

# unigram · X

04 JAN. 1995

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The weekly information newsletter for the UNIX™ community worldwide

London, December 26 1994 - January 6 1995

Number 519

## STB TO OFFER ULTRASPARC REFERENCE PLATFORM

Sun Microsystems Inc's Sparc Technology Business unit is supposed to announce in January that it's got its UltraSparc reference platform together and available to any who come knocking at its door. Along with STB's UltraSparc chipset and a small highly integrated motherboard the platform will apparently be trumpeted as the beginning of a new era at Sun. The currently unnamed platform will come with sample issues of STB's 167MHz UltraSparc and cost in the neighbourhood of a few tens of thousands of dollars. It will reportedly ship with a shrinkwrapped version of Solaris 2.4x, some kind of interim or specialised edition of the software, including a sexy visual 3D instruction set and Wabi. Sun will make the point that with UltraSparc underneath Wabi performance can match anything Intel Corp has to offer. In the second half, an upgraded version of the hardware components will add PCI support. STB expects the reference platform to create highly versatile machines that sell initially for around \$10,000, dropping to \$5,000 in relatively short order. Needless to say, it expects the thing to give Intel a run for its money unlike any previous RISC chip. STB expects the platform and associated parts to do business for it in embedded environments.

## HITACHI POWERPC STRATEGY NOT YET COOKED

Although the ink on its wide-ranging agreement with IBM Corp for PowerPC has been drying since May (UX No 485), Hitachi Ltd still hasn't cooked its microprocessor strategy internally, according to company sources. There's apparently a lot of aroma, but no goose on the table yet. The most visible manifestation is the lack of an expected statement of direction from Hitachi about how it'll move the PowerPC agreement forward in new products, and no word yet on whether it'll offer IBM's SP2 PowerParallels OEM. Because the Japanese company hasn't fully resolved the relationship between its PowerPC future and its already in-place Hewlett-Packard Co Precision Architecture RISC strategy, it hasn't been able to figure out exactly how and when it'll introduce its own PowerPC server technologies, and therefore how it could or should position SP2s in relation to its current products. The assumption has been that SP2s will be available from Hitachi, because of the option included in the original agreement, Hitachi says. It's been evaluating SP2s out in Japan. Seems the pieces of the strategy will be put to Hitachi managers for approval at the start of the New Year with a statement of direction - promised to be significantly different from the original agreement - later in the first quarter.

## HP IS KING OF THE UNIX SYSTEMS MARKET - JUST; SAYS IDC

Preliminary 1994 results in from market researcher IDC show that Hewlett-Packard Co has deposed Sun Microsystems Inc as the leading supplier of Unix systems, if only by a tiny margin. IDC believes HP did \$4,426m on Unix systems in 1994 giving it 16.4% market share, compared to Sun's \$4,393m which earned it a 16.3% slice. Sun's growth has slowed to below the overall Unix market growth rate. Overall, the Unix systems market regained momentum last year, IDC believes. Total spending on Unix systems climbed by 23.5% to \$26,952m over 1993 figures. IBM now leads in the mid-range market whilst DEC turned in a remarkable 71.1% growth on its 1993 Unix systems business, finishing with \$1,069m, a 4.0% overall share and now lies in sixth spot. (see p2)

## SCO LOOKING TOWARDS FULL UNIX-TO-PC SOLUTION

In the short term Santa Cruz Operation Inc's new Visionware Ltd unit will be open for business as usual. SCO has price-listed Visionware's PC X server software for some years. However in the medium term the plan now being drummed-up by IXI Ltd boss Ray Anderson's transition team is to find ways of combining SCO's operating system products with IXI's Eye2Eye PC-to-Unix integration technology and Visionware's PC-to-Unix connectivity services as bundled solutions packages for organisations with Unix and PC requirements. More host capabilities and tighter desktop/server integration are seen as obvious initial enhancements. A natural extension of SCO's Windows friendly initiative, the strategy will be the opposite of Windows-on-Unix, Wabi-style. As SCO sees it, these kinds of solutions are destined for the niche product drawer in any case, what with X/Open Co Ltd's avowed disinterest in such solutions and Sun Microsystems Inc's mounting campaign to embrace the PC world with its SolarNet technologies. 1995 will see the beginning of a wider struggle between Unix-only vendors and integrationists, SCO believes.

## SUPPOSE IBM, SUN AND APPLE GOT TOGETHER?

Bear in mind that when we speculate we are often reflecting the brainstormings, thought patterns or considerations given to certain notions by some very highly placed person-ages, the kind of people who are in a position to make things happen. Having said that, merely out of self-defence, let us pick up the train of a thought we ran a few weeks ago when we were discussing the eventual fate of IBM Corp's AIX operating system (UX No 514). We suggested at the time that if IBM were to put AIX out to pasture, it might replace it with - dare we say it again - SunSoft Inc's Solaris. Now suppose we were to suggest that that little gem might have other facets. We're willing to bet that some bread has been broken somewhere during discussions that Sun Microsystems Inc - in return for IBM's Solaris business - take the PowerPC chip to its proverbial corporate bosom and that IBM partner Apple Computer Inc enters the picture as everyone's favourite client. Such a triumvirate would of course mean outright war with Microsoft Corp which might be exactly what Nostradamus had in mind when he made his apocalyptic prophecies, who knows?

## DEC GOES SUN-BASHING

DEC is preparing a major sales offensive against its arch-rival Sun Microsystems in the new year, vowing to win back some of those original DEC customers that defected to Sun workstations in the mid-1980s, when DEC spent four years getting its first VAXStations out of the door. And this time DEC feels it has the advantage, claiming that it's easier to port from SunOs/Solaris 1 to DEC's OSF/1 implementation than it is to Sun's own V.4-based Solaris 2, with its different file system and kernel. OSF/1, built on the Mach microkernel, shares a greater commonality of file constructs, application programming interfaces and commands with Berkeley Unix, from which SunOS derived, than with Solaris 2. DEC also cites a two to one price/performance advantage over Sun, includes three years of maintenance in the price, and claims to have as many applications on OSF/1 as there are on Solaris 2. A senior vice president is said to be ready to head the worldwide campaign, and the word is that customers have already been lured away, including some in the UK's Ministry of Defence. Sun says that it may lose out on a few deals due to raw processing speed, but doesn't think the porting issue is a valid one, particularly now that Spec 1170 is coming on stream. However, although "most" of its customers now take Solaris 2 on new Sun boxes, it admits that a number still opt for what it calls a "sidegrade", and stubbornly stick with the old Solaris 1.

## BULL DESCRIBES INTEROPERABILITY PLAN BETWEEN ITS GCOS AND UNIX SYSTEMS

High-performance communication, repackaged distributed applications and automated storage management products, aimed at greater interoperability between GCOS and Unix systems, have been announced by Groupe Bull. The company has added Lannet Ltd's MultiMan network applications to its Integrated System Management system. The MainWay, Alliance Solutions and EpochBackup products are intended as follow-ups to its recently issued statement of direction for 'enterprise information processing' which outlined three development projects, Unix interoperability, enterprise networking and CMOS-based GCOS 8 processors, in the areas of GCOS and open systems. The development projects will cost Bull approximately \$200m. MainWay products support multiple network protocols and use switched Ethernet to maximise throughput between Ethernet segments and Fibre Distributed Data Interface. Without specifying, Bull says the products support 'a large number' of transactions per second on wide area network-dedicated modules and is Frame Relay- and 100Mbps Ethernet-ready. Bull says its Asynchronous Transfer Mode offering will be available next year. TCP/IP access to the company's Open Systems Interconnection-compliant Distributed Systems Architecture is not yet available; an announcement will be made within a few weeks. In the first phase of MainWay development, Bull has presented six products: three models of MainWay host systems for multiple local and wide area network communications and FDDI processors for GCOS 7 and GCOS 8. MainWay 2010 supports up to 12 Ethernet ports, one wide area network processor, seven FDDI links and 70 transactions per second - communications exchanges, not TPC transactions; MainWay 2020 handles up to 10 Ethernet ports, four wide area network processors, seven FDDI links and 280tps; and MainWay 2040 supports up to 58 Ethernet ports, four wide area network processors, 13 FDDI links and 280tps. The MainWay products will be available in March, starting at about \$20,000.

### Hell of a lot easier

FCP 7 and FCP 8, the FDDI processors, start at \$14,000, and FCP 7 is already operational at a customer site, Bull said. Secondly, Bull has repackaged and renamed its distributed client-server applications, which are based on components of Bull's Distributed Computing Model. The newly-named Alliance Solutions, Bull says, cover four general areas - system management, remote printing, data access and transaction processing. Within each category, there are several different packages, either for number of users or size of machines. For GCOS 7 users, Alliance Solutions are available for system management, remote printing capability, and data access. GCOS 8 users can get the print and data access packages, plus a transaction processing package designed to enable co-operation between TP8 and Tuxedo. All the packages start at under \$14,000. Alliance Solutions is the first step in a development programme called Stella, which aims to provide easy interoperability between GCOS and Unix. The second stage of Stella - an FDDI link between GCOS and Escala Unix systems - will be ready next year. An 'even faster' link technology is planned for 1996, Bull said. Finally, the company has made EpochBackup, a client-server tool from EMC Corp, providing automated storage management for personal computer local networks, Unix servers and workstations, available for DPS 7000 users and can be used to share expensive automated tape libraries.

## SGI SUPPLIES DIGITAL MEDIA SERVERS TO INTERNET UNDERGROUND MUSIC ARCHIVE

Silicon Graphics Inc has got into the music delivery business by supplying the Santa Cruz-based Internet Underground Music Archive (IUMA) with a Challenge DM digital media server. The company's UK arm has supplied a similar system to North London-based Southern Studios Ltd, a record company and independent distributor that is acting as the European centre for IUMA. Run from the University of California at Santa Cruz, IUMA provides independent and unsigned bands with a distribution outlet for their songs that bypasses the traditional record company set up. Bands pay IUMA \$100, and in return their music, in the form of compressed MPEG audio files, can be accessed by Internet users: the service is currently attracting 80,000 accesses in the US and 15,000 a day in Europe. The major labels, most notably Warner Brothers, are somewhat more suspicious of the new distribution model and are currently providing only clips of songs. IUMA has 400 bands on-line taking up 12Gb of disk space, most of them currently without a record deal. It says that the bands will benefit from the exposure that they would otherwise not receive: but is also working on a credit card ordering facility for early in the new year that will allow those interested to buy the music on-line, or to order compact disks. With the new servers, IUMA says it is achieving downloading rates for audio files of 1Mb a minute, so that a three minute piece of music can be downloaded in around 15 minutes, using fast modems and ISDN. It is also working on a method of listening to an audio file while it is still being downloaded. Southern Studios is also using a Silicon Graphics Indy workstation to edit its World Wide Web pages. Access to the new European site is by <http://www.southern.com>.

## UNIX SYSTEM MARKET RECOVERED MOMENTUM LAST YEAR, SAYS IDC

According to its preliminary studies, industry-watcher and researcher IDC believes the Unix systems market recovered much of its lost momentum in 1994, with overall revenues climbing by 23.5% to \$26,952m over \$21,820m in 1993. Unix PC and workstation sales climbed 20.5% from \$10,515m in 1993 to \$12,676m last year. Small-scale systems turned in \$9,098m, up 29.1% over 1993's \$7,050m; medium-scale system sales rose 27.7% to \$4,085m in 1994 over \$3,200m in 1993; whilst large-scale system sales clocked \$1,093m, up 2.7% on 1993's \$1,064m.

### HP overhauls Sun as number one Unix system vendor

Hewlett-Packard Co is IDC's star performer, overtaking Sun Microsystems Inc as the leading Unix vendor overall by a small margin with Unix sales of \$4,426m and a 16.4% share of the overall market. HP's Unix business increased 23.7% over 1993's \$3,578m. Sun's growth has slowed to below the overall Unix market growth rate. Its \$4,393m earned it a 16.3% share of the market IDC reckons, with revenues up 15% on 1993's \$3,821m. Number three player IBM Corp is estimated to have sold \$3,412m of Unix systems, up 43.2% on the \$2,383m it did in 1993, now with a 12.7% share. AT&T GIS Unix sales grew 28.2% at \$1,648m over \$1,285m last time, giving it a 6.1% share. Silicon Graphics Inc did \$1,484m, up 32.5% on 1993's \$1,120m, with a 5.5% share. DEC showed a remarkable 71.1% growth in Unix system sales to \$1,069m over \$625m in 1993, giving it 4.0% of the market. Cray Research Inc's \$739m was up 1.9% on 1993's \$725m, giving it a 2.7% share. Compaq Computer Corp's Unix system sales climbed 28.3% to \$565m over \$440m last time; it has a 2.1% market share. Data General Corp's \$500m, 15.1% up on 1993's \$434m give it a 1.9% share. NEC's \$500m, up 0.7% on 1993's \$496m gives it 1.9%. Siemens Nixdorf Informationssysteme AG's \$466m, up 9.4% on 1993's \$426m gives it a 1.7% share. ICL Plc's \$425m was up 10.0% on 1993's \$386m, with 1.6%. Fujitsu Ltd's sales declined 1.8% to \$387m from \$394m, giving it a 1.4% share. Sequent Computer Systems Inc's \$346m was up 25.4% on 1993's \$276m, giving it 1.3%. Intergraph Corp's waning Unix business declined 7.1% to \$328m from \$353m last time, giving it a 1.2% share. Other vendors accounted for the remaining \$6,265m, or 23.2% market share. That business grew 23.1% over 1993's \$5,088m.

### IBM heads mid-range market

In the mid-range Unix systems market, IBM leads with 16.7% (\$2,204m) of a \$13,183m market, which grew 28.6% over 1993's \$10,250m sales. HP comes in second with 15.3% (\$2,013m), followed by AT&T GIS 11.5% (\$1,516m), Sun 9.5% (\$1,257m), DG 3.8% (\$495m), SNI 3.2% (\$428m), ICL also with 3.2% (\$425m), Sequent 2.6% (\$346m), DEC 2.3% (\$310m), SGI 2.3% (\$298m), Motorola 2.0% (\$165m), Compaq 1.6% (\$155m), Fujitsu 1.4% (\$191m), Olivetti 1.3% (\$170m), Pyramid 1.2% (\$155m), and others 22% (2,895m). Sun is the rising star in this market.

• IDC figures increasingly specialised server products will hot up the database and network server markets further; that low-end, low-priced Unix offerings are staving off the incursion of PC-based servers; and that the Windows NT threat to Unix servers has slipped another year but is looming large, with AT&T the most successful direct NT sales player so far. Sun servers, IBM RS/6000s, HP platforms and rapid DEC growth will be the hallmarks of 1995, IDC believes.

### UNIX VERSIONS OF AUTOCAD 13 PROMISED

Unix versions of AutoCAD Release 13, the world's most popular CAD package, are due for release over the next few months following the shipment of a multiple platform licenced version covering DOS, Windows and Windows NT at the end of November (the NT code will not actually ship until the end of February, but will be free to anyone purchasing in the mean time). Autodesk Inc, which still does up to 90% of its business on DOS/Windows-based PC platforms, will eventually ship Sun Solaris, HP-UX, Silicon Graphics Irix and IBM AIX PowerPC versions of the package. It also has plans for an Alpha NT port. As well as improvements to the internal file system, and an improved customisable graphical user interface with floating palette, the PC version also includes enhanced dimensioning, geometric tolerancing, associative hatching, and 3D solid modelling support - features more commonly found on higher-end Unix-based CAD systems. One thing that could potentially drive more AutoCAD users from PCs to Unix is the Pentium bug, but although its users frequently use the ninth decimal place, Autodesk says it has yet to receive any calls reporting Pentium errors from its customers.

### **ODI POSITIONS IBM WORK AS A SUITE OF GATEWAYS**

Last August (UX No 500), Object Design Inc explained to us how it was, in conjunction with stakeholder IBM Corp, developing a bidirectional, object/relational connectivity tool called DBconnect, which would enable its ObjectStore object oriented database to interoperate with relational databases using schema mapping. Now DBconnect is being cast as a suite of products. The schema mapping tool will be used by relational developers to map table-based data into ODBC-compliant objects that can be used under 4GLs and other tools. ObjectStore/RDB is a gateway that can access DB2/6000, DB2/MVS, Oracle and Sybase relational databases from ObjectStore. A third DBconnect component, ObjectStore/ODBC, enables 4GLs and tools to access ObjectStore data through ODBC. Betas are out now but AIX and DB2 ships won't begin until the second quarter, with Windows NT stuff due in July. The Burlington, Massachusetts-based company will have a new name for DBconnect by then, too. ObjectStore 4.0 is due in the second quarter.

### **NOW APPLE PUTS BACK COPLAND LAUNCH TO MID-1996**

Apple Computer Inc has joined the unseasonal chorus of woe, and following Microsoft Corp's warning that Windows95 may not be ready to ship until August, has had to own up to a big delay in Copland, expected to appear as Macintosh System 8. It now expects Copland to be shipped in mid-1996 rather than the original target date of the end of 1995, David Nagel, general manager of the AppleSoft division said. Copland is intended to be the first version of Mac OS to implement full pre-emptive multitasking, so that several applications can run concurrently, and one bad application or mistake by the user won't crash the system.

### **CHEYENNE SOFTWARE HAS BOUGHT NETSTOR**

Cheyenne Software Inc, the networking back-up software developer of Roslyn Heights, New York, has acquired NETstor Inc, the Minneapolis-based subsidiary of Carlisle Companies Inc, paying an undisclosed cash sum for the assets and assuming some liabilities. Cheyenne will take a one-off hit of less than 2 cents a share this quarter to cover writing off of in-process research and development. NETstor specialises in hierarchical storage management software for Unix.

### **ORACLE SOARS IN SECOND QUARTER**

A 67% increase in the licence sales of its server software headlined Oracle Corp's second quarter results, though Unix and desktop systems remained its core products, up 51% and 49% in licence revenues respectively. Overall, second quarter licence sales rose 44% to \$362.5m, while service revenues rose 54% to \$307.8m. As a whole, the company posted profit in the quarter up 51% at \$93.9m on turnover up 48% at \$670.3m, the largest quarterly rise for four years. The earnings per share of \$0.32 was at the top end of analysts' predictions, which ranged from \$0.24 and \$0.33. Turnover in the US, Canada and Latin America collectively grew 50% year on year, sales to Europe, Middle East and Africa were up 40% and Asia Pacific by a massive 76%. Pre-tax margins rose to 20.9% in the quarter from 20.3% a year ago. Capitalised software costs of \$11.8m were written off against \$9.4m last time.

### **MEMOREX TELEX OFFERS MAINFRAME TO OPEN SYSTEMS MIGRATION PROGRAMME**

Irving, Texas-based Memorex Telex NV is getting deeper into the world of client/server computing and has announced a programme to help businesses migrate to an open systems environment. It has also announced a number of products for mainframe to local network integration: the 9300 Internetwork Server family; 1174 Internetwork Controller models; and Generation C software for the 1174 family. The Next Step Upgrade Programme is available now and will run until March 31, 1995. The aim is to increase network functionality, decrease operating costs and position the network for future growth. The firm has also introduced new mainframe to LAN products in its 9300 Internetwork Server family. There are three models: the 9301 Communications Concentrator enables older installed controllers to communicate via Token Ring or Ethernet; the 9311 LAN Access Server is designed for the heavy communications traffic and simultaneous use of multiple protocols; and the 9341 LAN Device Server is an internetwork gateway designed specifically as a communications processor and features SNA host access for Unix, Internet Packet Exchange and DEC LAT Local Area Transport clients. All are available now: prices start at \$9,000 for the 9301; \$9,500 for the 9311; and \$12,250 for the 9341.

### **INTEL SURRENDERS, WILL REPLACE PENTIUMS ON DEMAND**

Intel Corp last week surrendered to its vast army of critics and agreed to replace all flawed Pentium chips on demand, issuing a humble apology for the way it had handled what has turned into the computer industry's worst ever public relations disaster - and will take an as yet undetermined charge against fourth quarter profits, likely to be at least five cents a share. It conceded that it may have upset consumers with its earlier policy of demanding evidence that customers might be affected - "Our previous policy was to talk with users to determine whether their needs required replacement of the processor," said chief executive Andy Grove. "To some people, this policy seemed arrogant and uncaring. We apologise. We were motivated by a belief that replacement is simply unnecessary for most people. We still feel that way, but we are changing our policy because we want there to be no doubt that we stand behind this product." It will now send a replacement processor to users that choose to do the replacement themselves. It also plans to sign up service providers to do replacements at no charge to the owners for those that prefer to bring their machines to a service location, and will work with OEM customers to provide replacements for those that prefer to work with their manufacturer. The replacement offer will be in effect for the lifetime of a user's personal computer, so those that can decide they don't currently need a replacement will still have the option of replacing the chip in the future if their sums get heavier. A key problem is that Intel does not actually have many of the redesigned parts, but it is making a rapid manufacturing transition to the updated version, and expects to be able to ship sufficient replacement parts to meet demand "during the next few months". "The past few weeks have been deeply troubling," said a clearly chastened Grove. "What we view as an extremely minor technical problem has taken on a life of its own." A difficult - and so far unanswered - question is whether Intel will have to restart the lines to make discontinued parts such as the 5V 60MHz and 66MHz. Intel also has the financial embarrassment going forward that much of output will be for replacement rather than new sale.

### **KALEIDA LABS SHIPS SCRIPTX**

The Kaleida Labs Inc joint venture of Apple Computer Inc and IBM Corp last week finally launched its first products - the ScriptX programming language for multimedia software developers, and the Kaleida Media Player Version 1.0. Media Player is an object-oriented operating environment handling dynamic languages and digital media technologies and was created to support ScriptX applications: it is the basis of portability of ScriptX applications and needs to be rewritten for each operating system supported. It interprets a single ScriptX application at run-time and provides system-independent compositing of audio, video and graphical elements. ScriptX enables one version of a multimedia application to run on both Windows and Macintosh personal computers, with a version for OS/2 Warp planned for the second quarter of 1995. A Unix version is also planned by the company. IBM and Apple expect eventually to bundle the Kaleida Media Player with their computers, and in the meantime, it will be included free to buyers of the first ScriptX-based applications. The ScriptX Language Kit will sell to developers for \$800; the right to distribute Kaleida Media Player with applications in unlimited quantities costs \$2,500 per title. The Language Kit consists of the ScriptX Language and Class Library of some 250 pre-programmed application elements referred to as core classes; the development system that includes browsers and a debugger. Kaleida says that it has signed up 250 developers to use ScriptX, and that first applications are expected by the middle of next year. IBM is saying that it will integrate ScriptX with its application development tools and technologies, including OpenDoc and VisualAge. ScriptX was originally intended to come to market way back in October 1992.

### **DEC TO RESELL NETSCAPE**

Digital Equipment Corp has announced a partnership with privately-held Netscape Communications Corp, Mountain View, California, which will make it the first reseller of Netscape's server software. Products and services will be available under DEC's Alpha OSF/1, Alpha NT and iAPX-86 NT systems. Netscape's Navigator for the Internet will also be available through DEC.

## SAP CHIEF - I LEARNED MY CAPITALISM FROM BILL GATES - UNBUNDLES ABAP/4 DEVELOPMENT ENVIRONMENT FROM R/3

~~In introducing its own, and yet another, application development~~ toolset, SAP AG has taken some pages from Microsoft Corp's play-book. At the introduction of ABAP/4 in Karlsruhe, Germany, last month, SAP co-founder and vice-chairman Hasso Plattner was asked why he would add to market chaos with his own product. With refreshing honesty about his company's market dominance, Plattner said, "I've learned some things from Bill Gates: this is capitalism. I'm not against CORBA, but these initiatives and the Open Software Foundation and Common Desktop Environment - they are all relatively slow. OLE is here. It's not perfect, but it's a start. Why not use it instead of discussing why it's not perfect? There are already many products out there supporting OLE, while CORBA is the subject of academic discussions. We don't want to wait for someone to define something that we might be able to use." SAP has just unbundled ABAP/4 from its suite of business applications. It runs on all Unix and Windows NT systems, supports all widely-used graphical user interfaces and accesses databases via SAP's Open SQL or calls to the vendor's native SQL derivative. It has existing interfaces to applications such as Microsoft's Visual Basic, Excel and Access. The product will be used first by consultants and partner developers, he said. It is priced at from \$50,000 for a five-user developer licence, including the R/3 BASIS middleware component. Each additional user costs \$6,750. "We feel comfortable enough with R/3, that it is a solid enough system that we can spend a significant amount of resources to talk to the customer at the development level," Plattner said. In fact, as he indicated in a presentation to hundreds of German users earlier that morning, SAP will have spent \$640m on R/3 by the end of next year, "The most expensive software product developed by anyone, ever." SAP says R/3 has 2,000 installations among 1,400 customers. So far, he said, the company has had little feedback on release 2.2, which was shipped in September. Release 2.2B will be in general release "very soon, with some major enhancements for manufacturing and distribution gleaned from sites in Germany and the US," he said. Contrary to indications from its rival Oracle Corp, Plattner said he "feels no vulnerability at all" in the process manufacturing sector. Release 3.0 of R/3 will include a Product Planning and Control for the Process Industry module that covers lab and process control equipment and recipe handling, among other functions, he said.

### Starting to copy

Furthermore, he said, SAP's five-year investment in data and process models is beginning to pay off. "Competitors are starting to copy them. We doubted the prudence of publishing them, but so far the competitive products only look the same. Once you get past a few screens, you see that they lack data sophistication," he said. Walldorf is not Hollywood, and SAP will not build an R/4, Plattner said. "R/3 has been built so that enhancements can be added on the fly. We are starting to re-engineer the system, however, and the first two of those projects will be part of release 3.0," he said. That release, which is scheduled to ship in the second quarter of 1995, will be enabled as an Object Linking & Embedding automation server and client, will have more integration with desktop software and less downtime for maintenance upgrades. Plattner made reference to SAP's 'Project Heidelberg,' which is a plug-and-play version of R/3 for Windows NT based on Microsoft's Windows95 and Oracle's workgroup server. It will have some industry-specific functionality and be convertible into standard R/3. The software will be used first by US firms with sales of \$50m or less, he said. The chief executive also outlined SAP's broad development strategies and principles: reliance on Remote Function Call for integration; Object Linking & Embedding and SAP-Application Link Embedding are key initiatives; co-operation between internal and external workflow; redefinition of distributed system architecture; the need for a homogeneous set of applications for distributed databases; and diversification of local business practices making sharing the same data impossible. "It's a mistake to believe that all possible forms of business practices can be reflected in a single physical system. Distribution [of applications] will be possible using the technology of object link exchange. The distributed database is a myth. Distributed database technology can be used for propagation of shared meta-data, such as repository objects," Plattner concluded.

## ICL PUSHES DAIS FOR PC OBJECT DEVELOPMENT - CUT DOWN CLIENT MOOTED

ICL Plc has been working to integrate its Object Request Broker, DAIS, with Windows, and reckons its software is the only ORB that supports PC-only NetWare or Windows for Workgroups networks of servers and clients. It recently added Windows and Microsoft TCP/IP drivers and says Windows for Workgroups users can access files and printers using Novell Netware, World Wide Web and run DAIS applications on TCP/IP using standard network cards. DAIS applications also run on Windows NT - ICL promises a native version soon. Developers can write DAIS applications in C, Uniface, Gupta, Powerbuilder or Visual Basic. DAIS application components work like other Dynamic Link Libraries, communicating with other Windows applications using DDE or OLE. The DAIS DLL uses 295Kb memory so it doesn't need extra RAM in the PC, although ICL says it is thinking of doing a cut-down client-only version. ICL is working on bridge technology to embed the necessary OMG IDL and invocation handling inside PC development tools a la Iona Technologies.

## McCAW TAKES TIVOLI ON NEXTSTEP; FAILOVER IN SOFTWARE DUE

Tivoli Systems Inc is putting its distributed management platform up on NextStep for Intel Corp boxes at the behest of McCaw Cellular Communications Inc which in return will buy \$3.25m of Tivoli software and applications to manage its Cellular One customer service operation in the US. McCaw will begin deployment next March - the project is expected to take a year to complete. McCaw's customer service operation will consist of eight data centres with Unix servers and PC clients. Meanwhile, with lack of support for multiple, mixed sites now fixed in TME 2.0, Tivoli next target is adding failover capability.

## ILLUSTRATE ADDS WWW, MEDIA DATABLADES

Illustra Information Technologies Inc, Oakland, California, is offering new datablades for use with its Illustra Server object-relational database. The Web datablade provides everything required for using Illustra Server as a fully-functional Web server. It costs from \$100 next month. The Open Media Framework datablade is aimed at the entertainment industry, supposedly turning the database into a multimedia management centre. It betas next quarter.

## HUMMINGBIRD UNDAUNTED BY SCO ACQUISITION, SEES ONLY BOOMING BUSINESS

Hummingbird Communications Ltd, Markham, Ontario, doesn't expect Santa Cruz Operation Inc's acquisition of its PC X server rival Visionware Ltd to change the rules of the game in the X Windows-for-personal computer market in a big way (UX No 517). In its estimation the market is growing steadily at some 60% a year on the back of custom orders from organisations that want to hook large numbers of PCs up to their Unix servers. The trend, apparent in the US for a year or 18 months, is now reaching Europe, Hummingbird says, where it claims to be on the verge of a number of deals for hundreds of installations. Content to ride this wave for now, Hummingbird has gradually expanded its European presence with the establishment of operations in Leeds, UK, and Munich, Germany, in addition to Geneva, though it still works primarily through integrators and partners for sales, not direct. Hummingbird's European business now accounts for between 20% and 25% of revenues, which were some \$33m last year. If SCO's plans for fully integrated PC/Unix solutions change the PC X server business model - see front page - then Hummingbird and the rest of the market, which includes the likes of X expert Network Computing Devices Inc and terminal emulation house Walker Richer & Quinn Inc as well as PC X server provider AGE Logic Inc, will have to adapt accordingly. Of course SCO is hoping its wind will blow Hummingbird and co off-course whilst they develop or buy into additional product areas to keep-up.

## OMG CHIEF LASHES OUT AT DEC TO SET THE RECORD STRAIGHT, HE SAYS

Object Management Group chief Chris Stone called in last week to complain of the coverage *Unigram.X* and its sister publication *Client Server News* have recently afforded the losing side of the CORBA 2.0 ticket - the side represented most stridently by Digital Equipment Corp. ~~DEC needless to say has not gone down in defeat quietly. In fact, it claims that its DCE-centric proposal will become the *de facto* standard despite industry legislation inside the OMG adopting UNO, the TCP/IP-based proposal, as its interoperability mechanism.~~ This is strong stuff for Stone considering he takes exception to the accuracy of a number of statements DEC has made to advance its position. What follows is essentially a letter to the editor in memo form that Stone e-mailed over to us itemising his concerns. He has used excerpts from a CSN article [*shown in italics*] that ran last week to act as his foil.

To: *wif@panix.com*  
 Subject: *CORBA 2 Misinformation. My Response*  
 From: *STONE@jagger.omg.org*

Over the past 3 months, and particularly the past six weeks, I have been entangled with some of the strangest misinformation in years. Ronald Reagan would have been proud. Now that the CORBA 2 vote has passed, I would like to open my mouth and clear up some of these misconceptions. Here's my top ten issues.

One, and perhaps the most controversial is, [DEC's characterisation of the way we treated] DCE. In making the CORBA 2 selection, OMG did not "*pass by*" DCE. This whole issue is rather silly. OMG chose UNO because it was simple, object-oriented and the best technical solution. It is a flexible architecture that allows for the use of multiple transports and bridges. It just so happens that in order to guarantee interoperability, which is why we did this in the first place!, you have to MANDATE a protocol stack. Optional, equal, or more than one protocol just doesn't cut it. DCE is included in the specification as an optional RPC.

Two, [DEC's allegation that] "new and untried technology was adopted". Actually, both submissions contained some new or modified technology. The DCE submission is based on a subset of the DCE RPC (connection-oriented, based on OSF AES). This is formed by using only the connection-oriented protocol and not UDP/IP. The DCE-CIOP does, however, specify fixed values which are legal DCE-RPC values. The UNO proposal uses a message format (called GIOP) which can be hosted on TCP or other transports (as can the DCE-CIOP) and bridging technology. Most of the questions came about because of dearth of people actually "*reading*" both submissions. The complaint that UNO is new and I can't integrate with it if I use DCE is downright ignorant. The net result is that all communication within an ORB domain can use any appropriate protocol (e.g. a DCE-based one or a proprietary one) and that the IOP (the mandatory part) is required to be supported only to communicate with ORBs in other domains. An IOP half-bridge must therefore only be included in an ORB node at the domain boundary. As an example, Novell, with 70% marketshare in NetWare is perhaps compromising more than anyone buy supporting UNO.

Three, [DEC's allegation that] "*no user contacted OMG to support UNO, OMG dismissed the DCE Users as misguided and uninformed*" is Baloney. OMG received exactly 13 mail messages pleading for mandatory DCE. These were not all "*out of the blue*". The OSF End User SIG, as an example, sent out bait mail prior to the OMG meeting in Long Branch, NJ USA which included the hotel name, and all OMG board members addresses. It encouraged DCE supporters to contact us. The OMG End Users voted in favor of the UNO and DCE-CIOP proposal by greater than a 3 to 1 margin. So did the technical Committee. So did the OMG board. As for the 13 messages, yes, most were misguided and uninformed. Upon explaining the technical issues of how UNO worked and the optional environment for DCE,

six have already responded back with statements akin to "*oh, we didn't realize that...*". This was 70% politics and 30% technical. Some would argue an even larger skew toward politics.

Four, [DEC's allegation that] "*secret ballots are not for open organizations...*" Huh? Secret Ballots are an institution in this country. Ever been to a town meeting or voted for a dog catcher? By the way, no one opposed this.

Five, [DEC's misleading question] "*why didn't CORBA 2 include administration services...?*", is yet another misconception that seemed to run rampant for no explained reason. If a user wishes to use full DCE services, there is nothing in the specification that prevents this, assuming they use an ORB that uses these services. The Object Management Group, when producing the CORBA 2 RFP, never requested or required administration services to be part of the response. OMG has a full scale effort called Object Services that is currently working on Security, Query, Transactions and many other services. Both submissions made it clear that they support OMG's Object Services.

Six, [DEC's contention that] "*OMG staff were in a hurry to select something*" is an interesting comment. Richard Soley and I have been globetrotting for 5 years espousing distributed, interoperable objects. So, after 18 months of the CORBA 2 process with 90+ companies voting by a 3 to 1 margin, we finally did it and we were in a hurry?

Seven, [DEC's charge that] "*Lotus was barred from voting*". Wrong. Lotus voted, and it counted.

Eight, [the free-floating industry fear that] "*Microsoft was behind all this...*". It is truly amazing how Microsoft seems to be the blame for everything. I blame them when my lights dim, faucet drips, and laundry smells. Cut them some slack. They may have a competing technology in OLE/COM but they are working with OMG to build a bridge between CORBA and OLE/COM. Let's wait and see on this one.

Nine, [DCE-prone 3M's charge that] "*CORBA 2 ignores Windows*". Another huh? Three submitters, IBM, Expersoft and IONA have Windows based ORBS that will be supporting CORBA 2. There will be more...

Ten, [the editorial comment that] "*OMG seems to always rise up out of controversy*". Wait until 1995.

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# unigram·X

The weekly information newsletter for the UNIX™ community worldwide

**Intel Corp** is hopeful that its decision to replace Pentium chips on demand will nullify some of the recently filed legal claims against the firm citing breach of warranty.

It has generally been assumed that the potential impact of the Pentium flaw was significantly greater than **Intel Corp** suggests, but not as serious as **IBM Corp** contends, and now the *PC Week* and *PC Magazine* labs have run their own tests, which lend weight to the assumptions: they say errors using floating point divide are 200,000 times more likely to occur than Intel claims and 200 times less likely than IBM claims; "engineers and scientists will probably find the level of possible errors unacceptable, as will most people using a spreadsheet for complex financial calculations," said *PC Week* technologies analyst Peter Coffee.

**IBM Corp** has announced its promised OpenEdition DCE Base Services for MVS/ESA, OpenEdition DCE Application Support MVS/ESA for IMS and CICS, and LAN Resource Extension and Service. DCE Base Services means MVS can be integrated with Unix and other platforms running DCE. The module allows non-IBM systems to access IMS and CICS data. LANres/MVS 3.1 and /VM 3.1 ties S/390s to networked PCs and can provide access to NetWare facilities.

**NetLabs Inc**, Los Altos, California, has a new version of its Vision environment which now allows developers to create graphical systems for managing mixed AIX, HP-UX and SunOS platforms. Vision DE 2.0 creates Motif-based applications to control, configure and monitor SNMP devices on TCP/IP networks. Prices start at \$10,000 per development platform.

**Chorus Systemes SA** has closed its Los Gatos, California, and Beaverton, Oregon offices and opened a single outlet in Campbell, California. Most of the 20 staff involved are relocating. A couple are leaving and a couple will work from home in Oregon, Chorus says. The idea behind the regroup is to have a single sales and engineering headquarters on the West Coast in readiness for its next phase of development, adding its microkernel to Novell Inc's SuperNOS.

*PC Week Labs* looked under the hood of UnixWare 2.0 last week and found it easier to set up than Windows 3.1 with comparable functions - TCP/IP, IPX, remote access, printers, e-mail, and terminal emulators. The SMP UnixWare 2.0 includes a C compiler and C++ compiler SDK. It needs 8Mb RAM and 100Mb disk minimum. UnixWare 2.0 will run SCO applications and is compatible with Novell's Open Data Link Interface drivers for network interface cards.

Robert Fabbio's Austin, Texas-based **Dazel Corp** is developing class libraries for **Dynasty Technologies** and **Powersoft** to give Dynasty and PowerBuilder application developers the ability to support its Delivery and Express output management systems. Dazel has also teamed with Fabbio's previous start-up, Tivoli Systems to have its software work within Tivoli's TME environment.

**Emulex** has hired Scott Ruple as its director of product marketing for **Motorola's Semiconductor Products Sector** and charged him with launching the firm's new fibre channel family for network data transmission, due in '95. Ruple has also done time at **Ungermann-Bass**.

Boston, Massachusetts firm **Open Environment Corp** has teamed-up with **Information Builders Inc** on data access tools called Encompass Data Extender that allow developers to build applications that run across DCE, TCP/IP and mainframes. The software combines IBI's EDA/SQL with OEC's Encompass development environment and require both to run. It costs from \$14,800 from next month.

**Rational Software Corp**, Santa Clara, California, has integrated its Rational Rose analysis and design tools with **Trinzic Corp's** ObjectPro and **Gupta's** SQLWindows tools. Both are out now.

**Thomson-CSF** is throwing its **Must Software International** 4GL and **Alslys Inc** Ada and GUI-builder concerns into a new company it's calling Thomson Software Products to be headed by Must CEO Jean-Luc Badault. Alslys president Ben Goodwin gets to be CEO America and Pacific Rim. The unit will be run out of Must's Norwalk, Connecticut offices, European operations out of Paris. Thomson says the combined operation will have revenues of \$75m.

Under **Microsoft's** 1988 agreement with **AT&T Co** - terms of which are now the subject of a wrangle between **Microsoft, Novell, SunSoft Inc** and **X/Open Co Ltd** - subsequent Unix-on-Intel implementations have been required to run a suite of Xenix apps to test for compatibility with the Microsoft Unix. They include Lerex, Professional, Informix and Uniplex.

**Sybase Inc** has bought out its down under distributors **Open Vision Systems (OVS)** in Australia and **Object Technology Ltd**, in New Zealand, and added them as regional subsidiaries. Sybase has installed Gary Jackson as general manager of Sybase Australia, replacing Steve Clark, former president of OVS. Object Technology president Mark Lunt becomes managing director of Sybase New Zealand. Sybase aims to double its market share in Australia within two years. Sybase has six subsidiaries and eight distributors in the Asia-Pacific region.

With Alok Mohan moving upstairs as president and CEO, **Santa Cruz Operation Inc** has installed its former Pacific Rim VP John Jarvis as CFO and senior VP operations. Europe, Middle East, India and Africa boss Bernard Hulme takes on responsibilities for Pacific Rim in addition and is promoted to senior VP and managing director of what SCO is now calling its Europe and International division. Former VP of Americas field operations, Ed Adams is now senior VP and general manager of that division.

Continuing its pursuit of commercial revenue, **Cray Research Inc's** new business systems division combines its Cray Research Superservers Inc Sparc unit's Beaverton, Oregon and San Diego-based operations and the recently acquired Dallas, Texas-based **Savant Solutions Inc**.

Connectivity firm **Interlink** says it will make its TCPaccess product fault tolerant in January.

**X/Open Co Ltd** says that if a settlement isn't reached and **Microsoft Corp** doesn't drop its requirement for Xenix compatibility, any resulting procedure for checking conformance to it will be separate from the Unix specification and branding process it's now putting together.

**Independence Technologies Inc** is offering AT&T GIS Top End on Solaris 2.3, with an HP-UX version due in January and AIX soon after.

The work that **Excalibur Technologies Inc** has been doing with **IBM's Software Solutions Division (UX No 489)** on its Text Recognition Server (TRS) and Text Recognition Library is up and ready to ship on AIX, Solaris, HP-UX, and OSF/1 platforms.

**Gupta UK** didn't get a new managing director for very long. Ex-**Oracle Corp** UK managing director Mike Evans who jumped ship to **Gupta Corp** a month ago has moved on already, this time landing at **Informix**, as European marketing director. In the new position he'll report to Ken Coulter, VP Europe.

Meanwhile, **Informix** is reorganising its 17 European subsidiaries to bring them into line with its plan to ramp up its direct sales operation. From next year Europe will be split into three operational regions: Central, Northern and Southern. Each will be managed by a European director who will report direct to Ken Coulter.

Marlborough, Massachusetts' **Stratus Computer Inc** is combining the operations of two of its software subsidiaries, **Shared Systems Corp** of Dallas and **SoftCom Systems Inc** of Atlanta to form a new company called S2, headquartered in Dallas. Robert E Lund will head the operation.

**AT&T** has named Daniel Stanzione president of Bell Labs succeeding John Mayo who retires in February.

Rumour has it **AGE Logic Inc** has a private label OEM deal going down in Japan that will have **Allied Telesis KK** selling its Xoftware for Windows product in a localised edition.

**Blenheim** says that 80% of the exhibitors at DB/Expo New York have resigned for next year. It's currently scheduled for the Javits Center on December 5-7. Blenheim is trying to get the dates changed because it conflicts with the competing Database and Client/Server World show in Chicago. It figures it stands a 50% chance.

*People* magazine of all places has named Internet co-author Vinton Cerf one of the 25 Most Intriguing People of the Year in its end of the year issue. Cerf's right up there with Princess Di, Sinn Feiner Gerry Adams, the Pope, OJ Simpson, Tonya Harding, American traitor Aldrich Ames and tennis star Andre Agassi, obviously a selection meant to appeal to a broad spectrum. The magazine notes that Cerf's championing of the Net stems from his hearing difficulties, the results of a premature birth. He has trouble making out voices on the phone but of course no difficulty reading e-mail.

The final Common Desktop Environment 1.0 specification (UX No 507) is working its way through **X/Open Co Ltd's** fast track process: there'll be more news on the spec late in the first quarter but branded products are still many months off.

We hear that there's really little need for a rival like **Microsoft Corp** what with all the feuding going on between **Apple Computer Inc** operating system people, the **OpenDOC** team and **Taligent Inc**, supposedly object partners.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

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16 JAN. 1995

The weekly information newsletter for the UNIX™ community worldwide

London, January 16-20 1995

Number 521

## SIEMENS NIXDORF IN TALKS TO BUY PYRAMID

The foreseeable future is a very short time-frame in the Siemens Nixdorf Informationssysteme AG lexicon. The company said back in September, when it raised its stake in Pyramid Technology Corp to 17.6%, that it didn't see the new deal leading to it acquiring Pyramid in "the foreseeable future" - yet last week, less than four months later, it announced that it was holding talks with Pyramid that were likely to lead to a bid of \$15 a share for the Mountain View, California parallel Unix server manufacturer (UX No 502). Such a bid would value the company at \$234m, and cost Nixdorf \$193m for the shares it does not already hold - it paid only \$10 a share for the last tranche, which took it up from about 5% previously. The mooted offer values Pyramid at about one year's sales - the company lost \$22.4m on sales of \$218.5m, down about 6% on the previous year, for the year to end-September. SNI already takes Pyramid technology OEM and badly needs the new Meshines to compete with IBM Corp's SP2 parallel systems. Pyramid boss John Chen and investment house Smith Barney believe the company isn't fully valued at \$15 a share; Chen said he'd be seeking a higher bid from SNI. Pyramid is expected to do better than break even in its first quarter to the end of December; Wall Street is looking for around 5 cents a share when it reports this week. Chen expects the company to come in slightly ahead of expectations, and if what he claims are two of the largest deals in the company's history come down on cue in the next couple of weeks, that will likely be enough to drive both expectations for the year, and an SNI offer, up. The feeling is that Pyramid, which is probably seeking something closer to \$20 a share, should be able to get SNI up to \$17 or \$18 even without the orders which don't appear to have been built into expectations.

## COMMERCIAL UNIX ENDEAVOUR "LACKS LEADERSHIP"

Although it would be nice to remain independent, Pyramid Technology Corp is still too painfully small to bear, all by itself, the cost for the kinds of research and development it envisages. As well the R&D marks that SNI can provide, Pyramid badly needs a bigger lever to use against even the smaller commercial players such as rival Sequent Computer Systems Inc, still around twice Pyramid's size. For example, Pyramid boss John Chen is currently looking at how to advance the company's DC/OSX commercial SMP Unix SVR4 implementation in a world which Microsoft Corp now also covets. With SNI's Sinix Unix effectively DC/OSX under-the-hood the task is a double dare. For starters Chen says he hasn't decided whether to take Novell Inc's UnixWare 2.0. He's more interested in two other options. First is to drum up some kind of high-end commercial Unix specification initiative in conjunction with the other commercial players. It's a notion that's been run past us several times but never put into action (UX Nos 481, 509). "Don't bet on it happening, but everyone wants to do it and knows it's the right thing to do or NT will take a run at Unix," says Chen, who acknowledges "it lacks leadership however."

## ... AS PYRAMID EVALUATES SOLARIS-ON-MIPS

A second alternative to UnixWare 2.0 Chen says he's actively investigating is the use of an upscaled Solaris ported to Mips. Pyramid says it could drive the effort, even if it doesn't do all the work. Pyramid's parallel Meshine can be kicked at CeBit Hanover fair in March - it'll be formally announced late April or early May.

## CANON SIGHTS SPARC BOX WITH OPENSTEP

Advanced Technologies Operation (ATO), the NextStep-oriented unit of Canon Inc's Canon Computer Systems Inc (CCSI) US marketing arm looks ready to head out to Sparc pastures from its Intel Corp base and build itself a machine capable of running OpenStep, the operating system-independent version of Steve Jobs' object paradigm. It's also got SunSoft Inc's anticipated Solaris x86 version of OpenStep in its sights for its existing Intel Corp technology. ATO will of course also handle the PowerPC gear out of Menlo Park, California start-up FirePower Systems Inc, the NeXT spin-out in which Canon Japan has majority ownership. Although primarily a Windows NT house, Firepower is also negotiating for the PowerPC version of Solaris on its Powerised systems which ATO will pick up. ATO, formed in March last year in a bid to redeem some of the \$170m Canon sank into NeXT Computer Inc over the last few years and based in Portland, Oregon with the rest of CCSI is up to 30 staff. It's now got a couple of 486 boxes running NextStep - see page 3. It won't talk numbers although it claims to be selling everything it can build. The unit is aiming to do \$50m by 1997. It's got PCI bus architecture in testing and although it had promised a Pentium system by the end of last year says it's waiting on good parts from Intel Corp.

## IBM AND THE FUTURE OF AIX

Not only has *Unigram.X* had to put up with IBM's angry denials on the Web trashing our story that the end of AIX was in sight, we also have to put up with guff from a certain, otherwise reasonable, analyst dismissing it as merely a matter of semantics. Well, Andrew, we're here to tell you that we did *not* mean that AIX was going to rise Phoenix-like from the ashes and, poof, reappear on the scene as a personality on the microkernel. IBM ditched the notion of porting all those wonderful personalities we've grown to know and love over two months ago - AIX included - after the powers that be discovered it was going to be TOO expensive and TOO complicated to pull off. In fact, if you look careful inside of IBM you will find that the group of 50 people and the handful of first- and second-line managers it put together about four months ago to figure out how to migrate AIX to the microkernel was disbanded within four weeks for lack of funding and reduced to about 10 people casting about for other things to do. We further maintain that the microkernel issue is separate from - if coincident in time - with IBM's decision to pull the plug on investing further in AIX and manage it as a cash cow. The impact of this decision is a haemorrhaging of talent out of what remains of the AIX effort in addition to those 200 people IBM terminated.

## SCO AND CHORUS GOING STEADY

Santa Cruz Operation Inc and Paris microkernel house Chorus Systemes SA are planning to hitch their wagons together in a few weeks time and take their technical marketing agreement forward into a "full blown" long-term relationship. As well as bringing SCO into the real-time operating system business via a new joint marketing effort planned for the Chorus/Fusion SCO Unix-derived microkernel the two are expected to work on adding Everest functionality to Chorus/Fusion. Everest is the upcoming version of SCO Unix due in May or June which will feature new reliability and availability, and improved network and Windows management, among other things. The notion is to build on SCO's commercial Unix-on-Intel stronghold with Chorus technology. For example each pump on a petrol station forecourt could be running pure Chorus microkernel, operating as a distributed real-time node. Chorus/Fusion for SCO Unix would run on tills serving the pumps and other product outlets, with SCO Unix up in the back office. Chorus will finally reveal its large telecom win next week.

## POWERPC 602 EMERGES AS JOINT IBM/MOTOROLA EMBEDDED EFFORT

Looks like the PowerPC camp is going to correct itself. Remember how Somerset said PowerPC 620 was a misspelling of 602? Well the 602 that's on the table now looks like a joint IBM Corp/Motorola Inc embedded affair (UX No 516). The two have maintained their own separate embedded PowerPC projects so far. The 602 is the part that game builder 3DO Co is expected to use in a future Multi-player system. ~~Meanwhile, our sister publication PowerPC News, which told us all about the Motorola Inc and IBM Corp's 603+ some time ago, is intrigued about its delivery schedule. 603+ is an enhanced version of the PowerPC 603 with 32Kb of cache, twice what it's got now. The 0.5 micron part is a shrink from 603's 0.65 process and will boost speed to 100MHz but the extra space will be taken up by the increased cache. If Microprocessor Report is right, and Apple Computer Inc won't be getting volumes of the part in the third quarter, doesn't this rather put the mockers on Apple's notebook plans for some length of time, it asks? We understood 603+ was the part slated for that item. Meanwhile, IBM Japan Ltd is discussing a joint venture with construction machinery maker Komatsu Ltd on PowerPC. Komatsu said the proposed venture may include development of automation products, that is embedded stuff.~~

## HEADS ROLL IN IBM REORG

Several of IBM's top officials are out, as CEO Lou Gerstner begins the New Year with a reorganisation that will meld the company's sales force and create a new software operation and a new server group. The reorganisation may cost a number of high-ranking IBM stewards their job. In fact, *The Wall Street Journal* speculated that the days of IBM's top strategist Jim Cannavino and OS/2 boss Lee Reiswig may be numbered, the latter depending on how it goes with Warp. (IBMers found it telling that Cannavino wasn't a member of Gerstner's new 'cabinet' effectively named last week.) Gerstner is said to want to push OS/2 over the top but not at all costs. Among the first departures was IBM treasurer Frederick Zuckerman followed quickly by Ellen Hancock, long-time industry icon and IBM's highest-ranking female executive, who has been running the company's networking interests and recently a lot of its software activities, sizeable businesses. She lost out to John Thompson in an opportunity to run this new-fangled software operation and resigned. Insiders said Gerstner didn't think Hancock, who started as a programmer and came up on the development side, had enough marketing savvy. The Journal reported her being perceived as "too slow and conservative, holding on too long to old products and afraid to take risks with new ones." Thompson has been in charge of IBM's big iron, a division that will also be reorganized as a server group that includes mainframes, the AS/400, PowerParallels, the RS/6000 and PC servers under Nick Donofrio, who's been running mainframes. He used to be responsible for Unix and the RS/6000 line a few years back. IBM's client side, under Richard Thoman, the ex-Nabisco executive, now the equal of Donofrio and Thompson, includes PCs, AIX clients and the company's upcoming PowerPC boxes. Also on the same level as Thoman, Thompson and Donofrio is Pat Toole, who is in charge of IBM Microelectronics, IBM storage and networking. Coordinating the activities of the three groups is a client/server marketing group that reports to the now-leaderless IBM US, since IBM veteran Robert LaBant, the senior VP who ran IBM's sales force and one of the company's erstwhile golden boys, a one-time contender to succeed chairman John Akers, also resigned after failing to win control of the new sales operation. That job falls to Ned Lautenbach, chairman of now-defunct IBM World Trade. Under the new regime domestic and foreign sales operations will be melded together in what is considered a massive restructuring designed to present a single face to large accounts. Lautenbach is also responsible for running the company's vertical market units. Meanwhile, Gerstner also told IBMers he can see an end to layoffs though potential areas for further cuts include the firm's PC Company, the Unix-driven RS/6000 division and software, particularly OS/2.

## CONTENDERS READY APPLE BID

Hambrecht & Quist Inc analyst Bruce Lupatkin says he sees Apple Computer Inc as a takeover target and reckons Oracle Corp could put the company into play, but that the end game would probably see IBM Corp acquiring Apple, according to Cable NBC's Dan Dorfman. But, Donaldson Lufkin & Jenrette analyst Thomas Rooney said he does not believe IBM is interested in buying Apple and that while large acquisitions will play a role in IBM's future, Apple does not meet the profile of a company IBM would be interested in acquiring - dilution to IBM earnings would be as high as 15%, and IBM has invested so much in its OS/2 Warp operating system that \$6,500m to \$7,000m is a lot to pay for Apple's Macintosh operating system, considering it only represents no more than 10% of the market. On the issue of price, Lupatkin said the ultimate price for Apple will be \$60 a share or about \$7,000m.

## IPC OF SINGAPORE A DARK HORSE IN THE BIDDING FOR STAKES IN BULL

The French press re-ran the usual suspects in hazarding the identities of the bidders for stakes of more than 10% in Compagnie des Machines Bull SA, but one really dark horse has surfaced. It is IPC Corp Ltd of Singapore, a diversified motherboard, systems and peripherals group, which has a US subsidiary, IPC Technologies Inc in Austin, Texas. IPC was the first OEM customer to declare for Firepower Systems Inc's PowerPC-based clone systems. The French press is still including AT&T Corp in its list of bidders, but our understanding is that AT&T has walked away after learning there was no chance of it getting a telecommunications operating licence in France. In all, 10 firms have registered an interest in Bull, but only five have said they want at least 10%. And only NEC Corp has declared that it wants to up its stake in Bull to more than 10% from its present one, now diluted down to 3.7%. Top Bull executives want a 5% stake, and 10% may be set aside for staff.

## PHILIPPE KAHN TO TAKE BACK SEAT AT BORLAND

Philippe Kahn, founder of the disconcertingly shrinking Borland International Inc, has resigned as president and chief executive but will retain the post of chairman. Chief financial officer and executive vice-president of operations Gary Wetsel was named president and appointed to the board, leaving Kahn to focus on long-term planning, international business and other special projects. "It has become clear that my continuing as president and chief executive has become a distraction at a time when Borland needs to be fully focused on the challenges ahead of it," Kahn said, adding "the board of directors has full confidence in Gary Wetsel and the rest of the management team to design and implement a successful restructuring plan." Borland's new president, Gary Wetsel, confirmed that the Scotts Valley, California company will announce a restructuring involving "dramatic reductions" in staff in the next two weeks. He told *Reuters* the restructuring would involve cutting at least 500 jobs from Borland's current 1,700-strong payroll as it narrows its product lines to focus solely on selling to software developers, and the restructuring is intended to bring costs in line with the revenues it sees from the new strategy. The new plan lends weight to suggestions that the company will seek to sell its database products.

## MOTOROLA TO CONTINUE MAKING ALPHA FOR DEC, AT SCOTTISH PLANT

Under the agreement for Motorola Inc to buy Digital Equipment Corp's wafer fabrication facility in South Queensferry, Scotland, South Queensferry employees will become Motorola employees at closing; all DEC chips, including the Alpha microprocessor, that are currently being manufactured in South Queensferry will continue to be fabricated there. And Motorola will honour DEC's two-year foundry contract with Advanced Micro Devices Inc to make Am486s. The price being paid is to remain confidential, but the plant is a medium-sized fab. The total investment in the facility was valued at \$200m in 1992, and since then, a further \$100m was committed last year. This would now value the plant at perhaps \$150m to \$200m, but the fact that DEC and Advanced Micro have first call on a large part of the capacity will cut the value.



### MCNEALY WILL "LOOK INSIDE" FOR SAMPER REPLACEMENT

J Phillip Samper, the board member who last year stepped into the breach and finally ended Scott McNealy's search for the Holy Grail, is going to step down as president of Sun's hardware arm, Sun Microsystems Computer Company, by the end of February. Samper's reasons are apparently personal not the least of which is his age, 60, and the fact that he has been commuting between Sun in California and his home on the East Coast every weekend for the last year. Still, McNealy last week, after the announcement was made, handed him the ultimate industry accolade: "He's the only guy I know," he said, "who works harder than I do." McNealy feels a lot better about the overall condition of Sun now than when Samper, a former vice chairman of Eastman Kodak, took over the SMCC reins. An executive search is said to be underway but McNealy told *Unigram.X* he doesn't feel he has to go outside of Sun to fill the slot. His statement lends strength to speculation that he might move Ed Zander, once VP of marketing at SMCC and now president of SunSoft Inc, into the spot. Zander may not be wholly popular with SMCC folks but McNealy may see the turmoil his appointment might create as being constructive. There aren't after all that many captains of industry that could move gracefully into the Sun presidency and there's currently a good deal of competition for those who could. Most of them would want to be CEO, McNealy's job. Rotating Zander leaves other possibilities to conjure with - like McNealy casting his eye in the direction of, say, Ellen Hancock, newly liberated from her job running IBM Corp's software interests. Just a thought that. Anyway, Samper will continue to consult for Sun Microsystems Inc. McNealy said he was leaving now so as to leave room for his successor to put his stamp on the next series of Sun objectives.

### KOCH SEEKING MORE PUNISHMENT?

According to *Electronic Engineering Times*, Bill Koch, former chairman and largest shareholder in MPP outfit, Kendall Square Research Inc, now in Chapter 11, is considering a new \$5m to \$10m investment in a venture to apply Kendall's All Cache interconnect technology for clustering groups of up to 32 PCs together so that they appear as a single logical unit to compilers and applications. Koch's made no final decision but is apparently evaluating the potential market for such a solution.

### HEADS ROLL IN STEAD'S FIRST WEEK

Sources say that Jerre Stead wasn't the only one to interview for the CEO job at Legent Corp. Apparently Hewlett-Packard Co's Wim Roelandts spent a weekend in Virginia and the Legent folks reportedly, took a run at Roel Pieper, but he's supposed to be trying to take UB Networks back out of Tandem Computer Inc. After all he's got 5%. These guys are getting to be everybody's favourite job candidate. They're also touted to replace Stead. Stead, meanwhile, is supposed to get the Legent chairmanship as well when Joe Henson retires next month. Stead will then have to turn his attention on boosting Legent's slumping growth. Looks like Stead turned his attention to other matters last week in preparation. COO David Whetmore and VP Europe Ian Cartwright both resigned their posts. Whetmore will return to Europe and run that and other agent operations there for Stead for the next six months or until the position is filled.

### PYRAMID TO RETAIN IDENTITY IF BOUGHT BY SIEMENS

If, and when, Pyramid Technology Corp becomes a Siemens Nixdorf Informationssysteme AG unit it will retain its name and all functions, the two companies say. SNI would peddle its Unix and Windows NT RM Mips boxes through Pyramid's US market channels where the Paderborner has less grasp. SNI will carry Pyramid kit around Europe and wherever else Pyramid currently does not have outlets. What will happen to Pyramid hubs where SNI already resides is unclear. Pyramid has worked with SNI's Nixdorf unit since 1985 - before Siemens bought the ailing computer unit - and the two have exchanged engineering teams ever since. Now pegged at some 850 employees, Pyramid has suffered a decline in its once expansive OEM business. Although it now counts ICL Plc, Fujitsu Australia and Spain, Hyundai Electronics Industries Ltd and Sharp Corp as resellers, its Ing C Olivetti & Co SpA deal is on the wane and its lucrative AT&T Co agreement is now defunct.

### DCE RULES IBM'S ROOST; UNO SECOND FIDDLE

Distributed Computing Environment is the "only game in town for the integration of distributed networks of systems", according to Don Haile general manager of IBM Corp's network software division. As we already know, IBM plans to support both DCE and the Object Management Group's UNO mechanism for object request broker interoperability (UX No 515). Its Distributed System Object Manager (DSOM) will support UNO as well as a DCE protocol gateway. More frankly it admits that whilst "the exchange of object-oriented information across untrusted networks is the base specification for UNO. DCE is required for security and directory services". In simpler terms DCE will remain IBM's premier transport mechanism for transporting objects across enterprises although it'll make enough concessions to be compatible with UNO request brokers too where required. IBM now has DCE 1.1 betas out on a range of platforms - an OS/2 1.1 beta refresh is due next quarter The company expects to ship production versions of 1.1 on AIX this half, followed by OS/2, MVS and OS/400. OS/2 beta of DEC 1.1 is out at some 20 sites.

### DCE 1.2 AGREEMENT DUE BY FEB

Although agreement was anticipated last October, seems the Open Software Foundation still hasn't worked out a final development agreement for DCE 1.2, the next version of its Distributed Computing Environment. With content now firm, a development contract will be in place by the end of the month, according to IBM. It is looking for a completed 1.2 to go out to vendors by the end of the year and to ship production versions in something under 12 months from there.

### SGI BRINGS REALITYENGINE2 GRAPHICS DOWN BELOW \$100,000

Silicon Graphics Inc will this week bring the cost of its 1.2GFLOPS RealityEngine2 graphics subsystem down below \$100,000 with the launch of the Reality Station. The new member of SGI's Onyx family of graphics processing systems employs a single Mips 200MHz R4400 RISC and is aimed at advanced design and manufacturing, image processing and visual simulation markets. The 1.2GFLOPS RealityEngine2 has previously only been available in a \$170,000 system. Out in March, Reality Station lists at \$94,000 with 64Mb RAM, 2Gb disk and 21inch screen. Onyx SMP systems go from two-to-24 R4400s - Power Onyx uses the R8000. SGI has a new Audio/Serial option for Onyx and Challenge systems for high-quality audio processing. The single board solution has six ports and costs from \$5,00 in May.

### CANON'S NEXT ARM ADDS NEW INTEL BOX

The Advanced Technologies Operation (ATO) unit of Canon Inc's Canon Computer Systems Inc (CCSI) US marketing arm, will this week unveil a second NextStep-on-Intel box as the entry-level object.station 31. ATO has pared down the specification of its existing object.station 41 to create the 100MHz 486DX4-based desktop which comes with an IDE interface instead of the 41's SCSI and a standard, not high-resolution 17inch colour screen. It costs from \$4,000 from the second week of next month compared to the \$5,000-odd an entry model 41 costs. Object.station 31 comes with from 2Mb VRAM, 16Mb RAM, and 500Mb disk, ATO's proprietary video subsystem which speeds throughput but retains compatibility with standard monitors and support for Insignia Solutions Inc's SoftPC Windows-on-Unix software, though only a demo version is bundled.

### DEPLOY PROJECT CHANGES TACK AGAIN

X/Open Co Ltd has restructured its Deploy project once again following lack of financial support from ISVs. The way it sees it, "it is understandable that software vendors prefer us to do most of the work before they make commitments to adopt this technology". Deploy is using technology developed at the UK's Defence Research Agency (the TenDRA component of OSF's defunct Architecture Neutral Definition Format initiative) to create a comprehensive application porting and testing environment that examines conformance to all APIs. Deploy is continuing with support from existing backers, including IXI Ltd, Software AG, plus two other organisations that are shy of the publicity. It's still aiming to unveil a program based on Deploy at UniForum in March.

## CLOCKLESS CHIPS: THE BENEFITS AND THE DRAWBACKS OF ASYNCHRONOUS PROCESSORS

By Chris Rose, Editor, PowerPC News.

The world of the microprocessor is one buzzing with innovation, right? Well, maybe, but a few days at the Microprocessor Forum at the end of last year could have had you feeling that the industry was in something of a rut. Faster clock speeds, and increased degrees of parallelism are the staples of the chip makers: evolution, rather than revolution. So what about the prospects for something really different? There is optical computing of course, and Intel Corp and Hewlett-Packard Co's collaboration, which is thought to be based upon Very Long Instruction Words, but that seems about it. However, while the rest of the world cranks up clock speeds further and further, a few groups are experimenting with processors with no clocks at all. These asynchronous processors do away with the idea of having a single central clock keeping the chip's functional units in step. Instead, each part of the processor, the arithmetic units, the branch units and so on, all work at their own pace, negotiating with each other whenever data needs to be passed between them.

### Deterministic

Today's computers are clock-based for good reasons - for a start it makes them easier to build. A central clock means that all the components crank together and form a deterministic whole. So it is relatively easy to verify a synchronous design, and consequently to ensure that the chip will work under all circumstances. By comparison, verifying an asynchronous design, with each part working at its own pace, is difficult. But clocks too are proving to have their problems. As the clocks get faster, the chips get bigger and the wires get finer and so it becomes increasingly difficult to ensure that all parts of the processor are ticking along in step with each other. Even though the electrical clock pulses are travelling at a substantial fraction of the speed of light, the delays in getting from one side of a small piece of silicon to the other can be enough to throw out the chip's operation. Steve Furber, ICL Professor of Computer Engineering at the University of Manchester in the UK, points out various other shortcomings. One of the most interesting is the realisation that the whole of the conventionally clocked chip has to be slowed right down so that the most sluggish function of the most sluggish functional unit does not get left behind. To take a simple example: how long does it take for an arithmetic unit to add two numbers? The answer is that it depends on what the two numbers are. In rare cases additions can slow down quite dramatically due to the pattern of bits generated and the way that the carry-bits have to be handled. Faced with this problem, the conventional designer has two choices. S/He can throw in some extra circuitry to try to speed up these slow special cases, or alternatively just shrug and slow everything down to take account of the lowest common denominator. Either way the result is that resources are wasted or the chip's speed is determined by an instruction that may hardly ever be executed. It would be much more sensible if the chip only became more sluggish when a tricky operation was encountered. In addition, conventional processors are becoming increasingly power-hungry. Today's highest-end chips, like Digital Equipment Corp's Alpha and the PowerPC 620 give off around 20 to 30 Watts in normal operation. Furber extrapolates current trends to show that by the turn of the millennium, if we were to continue to use 5V supplies, we could expect to see a 0.1 micron processor dissipating 2kW. Of course, we will not be using 5V at 0.1 micron, but reducing the supply to 3V, and then 2V, only reduces the 2kW to 660W and then 330W, which are still very high dissipation levels. He also argues that one of the shortcomings of the conventional clocked processor is that many of the logic gates in the chip are forced to switch states simply because they are being driven by the clock, and not because they are doing any useful work. CMOS gates only consume power when they switch, so removing the clock removes unnecessary power consumption.

### First asynch

Last March, a team led by Furber succeeded in building a completely asynchronous version of Advanced RISC Machines Ltd's ARM processor - the chip that powers Apple Computer Inc's Newton. The result is claimed to be the world's first asynchronous implementation of a commercial processor - it runs standard ARM binaries. In building the chip, the team had to overcome some formidable problems. Number one was the lack of suitable design tools. Today's chip-makers rely heavily on computer-aided design to help them lay out their silicon. These tools can indicate whether a design will function in the way intended and can perform quite complex tasks such as spotting and deleting redundant circuitry. Unfortunately, they screw up when applied to asynchronous processors where the criteria of 'good design' are different. Take, for example, the problem of 'race hazards' and what happens when a

signal gets ever so slightly delayed in a chip. Ironically, timing can be more critical within an asynchronous chip than in a conventionally clocked one. Imagine a logic element on a chip with two inputs and one output. If the data to one of the inputs arrives infinitesimally later than the data to the other input, the output will be momentarily wrong. On a conventional chip this does not matter, as long as the glitch has gone by the time the next clock cycle comes around all will be well. But on an asynch chip... oh dear - no clock, and nothing to differentiate between glitch and data. The problem can be overcome by adding a couple of extra transistors to the gate design, but yes, you guessed it - conventional integrated circuit design tools will try to remove them as being redundant. At a higher level, there are other timing problems. It is quite possible for a badly designed processor to deadlock, with one functional unit waiting for data from another, unaware that it will never come.

### Concepts

Conceptually, it is the same kind of problem that bedevils anyone writing parallel software for multiprocessor machines. Guaranteeing that the processor never dies in this way is tricky. Although you can run simulations, they only establish that the chip fails to freeze under the simulated conditions, and not that it is totally freeze-free. The upside is that deadlocks make it easy to spot exactly when and where in the processor a problem occurred. Furber points out that when a clocked design hits similar problems it will simply grind on to the end of its run, spitting out an incorrect answer, so that trying to identify exactly where the problem occurred is even more problematic. The resultant asynchronous ARM chip, dubbed Amulet1 is still a little rough around the edges: compared with a conventional ARM6 it is bigger, uses more transistors and draws more power. Bearing in mind that ARM6 is the fourth iteration of a chip based upon well-known RISC principles, that is hardly surprising. The design of Amulet2 is virtually complete, with silicon expected towards the middle of the year. Meanwhile, the existing chip shows some novel properties, in particular an ability to degrade gracefully in performance terms as voltage is decreased and the temperature changes - the test chips worked correctly between -50°C and 120°C, running more slowly as the temperature was increased.

### Mix'n'match chips

So, will asynchronous processors become the next big thing? Even their best friends are cautious. Furber's best guess is that asynchronous techniques will find their way into certain niches: in particular he cites embedded applications such as compact disk error correctors, where the work required is extremely bursty, or something like the Apple Newton, where power-saving requirements make the approach attractive. It is also possible that we will see mix 'n' match chips, mainly clocked, but with some asynchronous parts. This is the approach that Advanced RISC Machines itself is considering, with the company's engineering director suggesting that "complete functional blocks, like a multiplier possibly, may go asynchronous in a couple more product generations." Meanwhile Philips Research Labs in the Netherlands is looking at the technology for signal processing and Ivan Sutherland, the doyen of asynchronous technology has reportedly described an asynchronous implementation of the Sparc architecture. Moreover, as the returns to be gained from tweaking existing RISC designs begin to diminish, processor designers will no doubt continue to keep revisiting all kinds of esoteric technology in search of that elusive competitive edge. Who's to say that they will not someday decide to throw away their clocks?

### TADPOLE READIES PENTIUM NOTEBOOK, SPARCBOK UPGRADE

As promised Cambridge, UK-based Tadpole Technology Plc will ship its 100MHz Pentium Tadpole P1000 portable at the end of this month (UX No513). ~~It'll come with a choice of 340Mb, 520Mb or 810Mb drives, 8Mb to 128Mb RAM, and a 10.4" colour active-matrix TFT display.~~ The P1000 supports DOS 6.22 and Windows for Workgroups 3.11, with Solaris x86, Windows 95 and Windows NT implementations planned. Prices are expected to start from £5,500. The company aims to shift 25,000 of the P1000s in the first year. Tadpole will also update of its Sparcbook 3 notebook offering with a higher clock microSparc, and a ruggedised offering. It's still talking about the planned DEC Alpha 21066 notebook (UX No514) although there's nothing on the horizon.

### NOVELL BLOWS HARD ON BIG BANG; UNIXWARE ON ICL SPARCS NOW DUE Q4...

With much puffery Novell Inc duly took the lid off UnixWare 2.0, PerfectOffice 3 and NetWare 4.1 last week. NetWare 4.1 is shipping already, two versions of PerfectOffice 3.0 will ship at the end of this month with a third due in March, the same time as UnixWare 2.0 on Intel iAPX-86 platforms. Novell says all Spec 1170 API work on UnixWare 2.0 will be complete by mid-year. Dot releases will presumably follow. With perhaps the ignominy of UnixWare 1.0 and 1.1 on its mind it made no rival-trouncing claims for the OS release but says its got 100,000 desktop and server users of the existing UnixWares in the field. ICL will ship UnixWare 2.0 binaries on its Intel TeamServers in March. The Sparc source port for its SuperServers is now set for the fourth quarter. Word on other ports is promised by the end of March. NetWare 4.1, after UnixWare 3.0 the second part of Novell's SuperNOS vision, has seven core services; distributed directory, messaging, multi-protocol routing, management, security, file and print, and system Fault Tolerance III. It costs the same as NetWare 3.x. PerfectOffice 3.0 includes Wordperfect 6.1, Quattro Pro 6.0, Presentations 3.0, InfoCentral 1.1, Envoy 1.0, a workgroup publishing tool and GroupWise 4.1 (UX No509). The Professional release includes Paradox5.0 and AppWare.

### ...WORKS ON B2 SECURITY WITH HARRIS

Novell Inc is hoping to speed its path towards an evaluated B2-level trusted secure Unix implementation by working with Unix security experts Harris Computer Systems Corp. The formal evaluation process has to be done through the National Computer Security Center and takes a notoriously long time to complete. Novell is still in the process of pushing through an evaluation of System V Release 4.1 Enhanced Security, first released back in 1991, and running on a long defunct platform, the unloved AT&T 3B2. Harris says it will leverage this existing evaluation, and accelerate the evaluation of its own Secure/Power Unix product, based on Unix SVR4.2 MP, running on its own PowerPC-based Night Hawks. Once evaluated, this work will be fed back to Novell and offered by both Harris and Novell in future UnixWare products. It is currently unclear whether or not this relates simply to PowerPC platforms (Novell is currently working on a PowerPC port - UX No 504) or will also benefit Intel-based UnixWare systems: security conformance is tied to individually evaluated hardware platforms. Novell claims that UnixWare 2.0 already meets five out of six requirements for B2 security, but meeting requirements is not the same as holding a formal evaluation. Harris hopes the deal will add to its secure software revenues and distribution channels. Secure/Power Unix is also available on IBM RS/6000s and Bull Escala systems.

### ROGUE WAVE READIES CODE GENERATOR UPGRADE

Corvallis, Oregon-based Rogue Wave Software Inc will upgrade its RWCGEN code generator at the beginning of February. RWCGEN links UIM/X, the GUI builder from Canadian software house Visual Edge Software Ltd, with Rogue Wave's View .h++ C++ library. Used together the three provide a complete Motif-application development system, the company claims. Version 2.6 of RWCGEN is an upgrade that's in step with UIM/X Version 2.6. RWCGEN tracks UIM/X translating UIM/X's instructions into View .h++ compatible code.

### TANDEM LAUNCHES NEW GENERATION HIMALAYA, INTEGRITY LINES

After, in its own words, "relaunching" itself with its Himalaya parallel servers, Tandem Computers Inc last week duly announced the ~~promised new models in the line, as well as new Integrity Unix boxes.~~ Tandem claims that with the addition of Asynchronous Transfer Mode input/output interfaces the new Mips R-series RISC-based parallel servers offer up to three times the performance of the current models at comparable pricing. The new Himalaya parallel servers are the K20000, the K2000, K200 and K2. The first two replace K10000 and K1000, the latter two supersede the K100. Like the K10000, the K20000 can scale to a theoretical 4,000 processors, and is said to offer a 50% performance boost over the K10000. It uses 200MHz R4400s. A two-processor affair, the K20002, comes with 256Mb RAM and seven slots. The models step up through multiples of two processors to the K20016, a 16-way system with 2Gb RAM. Above six-ways, TorusNet H-link controllers are bundled: the K20016 has eight of them. With Multidomain TorusNet the K20000 will scale to the full 4,000 CPUs and accommodate 4Mb cache per processor, 1,044Gb RAM and 16,711Tb disk. With TorusNet Domain the K20000 reaches 224 processors supporting 4Mb cache per processor, 57Gb RAM and 918Tb disk. With TorusNet Node the K20000 runs to 16 processors, 4,000Mb RAM and 65Tb disk.

#### 4,000 way systems

Configured with up to 56 processors each using Tandem's TorusNet, four processing modules can be linked together as a single 224-node domain, which are interconnected with fibre links to reach the maximum 4,000-way system. K20000s go from \$339,000. The K2000 also runs 200MHz R4400s. A two-way system, the K2002 comes with 256Mb RAM and three slots. The 16-way K2016 has 2Gb RAM and 31 slots. K2000s start at \$135,000. The K200 line uses 125MHz R4400s. A K202 with two CPUs comes with 128Mb RAM. The top-end four-way K204 has up to 512Mb RAM and 184Gb disk. It starts at \$70,000. The K200s offer more memory and expansion than the old K100s in addition to the faster processor. Meanwhile, the existing K100s have also been fitted with the latest Mips RISCs, been renamed K2s and still start at from \$25,000. All are out in March except the K200s which are slated by mid-year. Existing users can upgrade by swapping boards or by adding the new boards to their existing configuration.

#### NonStop D30

Each runs Tandem's NonStop Kernel 2.0 release D30.01, the microkernel implementation of its proprietary Guardian operating system. D30 comes with a Posix.1 and .2 API superset; Tandem is aiming at XPG4 branding rather than Spec 1170 conformity per se. Beta releases of the promised DCE, parallel CICS and NonStop Tuxedo are slated for dot releases of the operating system from next quarter. There are also new Integrity Network Resource (NR) and Fault Tolerant (FT) Unix machines using the 200MHz R4400 RISC. The NR line, which are re-badged Silicon Graphics Inc Challenge servers, now include the symmetric multiprocessor NR/4412 (12-way Challenge) and NR/4436 (36-way Challenge) models at from \$97,000 and \$149,000 respectively. The performance improvement is tagged at 33% but users of the Integrity NR models may see a 70% performance boost in some cache-dependent applications. Tandem went to its UB Networks unit for the GeoRim/Ethernet Asynchronous Transfer Mode gateway, which scales up to 12 connections to the Himalaya server so data from an Asynchronous Mode network can be broken into multiple Ethernet connections and fed to individual CPUs; K20000s go from \$339,000 in March.

### SAG ADDS UNIX FEATURES TO MAINFRAME ADABAS

Darmstadt, Germany-based Software AG is readying a relational Adabas mainframe server with Unix system support. Adabase version 6.1 for mainframes includes triggers, stored procedures, DBA Workbench 2.1 API and an SQL-compatible interface. Unix features include SMP support and Adabas and SQL integration. Adabas 6.1 will beta in March and Software AG expect general release in July.

### PLAN 9 GOES COMMERCIAL WITH AT&T'S SET-TOP BOXES

Plan 9, Bell Labs Unix successor, is making the move beyond its early success in academia towards the commercial market. And as expected (UX No 476, 505), it will appear first embedded in interactive consumer and telephone applications, rather than on general purpose computer systems. At the Consumer Electronics Show in Las Vegas a few weeks ago, AT&T demonstrated two set-top boxes in a new family of TV Information Center products that use Plan 9 running on an AMD 29200 processor. The boxes also include AT&T's 160X digital signal processor chip, audio RAM and video chip. The idea is to enable consumers to display information on their TV screens downloaded from ordinary telephone lines and selected using on-screen menus. Local services bureaus are currently being set up by AT&T to filter information and handle customer billing. Services are expected to include home banking facilities as well as access to news and entertainment.

#### Code name "Sage"

The boxes, developed under the code name "Sage", will be launched some time in the second quarter, according to *Electronic Engineering Times*. Zenith Electronics will also use the functionality in its own televisions and set top boxes due for launch in 1996. AT&T has already used set-top boxes running Plan 9 as part of Viacom's interactive TV trial in Castro Valley, California. Sony has developed a comparable system, called Apertos, in its Japan-based research labs, points out the paper. Meanwhile, Plan 9, developed in the main by Unix pioneers Ken Thompson, Rob Pike, Dave Presotto and Phil Winterbottom, with Dennis Ritchie as main cheerleader, has been gaining popularity amongst its academic users. Its macro-kernel base takes up just 170k and it allows for fully distributed operation across an assemblage of bit-mapped terminals, CPU servers and file servers. Components of Plan 9 include the alef concurrent object-oriented language, the 9P state-full (rather than state-less as in NFS) simple network file protocol, a 300Mb/s network called Planet developed by Phil Winterbottom, and an audio compression algorithm capable of 13:1 compression (compared with MPEG's 4:1). The current Plan 9 research project, Brazil, is said to look like Plan 9 on the outside but has numerous internal changes, including shortened kernel data paths to improve throughput. The windowing system was apparently re-written in four days by Rob Pike using the alef language. For those non-academics unable to get hold of Plan 9, there are a few Unix tools that make Unix look somewhat like Plan 9, including the 9term terminal emulator for X-Windows and gwm from Australia, which makes X look like a Plan 9 "blit" terminal. For licensing information, write to Neera Kuckreja at AT&T Bell Laboratories, Room 2C-557, Murray Hill, NJ 07974.

### INTEL, ADVANCED MICRO SETTLE ALL THEIR DIFFERENCES

Exhausted by the seven-year war between them, Intel Corp and Advanced Micro Devices Inc have decided that skimming their profits just to keep lawyers in clover is a mug's game, and have settled all outstanding issues in an agreement that is being seen as something of a victory for Advanced Micro. It agreed to pay Intel \$58m, but gets a perpetual licence to the microcode in Intel's 80386 and 80486 microprocessors, lifting the cloud that has been hanging over the success of the Am486 parts. Advanced Micro agrees that it has no right to copy any other Intel microcode including the Pentium Processor, P6 microcode and 80486 in-circuit emulation microcode. The two will negotiate a new patent cross-licence agreement to succeed the one that runs out at the end of the year. Offsetting the \$58m, Intel will pay about \$18m awarded by the arbitrator for breach of contract and will not contest the rights granted Advanced Micro in the arbitration award. The latter gets the right to use foundries for Am486 products containing Intel microcode for up to 20% of its Am486 production, and Advanced Micro and its customers get a licence on Intel's Crawford 338 patent, covering memory management. And to draw a firm line under the past, the two agree not to initiate legal action against one another for any activity occurring prior to January 6 this year. Intel had been seeking damages estimated at more than \$1,000m, but Advanced Micro had been seeking \$2,200m in damages in its anti-trust counter-suit. The two companies said they have been in negotiations since October but the talks only came to light last week. The original dispute was triggered by an iAPX-86 second-source agreement Intel signed with Advanced Micro back in 1982 that went sour.

### SUN READIES NETWORK/SYSTEMS MANAGEMENT UNDER ONE HOOD

Sun Microsystems Inc is expected to reveal its network and systems management-under-one-hood environment on the 30th of this month (UX No 514). The object-oriented Solstice will embrace Sun's enterprise-level multi-user Encompass network management system which is derived from NetLabs Inc's Dimons environment (UX No 466). Sun will continue with SunNet Manager for existing users and both Encompass and SunNet Manager will feed information into Solstice. The notion is to provide a means of viewing all managed systems from a single point and carve regional domains out of large network setups that can operate independently. Product is expected in the third quarter. With Solstice, Sun will attempt to halt an apparent slide in network management market share towards rival Hewlett-Packard Co OpenView and IBM Corp NetView for AIX network management environments.

### ON OUR OWN? OPEN SYSTEMS TODAY GOES TO INFORMATION WEEK

We're beginning to get that lonely feeling again. *Open Systems Today*, which back in the good ole days used to be *Unix Systems Today!*, is being folded into *InformationWeek* magazine, a sister publication, so that owner CMP Publications Inc can light out after *ComputerWorld*, the last of the giants it figures it needs to slay. *IW* will keep its name, the book will be remade starting in March and *OST* will contribute product reviews in a new section called OpenLabs because *IW* was deemed to have lost the techie types over the last few years. The newly constituted *IW* will have a controlled circ of 300k with another 25,000 copies going to the news stands, more than double what *ComputerWorld* has. We of course will continue to worship at the shrine of the goddess, Unix. We'll follow the fortunes of the remaining US Unix glossies with interest.

### CERIDIAN BUYS PARAGON, TWO OTHER FIRMS

The Minneapolis-based Ceridian Corp, successor company to Control Data Corp, has acquired Paragon Imaging Inc as a present for its Computing Devices International, which has substantial operations in Canada and a UK base. Paragon, based in Woburn, Massachusetts, did about \$5m in 1993 with its defence-related imaging software which is used primarily by the US Department of Defense's intelligence community and service commands. Ceridian also bought the assets of Human Effectiveness Inc, Chicago employee assistance provider, and Payroll Tax Management Inc, a payroll tax filing operation in Glendale, California, for its Employer Services arm. No terms.

### CRAY'S SEVEN TRITON ORDERS

Cray Research Inc reports seven advance orders for its forthcoming parallel vector supercomputer code-named Triton, including the one already announced from the US Los Alamos National Laboratory; the first system, a four-processor model, has already been installed and accepted at one of the customer sites. Cray also reported that Rosgidromet, the Russian Federal Service for Hydrometeorology & Environmental Monitoring in Moscow ordered two Cray supercomputers valued at \$13 to \$16m.

### X CONSORTIUM TO DISCUSS FRESCO OBJECT ORIENTED INTERFACE

The X Consortium is staging a technical conference January 30-February 1 in Boston at the Marriott Copley Place. One of its features is discussion of the hot Fresco object-oriented user interface. It'll cost \$225 to attend. Call +1 617 374-1000 ext 175 or e-mail registration@x.org.

## DYNASTY 2.0 DUE EARLY MARCH

After six months in beta, Dynasty Technologies Inc, Naperville, Illinois, says it'll be ready to go GA with version 2.0 of its Dynasty Development Environment second generation application development system in early March. Version 2.0 will come in at less than the \$8,000 per developer Dynasty charges for DDE 1.0 which has been around for some 16 months and is claimed to have some 500 users spread around 43 sites. Motif client support will follow later this year - Macintosh in 1996. Dynasty, which recently lost its marketing director Martin Yam to Next Computer Inc and hasn't yet found a replacement, is up to 60 staff from 10 at the beginning of 1994 and is capitalised to \$26m. It's still looking towards an IPO in 1996.

### Dynasty business rules

Dynasty has its own object repository for business rules, some three years in the making, but says it's quite willing to trade that in for any standard that emerges. Unlike Forte, it only develops applications, forging relationships for other technologies. It doesn't have or plan its own object request broker, on-line transaction processing monitor or system management environment. Dynasty uses Tivoli Systems Inc for distributed management and is integrating Novell Inc Tuxedo OLTP monitor into DDE 2.0. It offers a Distributed Computing Environment implementation, but also the option of using Open Horizons Inc's DCE 'plus.' CICS, Encina, and Top End support will follow in dot releases of DDE, which includes a TP object so that Dynasty can be used for building various flavours of OLTP on top.

### Second generation future

With potential rival Ochre Development Inc now on the block (UX No 520), what's the prospect for the new breed of application developers that like to call themselves 'second generation,' including Dynasty, its main rival Forte Software Inc and perhaps wanna be's like Ochre and Bachman Information Systems Inc? They've got the Visual Basics, Guptas, PowerBuilders, Oracles, Informixes and other first generation crowd breathing down their necks with their own second generation plans. Dynasty has little time for their claims. For starters most other 4GLs are interpretive, it says. In other words they carry their own runtimes and lock users into their particular environment. If a user wants to stop dealing with that ISV it's unlikely to be able to continue with implementation using only runtimes. Dynasty doesn't deal in runtimes and claims both it and Forte have a long lead on the companies playing catch-up in their space.

### Money earner

The reason other ISVs are so keen to get in on the act is because enterprise applications are clearly a big money earner and second generation application development systems, which have been designed from the ground-up as enterprise-class environments, are beginning to be recognised as the route to enterprise-wide software. First generation systems simply can't accommodate enterprise-type requirements, Dynasty says. The check-list includes the ability to support mixed, cross-platform development from Mac and Motif clients as well as Windows desktops. The most widely-identified second-generation development characteristic is support for partitioning. That is the separation of the application presentation environment, application data and the application's business rules (processes) and their availability for processing on different, distributed CPUs. At present a financial institution's business rule for defining credit worthiness in PowerBuilder will be tagged to a button that's attached to a front-end on each users' desktop, for example. Second generation environments store rules as separate objects in a repository which can be applied as required wherever an application is being used.

### North of 50

Second generation environments must provide high-performance code generators and be highly scalable. "North of 50 users," as Dynasty puts it. Finally they must be object-oriented, incorporating inheritance, polymorphism and other object mechanisms. The slow uptake of object technology is the biggest brake on development of the second generation application market Dynasty argues. As well as the traditional application development tool ISVs larger corporate performers such as Fujitsu Ltd, Texas Instruments Inc and Arthur Andersen are looking for their own second generation solutions. Andersen will likely throw a ton of engineers at the problem and come up with its own solution, Dynasty believes. Whilst first generation developers such as PowerSoft will add second generation features to their tools, Dynasty expects them all to have to re-write their software for performance and 3GL code generation. Dynasty reckons analysts have pegged the task of creating a high-performance 3GL code generator at no less than \$15m and three years work.

## SPEC95 SET TO HALT THE CHEATING

Created in November 1988 by Apollo, HP, Mips and Sun to provide standard performance benchmarks for measuring and characterising RISC computers, the System Performance and Evaluation Corp (SPEC) has been drawing flak in some quarters for its seeming inability to address the creeping trend towards creative performance measurement techniques that threaten to undermine its credibility. Indeed, after drumming up a set of restrictions on the use of optimisation flags for compilers and preprocessors last summer called SPEC Baseline Run Rules, SPEC subsequently decided that disclosure of SPECbase results alongside standard SPECint and SPECfp numbers shouldn't be mandatory as originally planned, only that they be made 'available.' "Guess how many vendors have reported SPECbase results along with the inflated SPEC results in their press releases and new products materials since July 1," asked Andrew Allison's Benchpress at the end of the year. None that we've come across. Although SPEC says it will address these and other concerns through a new, single metric using baseline rules called SPEC95, it expects optimisation technologies to become much more prominent. Both industry and academia have indicated their beliefs that compiler and other optimisations will become increasingly essential in vendors' offerings and the claims made for them. Source code on any system is now routinely optimised for use by on board compilers. SPEC admits its current SPEC92 suites, focus on CPU, memory and hierarchy rather than I/O, graphics or distribution. SPEC95 will include updated versions of the set of source applications which are run to test and compare system performance and will emphasise raw processing capabilities. In addition to SPECint95 and SPECfp95 speed metrics, the group expects to retain a benchmark of raw CPU horsepower, currently known as SPECrate. There's been some demand for a benchmark that can measure multiprocessing system performance (SPECrate doesn't) although that will require more emphasis on stuff like I/O measurement and clustering than SPEC's existing system development multitasking (SDM) suite currently has. In all likelihood SPEC will keep SPECrate as a horsepower measure and drum up a new suite aimed at measuring overall multiprocessing system performance. SPEC95 goes to an initial vote at the end of this month with final approval penned for the end of March. The group expects a SPEC95 press announcement in the second quarter and first SPEC95 reported in June. Beyond SPEC95, the group is looking at how to measure stuff like client/server environments and will probably get together a package of database and workload measurement suites. It'll still be providing source code, not specifications like the Transaction Processing Council. It's also looking at how it will conduct future CPU benchmarking in the light of technologies described at events such as Microprocessor Forum.

## AXIL ULTRASPARC DUE IN THIRD QUARTER

Axil figures it did about \$50m this past year, roughly 10,000 units give or take. It's projecting it'll better the revenue figure by 50%-60% this year. Currently its best seller is its 90MHz HyperSparc, a chip model Sun Microsystems has snubbed. It can get four-ways with the thing, something not available with the 100MHz Ross chips Sun is adopting. Axil thinks it may turn out to be one of the only Sparc followers to go for UltraSparc and hopes to have its boxes, restricted to the MBus design, out by Q3. It offered to buy its design team more engineers to quicken the pace but doubts it can beat Sun at its own game.

## PLATINUM GOES RUSSIAN

The Platinum accounting package has now been fully localised for use in Russia. Platinum Russia, established in May, has invested 12 years in the localisation process and now offers fully supported implementations of nine Platinum modules from Platinum Software Corp and a further three due by the end of last year. The venture was established by Olga Peterson who had previously localised the rival Scala package while working for Ernst & Young. Besltsmodeller AB's Scala now has more than 50 installations in Russia. Given the time and complexity involved in implementing these packages, most of the work is done through one of the Big Six accountancy firms. Peterson said that the Big Six are in effect her main clients. "One of the key problems here is the twin currency issue and Platinum has been proven to work well in a hyper-inflationary environment," she noted wryly.

# unigram·x

The weekly information newsletter for the UNIX™ community worldwide

So, barred from using the name Macintosh for their clones, what are people that license Mac OS from **Apple Computer Inc** going to call their machines? People presumably have Raincoat and Gaberdine registered already, but the Macintosh is actually named for a variety of apple, and while all Mac devotees that don't live in France would detest a machine called Golden Delicious, Apple has bagged Pippin, there's always Cox and Russet and Laxton's Superb, and then there's Blenheim Orange and Worcester Pearmain - despite appearances, both apples, and while that very best of cooks, the Bramley Seedling, must be as American as apple pie, for our own Mac clone, we reckon we'll settle for Granny Smith.

After poking around a bit, we hear it's still a bit premature to expect more details of the **Hewlett-Packard Co/Intel Corp** alliance on VLIW architecture. It's all gone very quiet since the announcement last year though.

**Evans & Sutherland** is restructuring to cut some \$13m from its operating expenses, eliminating 200 jobs, or 20% of its workforce. It'll take a one-time hit of \$11.5m against its fourth quarter to the end of December 1994 to cover the cost. Its numbers are due in the third week of next month and will show a loss for the year. E&S blames changing markets for the move.

**Compagnie des Machines Bull SA** sales for 1994 rose 5.8% to the equivalent of \$5.641m; the company says the increase was 7.9% when calculated at constant exchange rates and for comparable business parameters: it is the first time since 1989 it had reported revenue growth - the average decline over the past four years has been 9%; it says it reckons the net loss for 1994 will come out to about \$375m.

**Digital Equipment Corp's** video server has won it another contract, this time for \$9m with Adlink, the second-largest cable television advertising distribution service in the US: the Digital Media Studio will distribute advertising to over 2m cable subscribers in Southern California; the pilot installation ties a video ad insertion system in a cable television head-end with a Media Studio at Adlink HQ, and Adlink plans to deploy 53 of the Digital boxes to affiliated cable companies in the Los Angeles area.

If you hear the term FBus that's another name for the new UPA bus **Sun** is drumming up for its new UltraSparcs.

**Hewlett-Packard Co** last week unveiled its first worldwide ad campaign designed to impress computer system decision makers with the company's competitive advantage. The print ads, created by troubled **Saatchi & Saatchi Advertising** and complete with lava flows and icebergs, launch this week.

**Encore Computer Corp** has sold three Alpha AXP-based Infinity real-time systems worth \$1m to the New York Power Authority and Main Yankee Atomic Power.

There isn't even a bid in for **Pyramid Technology Corp** and already some lawyer-happy shareholder has fired off a suit against the directors: plaintiff shareholder Brian Pohli claims Pyramid directors have breached their fiduciary duties "in connection with defendants' response to an acquisition proposal" - all the poor guys did was make a non-committal announcement reporting that **Siemens Nixdorf Informationssysteme AG** was holding talks that could lead to an offer of \$15 a share to buy the company.

**IBM Corp's** core corporate debt stood at \$4,600m at the end of the third quarter. Total company debt, including computer financing debt from its leasing subsidiary, is \$24,320m.

Now that **Hewlett-Packard Co** has pushed much of its object technology out into the various divisions, the advanced technology group run by Mike Matthews, which reports to open systems software division marketing manager Dorothy Deringer, has turned its attention to other things.

The forces at be at **Oracle Corp** seem to be in the process of clearing out its old guard of employees. Its latest victim is Oracle UK managing director, Mike Harrison, who left the company last Thursday. A replacement has yet to be found, but recent experience suggests that it is likely to be a person who toes the line.

**Visix Software Inc** has a new implementation of its Galaxy application development environment. Galaxy/Global uses Unicode to provide for the creation of distributed internationalised applications that can be deployed in local language versions. A Japanese language input version is out first with others to follow. On Unix, NT, Mac, OS/2, Windows and OpenVMS prices start at \$16,800 per developer, no runtimes.

**Hewlett-Packard Co's** promised HP-UX 10.0 operating system release is due next month.

And how many will it just sit on and not attempt to exploit? **IBM Corp** says it received 1,298 US patents in 1994, a new record for any one company in any one year.

**IBM Corp** and its PowerPC partner **Hitachi Ltd** are to develop new communications software based upon IBM's MQseries messaging technology for Hitachi systems and will promote common APIs for running applications across any MQseries implementations. Initially Hitachi will put MQseries into its TP software for workstations and mainframes, with other system implementations to follow.

Demo '95, the annual showcase sponsored by **PC Letter**, is set for February 6-8 at the Stouffer Esmeralda Resort in Palm Springs. Call +1 415 286-2732.

**XAPIA**, the X.400 API Association, has a meeting set for February 6 in La Jolla, California at the Sheraton Torrey Pines Hotel. The subject is a client directory API.

Two economists - one with the **Brookings Institution** and the other with the **Federal Reserve** - are publishing a book called the **Brookings Papers on Economic Activity** that claims that computers contributed at most 0.2% to American productivity from 1987 to 1993 - 0.4% if you throw in software and labour.

The NextStep Expo, scheduled for June, has been cancelled.

CeBIT '95 Hannover Fair is scheduled for 8th to 15th March.

The **Business Software Alliance** estimates Chinese pirates rip off about \$322 million a year in US software. Other countries lose about \$273 million a year. About 94% of all the software available in China is pirated, they say.

Former **NeXT Computer Inc** product marketing director Rick Jackson has turned up at **Taligent Inc** as CommonPoint product marketing manager (UX No 511). Eric Chu is now product marketing manager at Next.

Mountain View, California **Insignia Solutions**, the PC/Unix compatibility software house has made David Sidwell its VP of European sales and support. He reports direct to president and CEO Robert C Lee.

**Hewlett-Packard Co** will flesh out details of its forthcoming Precision Architecture RISC 8000 microprocessor at ComCon between March 5-8 and will announce the thing soon after, we hear.

At its Solstice object enterprise network administration and distributed management event on the 30th - see page 6 - **Sun Microsystems Inc** is also expected to re-brand some of the technologies now folded back into the **SunSoft Inc** unit following the collapse of its planetary system, including PC emulation.

For any non-believers out there, we understand **Sunsoft Inc** has a manager, four people and two contractors working on the Solaris-on-PowerPC initiative. **IBM Corp** is thought to have a couple of folk on it. There are nearly 200 PowerPC machines spread around SunSoft engineering running it and there are already Japanese, Korean and German language versions.

Someone recently asked us how much of a 1993 **Gartner Group** prediction we wrote up back then has actually transpired (UX No 419). Gartner said that by 1995 "Sun will compromise much more substantially than it previously has, de-emphasizing Sun-specific APIs and services such as Open Network Computing and Open Look in favour of X/Open, OSF and USL-endorsed interfaces." We thought we'd ask **Sun Microsystems** boss Scott McNealy how much of it has come to pass. He replied "we remain committed to COSE, X/Open, ONC+ and the only difference from two years ago is that we do OSF stuff now too." Whoever submitted this request, he says, obviously "needs some more work assignments."

Unigram.X is published by Unigram Products Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)71 528 7083 Fax: +44 (0)71 439 1105.

Editor: William Fellows. Deputy Editor: Catherine Everett. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: UK & Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: unigram!george@uunet.UU.NET

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Registered at the Post Office as a Newspaper

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KBN

24 JAN. 1995

The weekly information newsletter for the UNIX™ community worldwide

London, January 23-27 1995

Number 522

## PLAY IT AGAIN, SAM: NOVELL HUMS UNIFIED UNIX REPRISE, AT&T GIS TO CO-DEVELOP SUPERNOS

Stop me, please, if you've heard this one before.... There's an initiative afoot to get the industry behind a single Unix operating system. Really. No kidding. It was actually supposed to be announced this Monday January 23 *anno domini* 1995, until the parties involved said they reckoned they didn't have enough substance to justify getting the press together in San Francisco and pulled the plug at the eleventh hour. However, we were assured this hiccup hasn't changed their plans though it's raised speculation that the final deal, already long in the making, will be broader based, less Unix-centric - more "pervasive" perhaps - when it finally comes down than originally intended. We shall see. As far as we know now, AT&T GIS is still supposed to announce that it is committed to co-developing Novell's speculative SuperNOS operating system, the proposed combination of NetWare and UnixWare due out in 1997 at the earliest, but not this Monday. We understand AT&T GIS is going to throw its RAS (Reliability, Availability and Servicability) technology into the pot to give SuperNOS some substance. It's supposed to contribute full-time software architects and engineers to the cause. Its Intel symmetric multiprocessing hardware is supposed to be a key SuperNOS porting platform for systems over four-ways. If things had gone down as planned - and some parties believe it didn't because the AT&T reorg suddenly created a bunch of people with two cents to add to what was going on - AT&T GIS interim chief Bill O'Shea was supposed to stand up and pledge to re-base his company's Unix offering on a shrinkwrapped concoction that could ultimately prove impossible to develop. He was to share the podium with Novell chairman Bob Frankenberg; Intel senior VP David House, Oracle VP Richard French, Chase Manhattan Bank VP Gene Friedman and Computer Associates International president Sanjay Kumar were to be wheeled out in support. Furthermore, reports indicate the UnixWare propaganda machine was immediately prepared to imply that GIS, said to possess 40% of the NT server market, is moving away from Microsoft to embrace Novell. Don't bet on it. On the face of it, unless this thing gets too "pervasive," it's more a slam at Sun Microsystems Inc, which would like everybody to buy Solaris, than at Redmond. Before the companies aborted the announcement, sources from the Unix side of AT&T's house said to think of it as a maintenance move. GIS' Unix system has yet to progress past SVR4.0. Going with Novell will upgrade its code base - provided SuperNOS can actually be pulled off, something GIS obviously thinks can happen. Others, closer to Novell, added that this RAS stuff would be made part and parcel of the old USL Amadeus project, the Chorus microkernel initiative which, they said, has now been folded into SuperNOS.

### The old days

With this new partnership, things could revert to the way they were with security and MP back in the old days when AT&T still owned Unix. GIS can do the RAS work and turn it over to Novell to be made part of the generic operating system. This relapse into old habits is reportedly meant to rationalise AT&T's development costs, an argument we assume Novell is already using to try to persuade other Unix vendors to get their code from Utah. Novell will probably say that it can add features faster and more economically than IBM or HP, for instance, can on their own. Periodic reconvergence on a central core, despite its narrow following at present, is getting to be habitual with the Unix industry. The last time it tried was with the marginally successful 1170 API and there's been drift ever since, especially in light of Novell's lack of leadership. Solid MP RAS features are absolutely essential with GIS' installed base of large enterprise accounts where availability translates directly into money. Dayton's Unix actually competes with IBM's mainframe operating system MVS which is touted as being three or four times more reliable than your run-of-the-mill Unix by IBM's so-called "R Reports." GIS would currently maintain that thanks to its RAS crown jewels its Unix system is 90% as good as MVS. Insiders claim its next release, due later this year, will at least equal if not be 5% better than MVS, putting it leagues ahead of HP/UX.

## HAL PROMISES METAL IN MARCH

HaL Computer Systems Ltd, popularly known as the non-computer computer company, will finally unveil its first metal early in March when it's expected to announce a line of workstations based upon its 64-bit PM-1 Sparc. HaL, the Campbell, California outfit founded by RS/6000 designer Andy Heller, who was dismissed before Fujitsu Ltd rescued the company by buying the 56% it did not already own back in November 1993, has been working on its long overdue 64-bit Sparc for more than three years. Originally seen as being far ahead of its time, much of any lead it had will have been all but eroded by the time tin hits the streets. PM-1 is anticipated as an 0.5 micron CMOS, 225 SPECint92 part (UX No 491). Beta and ISV deliveries are expected to begin in a few weeks time - the company is still working to stabilise the software environment. The workstations will ship later in the year. Clarke Hoyle joined HaL from Unisys Corp at the beginning of the year as VP hardware marketing to spearhead the workstation campaign.

## POLO FALLS INTO THE HOLE

IBM Corp has trashed one of its three Power Personal systems, the sleek, small-footprint executive model known as Polo which has been widely shown since it featured on the cover of Byte magazine last April. Seems the "executive" price was never going to make a good business model so the unit was heave-ho'd a couple of weeks back. IBM's Power Personals started life as PowerPC 601 machines, metamorphosed into 603 affairs, have been seen at every trade show for nearly a year, been written-up, reviewed and now made obsolete without ever coming to market. That leaves the desktop and the Thinkpad-style notebook for the spring announcement. Under Louis Gerstner's new regime Michael Coleman has been brought from the PC Company under RS/6000 chief Bill Filip to breath some life into that part of the organisation. Early indications are that in his role as PC server chief Coleman will focus on getting a PowerPC server into a PC-style box for OS/2, Windows NT and Solaris. RS/6000 servers will fill the AIX requirement.

## POWERPC CAMP SEEKING UNIXWARE CARD

Meanwhile, sources tell us that PowerPCers at IBM Corp, Apple Computer Inc and Motorola Inc have been chatting recently to UniSoft Ltd, Novell Inc's porting arm for non-mainstream platforms, et al, about getting UnixWare on the PowerPC. Now if you were to listen to the Novell side of things, you would think that IBM was ready to throw the baby out with the bath water as far as Solaris is concerned - and of course substitute UnixWare - purportedly after realising Solaris wasn't going to sell very well. IBM's point of view about things, we've been given to understand, might be a tad more modulated. It just wants to sell as many boxes as possible and so will countenance any operating system on the PowerPC - the more software the more boxes sold they think. It wants all flavours of Unix on the chip.

## HP-UX 10.0 IN FEB

Hewlett-Packard Co is readying its HP-UX 10.0 announcement for February 9th, and is bragging about how everything will be hunky dory on getting users and applications up from 9.0x releases. Still a mix of Novell Unix Systems Group and OSF code, a new business release will go up on the expected new hardware platforms, and to ISVs and developers. A general business release to the installed HP base will follow - both this quarter, the company claims.

### IBM FINALLY GETS JUDGE EDELSTEIN REMOVED FROM CASE

IBM Corp has finally won victory in its long-running battle to get Judge David Edelstein off its case. The Second Circuit Court of Appeals granted IBM's motion to have Judge Edelstein, 84, removed, saying that although the court did not accuse him of bias, his statements about IBM went beyond the courtroom and would cause a reasonable person to question his impartiality. The ruling is seen as unusual because Federal appeals courts are normally reluctant to remove judges on the grounds it would undermine the judiciary and encourage parties to shop around for judges, and it went out of its way to say that Judge Edelstein is "one of the ablest and most experienced judges" in the New York area: "based on our knowledge of the judge's long and distinguished career we are prepared to assume the judge's subjective disposition is one of impartiality" towards IBM - but that a reasonable observer might think differently. The decision is seen as making it more likely that IBM will succeed in its bid to get the 1956 anti-trust consent decree terminated.

### BORLAND AXES 40% OF ITS WORKFORCE

Borland International Inc's restructuring is every bit as severe as forecast, with about 40% of the workforce - 650 people out of 1,700 - to lose their jobs; half of the cuts come in the US. The restructuring will include closure of many distribution operations in Europe, and the company will also close its duplication and packaging plants in the US and Europe and buy the services in. It will maintain principal operations in the UK, Germany, France and Japan, closing or cutting back operations heavily elsewhere. Where it does pull out of a country, its products will be sold through distributors. Borland highlights as its core products the C++ language, dBase, Paradox, and the forthcoming Delphi95 environment.

### STORAGE TECHNOLOGY REORGANISES FOR MAJOR MID-RANGE PUSH

Storage Technology Corp has subsumed its XL/Datacomp Inc acquisition in Lisle, Illinois into a unified mid-range marketing organisation in a shake-up intended to increase its focus on the open/systems distributed computing market. The new StorageTek Distributed Systems Division Inc also includes the marketing, sales and service units of Lago Systems Inc, a Los Gatos, California developer and manufacturer of tape library systems that StorageTek acquired in 1992. The new unit will be based in Lisle, and will offer the AS/400 products and services formerly marketed by XL/Datacomp and other storage systems for the mid-range market. Offerings will include a full line of Nearline automated tape libraries, including the machine-independent WolfCreek 9360 and a new library for Unix workstations and personal computer networks; the NearNet hardware-software combination managing such storage; and a variety of performance-scalable disk subsystems, including the Northfield 9638 and Nordique 9100 with Shared Storage Resource for mainframe, Unix and desktop environments. Storage Technology also plans to add support for Hewlett-Packard Co and Bull HN Information Systems Inc Unices to its StorageTek product line; and improved multi-host tape management and client capabilities. It has also set up new leasing deals and services for customers.

### DEC SELLS TRADING SYSTEMS DIVISION FOR \$10m

Management Technologies Inc, New York has completed the purchase of Desisco, the London headquartered trading systems division of Digital Equipment Corp for about \$10m. The unit, now renamed MTI Trading Systems, is expected to add more than \$15m to Management Technologies' annual revenues, resulting in an estimated group annual total revenue in excess of \$40m. Meanwhile, the company is currently in the process of turning itself into a financial services holding company that grows through acquisition, and has bought Winter Partners AG, the international banking systems company.

### JAPAN'S EARTHQUAKE-DAMAGED PLANTS STRUGGLE BACK TO WORK

The earthquake that hit Hyogo and Osaka last week caused damage and casualties in a 60-mile radius in and around the western port city of Kobe. It extended to Japan's second largest city of Osaka where many Japanese electronic companies, including Sharp Corp, Matsushita Electric Industrial Co and Sanyo Electric Co have their headquarters, and on to the ancient imperial capital of Kyoto. Sanyo and Sharp said they resumed operations relatively quickly at their electrical plants, after establishing that there was no major damage, and NEC Corp said its semiconductor plant in the area would resume operations shortly, minimising the threat of a shortage of memory chips, although work at a Mitsubishi Electric Corp chip plant was still suspended. Fujitsu Ltd's display and peripheral plant in Akashi, near Kobe, was still closed, and the company reported that one building was leaning and said it was possible that the entire facility will have to be rebuilt. Matsushita suspended operations at two electrical plants in Kobe city, although no significant damage to production lines and buildings had been found - "We can't resume operations until power utilities and water supplies are restored," it said. Texas Instruments Inc said its KTI Semiconductor Inc joint venture plant near Kobe suffered no damage, but the plant, in which Kobe Steel Ltd is the local partner, suspended production pending recalibration and repair of equipment and resumption of computer support, although operations are expected to resume within a week. Quantum Corp said facilities of its manufacturing partner, Matsushita Kotobuki Electronics Industries Ltd, were unaffected and the manufacturing process has not been disrupted. Nippon Telegraph & Telephone Corp said it had repaired most of the telephone exchanges damaged in the quake but 9,000 lines were still down.

### FILENET'S VISUAL WORKFLO OUT FOR HP-UX, AIX AND NT: SOLARIS SOON

Costa Mesa, California-based FileNet Corp is shipping the latest addition to its WorkFlo Business System software family, Visual WorkFlo, available for HP 9000, RS/6000 and Windows NT servers. The version for Solaris will ship at the end of the month. Visual WorkFlo is a Windows-based workflow automation product that integrates object-oriented technology with graphical authoring tools to automate the flow of images, data and text in a client-server environment. It enables users to add any task they wish into any of their company's business processes in real time, says FileNet. One of the features FileNet is emphasising is that Visual WorkFlo is quick and easy to use. This is, adds the company, because of the use of object technology. However, the objects are hidden from the users in a repository that links into Oracle or Sybase relational databases through an abstraction layer that makes them look like object-oriented databases. The advantages of this, says FileNet, are that a tried and tested database is used that requires only standard SQL. FileNet claims that Visual WorkFlo provides an open, flexible framework for workflow application development, supporting standard tools such as C++, Visual Basic and PowerBuilder, Windows-compatible applications that are Dynamic Data Exchange or Object Linking & Embedding 2.0-compliant; and WorkFlo Business System product. All routing, queuing and exception handling is managed through Visual WorkFlo using standard Windows interfaces and graphical tools. Visual WorkFlo consists of three modules: a client run-time program called Visual WorkFlo/Performer that ensures the flow of work to and from the business applications at the user's desktop; a system-administration module called Visual WorkFlo/Conductor that enables those with appropriate security authorisation to plan, administer, manage, modify and model work; and Visual WorkFlo/Composer, a Windows-based product used to develop WorkObjects, the basic components of Visual WorkFlo that replicate real-life work processes. Server software requirements include FileNet's Image Management Services software for imaging applications or Visual WorkFlo/Services for non-image applications. Visual WorkFlo can use any back-end networking protocol. The prices start at \$500 for Visual WorkFlo/Performer; at \$2,000 for Visual WorkFlo/Conductor; and at \$5,000 for the Visual WorkFlo/Composer.

### IBM SA TO RETIRE UP TO 2,000 STAFF

IBM France SA expects a "gentle" shedding of between 1,900 and 2,000 employees during 1995 via an attractive early retirement incentive programme, personnel director Michel Antoine told *Agence France Presse* last week. He said that over 2,300 employees of the appropriate age group had expressed interest in the plan presented to them in November, but added "That will be a lot more than is necessary for us to reach our target for 1995". The move, which is expected to be costly, will enable IBM France to avoid making any outright lay offs.



### ACER BEGINS SERVER REVAMP NEW XAMP FOUR-WAY IN WORKS

Acer America Corp, San Jose, California, is overhauling its AcerAltos server line, beginning at the low- and mid-range, adding its first PCI bus systems as the 90MHz Pentium 800/p and 7000/p, also both available with 100MHz Pentiums from March when it gets volume deliveries from Intel Corp. The uniprocessor 800/p replaces the existing 700/p as Acer's entry-level AcerAltos system for up to 32 users. At \$3,118 with no disk or \$3,750 with 1Gb, the company says it's going after a higher margin starting point. The 800/p comes with from 16Mb to 128Mb RAM, four EISA, two PCI and one shared slot. The single or dual-processor 7000/p is available without disk - \$5,187 - or with 2Gb, from \$6,440 with a single CPU. It comes with from 32Mb to 256Mb RAM, four EISA, two PCI and one shared slot. It replaces the 80486, 60MHz and 90MHz Pentium EISA systems. Acer says the models up to the 7000 level represent two thirds of its revenue from the one-to-four-way server line. They run SCO Unix, NetWare, OS/2 and Windows NT and are certified for Solaris x86 and UnixWare. Also bundled is new Acer Server Manager software for NetWare and SCO Unix, graphical environments for monitoring the server and subsystems. SCO Unix users also get Acer MirrorWare software for disk mirroring across a backup system. SCO Unix doesn't get its new easy-to-use management technologies until the Everest release. Other Acer units, notably Europe, are likely to offer similarly configured models within the next 60 days. Up its sleeve is a new high-end, four-way XAMP system that'll supersede current 17000s (four-way 60MHz Pentium affairs) using a split transaction bus architecture which divides reads and writes for faster processing. The P6-ready system will use Pentiums initially and is slated for the second half as a direct sales item. Acer says it's been picking up large NT orders from former mini-computer sites. Although it's not hurting its Unix business, they're sites that would presumably have plumped for Unix had NT not been around. Acer US's Taiwanese parent is looking for OEMs for the PowerPC technology it's building as part of the New Taiwan PC Consortium.

### THUNDER ROLLING, ALMOST

Hyundai Electronic America Inc's Metaflow Technologies has Solaris up and running on two of the three chips in its Thunder Sparc RISC set, claiming it'll deliver the full module under a 0.5 micron CMOS, four-layer metal, 3.6 volt process in the second half. The San Diego, California chip design outfit, now majority-owned by Hyundai, has been working on its Sparc since 1990, back in those days in conjunction with LSI Logic too, when the project was known as Lightning. The 0.6 and 0.8 micron parts now in existence and produced under a prior fab contract, currently lack a floating-point counterpart. Two chips will go into a Sun workstation in the first week of February - the floating point unit will be added the week after. The new design has taped out to Metaflow's foundry partner and the company says it's now being courted by all of the Sparc players. It's eyeing the Mbus market with a board module initially but will be looking at the other Sparc buses, V9 architecture and PCI when planning for its next product begins in a couple of months. Metaflow claims the Sparc V8 CPU, with four instructions per cycle, will meet performance expectations of 190 SPECint92 in 66MHz to 80MHz iterations, which it will push up to 133MHz to 160MHz with a process refinement and design tuning. It's claimed Thunder 1.5, as the 0.5 micron part is being touted, will offer the most advanced speculative, out-of-order execution seen yet. Metaflow can probably exist with only a very small portion of the Sparc market and is looking for the likes of its Hyundai cousin Axil Workstation Inc to pick up Thunder.

### SOUND OF PINs DROPPING

Seems folk are fast becoming disinterested in running native NetWare on their processors, courtesy of the promised Processor Independent version of Netware, or PIN. Hewlett-Packard Co pulled the plug on its PA RISC PIN plans some time ago. Now DEC says it's canned its PIN-on-Alpha plans. Novell has already pushed PIN delivery out once again to this summer (UX No 514) although beta implementations could surface at a springtime developers conference. Sun's Sparc Technology Business says the Sparc port will be all Novell's work and if it ever sees the light of day it could be put to some use. Pretty much all that's left now then is PIN for PowerPC.

### HP ADDS HIGH-AVAILABILITY SOFTWARE, INCLUDING NEW HP-UX 10.0 FUNCTIONALITY

With what it claims is some 50% of its server customers running high-availability solutions of one form or another, Hewlett-Packard Co will this week unveil a new set of products tailored to meet this demand. HP's existing Switchover software takes between 15 and 20 minutes to switch applications to alternative nodes in the event of failure. It says the new MC/ServiceGuard application will move applications around clustered nodes within 60 seconds using the new Journalled File System that features in the upcoming HP-UX 10.0 release - *see front page*. The software monitors clusters and views all of the system resources needed to run an application, plus the package itself, as one logical entity, all of which can be shifted to another node when required. MC/LockManager views HP's implementation of Oracle Parallel Server and its lock manager, which can be accessed by two servers simultaneously. Clients can be switched to other nodes in the event of failure. Informix and Sybase parallel database implementations will follow when they're up on HP servers. Standard databases go up under MC/ServiceGuard. There's also a new Model 20 RAID disk array that costs from \$1.42 to \$2.62 per Mb for up to 42Gb wide SCSI storage. OpenView gets additional failover functionality and PowerView provides management of SNMP-based power supply devices. HP has new high-availability service and consulting programmes too. The journaled file system, plus an optional on-line extension that provides file defragmentation, reorganisation, backup and recovery (OnLine JFS), a new memory management diagnostic tool and a new iteration of the OSF/1 volume manager will all be delivered as part of HP-UX 10.0 general business release this quarter. MC/ServiceGuard on 10.0 new business release (the version of the new OS which will go to ISVs, developers and up on new kit first), will cost from \$3,900 to \$24,000. MC/LockManager is \$7,500 to \$32,000 this quarter on HP-UX 9.04 - on 10.0 next half. OpenView AdminCenter costs from \$15,000 on servers, \$250 to \$800 on clients. The already announced Process Resource Manager (UX No 520) starts from \$2,300 to \$11,500 and is only available on HP-UX 10.0.

### OSF ORGANISES JAPANESE VENDORS INTO A SINGLE COMMITTEE

Open Software Foundation has formed a Japanese Vendors Council in conjunction with 13 vendors to take over the activities of COSE in Japan and get the new-style OSF's processes and aims rolling over there. The 13 are OSF Pacific Operations, NEC Corp, Sony Corp, Toshiba Corp, IBM Japan Ltd, Fujitsu Ltd, Yokogawa-Hewlett-Packard Ltd, AT&T GIS Japan Ltd, DEC Japan, Oki Electric Industry Co Ltd, Nihon Unisys Ltd, Novell Japan Ltd, Hitachi Ltd and Nihon SunSoft. Hitachi's Masanori Kataoka chairs a steering committee - Fujitsu's Hirokazu Narita is vice chair. Each company gets a seat on the committee which will decide on OSF/JVC policies. The X/Open Japanese office will sit in as observer.

### CA SHIPS DATABASE DRIVERS FOR OPENROAD ON NT, UNIX VERSION ON TRACK

Computer Associates Inc says it's now shipping CA-Ingres, Oracle, Microsoft SQL Server and Sybase database drivers for the Windows NT version of its CA-OpenRoad development environment with prices from \$420 per user for 16 developers. CA says applications can be developed once and deployed against multiple databases. The drivers also allow existing CA-Windows 4GL applications to be used in conjunction with the databases. Unix versions of OpenRoad are in beta and will be out in the Spring, with the same functionality as the NT implementation. CA says it's added some 100 system classes to the development environment, including the ability to write libraries with inheritance and polymorphism. For example there's a template for adding code to fields created by graphical application screen painters. OLE2 and OCX functionality will go into the next OpenRoad release now being designed. Planned CA-OpenIngres 2.0 database features and functions have gone before analysts - a user group will review the make-up in the next few weeks - CA will present the strategy for 2.0 in its promised white paper now seen around the third or fourth week in February.

### WALKER INTERACTIVE LAUNCHES NEW MAINFRAMES AND CLIENT/SERVER APPS

San Francisco-based Walker Interactive Systems Inc has unveiled the Walker Enterprise Series which includes two business and financial application families, the Tamaris and Aptos, with decision support and work flow capabilities in a suite of products called Walker Information Network and Walker Open Workforce. It has also launched the Aptos General Ledger, a client/server general ledger application. It is the first US release of Aptos. Tamaris is a suite of mainframe-based financial applications. Aptos is a suite of graphical client/server products for Unix environments and supports a variety systems, relational database management systems and user interfaces. Walker Information Network provides integration of Aptos and Tamaris through a spreadsheet-based decision support system that enables users to access, analyse, manipulate and report on information using any major spreadsheet program. Walker Open Workforce enables users to automate information flow using existing electronic mail technology. Aptos General Ledger is technology independent to enable applications to run in any user-defined environment, Walker claims. It has journal processing capabilities to facilitate the capture of business events through user-defined voucher types, descriptive information at both header and detail line level, multiple amount types for analysis, control total checking, template journals for creating accruals, prepayment and recurring entries, batch and real time processing, and comprehensive validation. It can handle multiple foreign currencies. It has pre-defined rules and processing to control multiple organisations. Other systems that post to general ledgers can be integrated and synchronised. There is a facility called Chart of Accounts that Walker says provides a flexible chart of accounts. And there is also real-time updates, table-driven processing, and complex balancing and validation rules. Additionally, Aptos is integrated with the Walker Information Network. The full suite of Aptos client/server applications is currently available in Europe and Asia-Pacific, and is scheduled for availability in North America this year. Aptos General Ledger is currently shipping in North America with pricing ranging from \$75,000 to \$300,000 depending upon configuration and number of users. Aptos General Ledger is currently available in North America, Europe and Asia-Pacific. Additional Aptos products, which include Accounts Payable, Accounts Receivable, Asset Management, Purchase Order and Inventory Management, are currently available in the UK and Asia, and are scheduled for availability in North America sometime this year with other products to follow. Pricing for Aptos GL ranges from \$75,000 to \$300,000 depending on configuration and number of users.

### ILOG'S NEW VIEWS

Paris, France-based Ilog SA has finally taken the lid off its Views 2.0 C++ GUI builder which previewed at Unix Expo (UX No 508). Views provides a single tool for graphics and widget design. Views comes with a PowerEditor, gadget library (text editors, labels, buttons, combo boxes, menus, menu bars, list bars and spreadsheet), the ability to switch applications from Motif to Windows look and feel dynamically, and a dynamic variables library for writing scripts to control the attributes of on-screen objects. Views 2.0 is priced from \$7,500 on Unix or \$5,000 on PCs for a single development licence.

### DATA GENERAL HAS NEW FAILOVER SOFTWARE FOR CLARiiON

Data General Corp has added Application Transparent Failover (ATF) and ArrayGuide board and software for use with its CLARiiON RAID systems. ATF provides automatic SCSI I/O bus re-routing to an alternate disk array path in the event of failure. It enables systems to continue to function rather than triggering a complete failover routine under DG's existing GuardWare software. ATF on SparcServers running Solaris is priced from \$13,000 for a dual-server configuration attached to a CLARiiON subsystem. ArrayGuide provides real-time monitoring and configuration of CLARiiONs attached to Solaris or AIX systems and is priced from \$300 for each server.

### IBM, MOTOROLA GO COY OVER POWERPC OPEN FIRMWARE REQUIREMENT

After June 1, any machine wanting to call itself PowerPC Reference Platform-compliant will need to support the Open Firmware standard IEEE 1275-1994. But neither the IBM Corp nor the Motorola Inc development kits contain Open Firmware code, furthermore nor do Motorola's shipping PowerStacks or IBM's only PowerPC Reference Platform machine, the RS/6000 40P. Also, the firms are still being fuzzy about whether they will have the drivers on board by the time the deadline hits. It is possible, therefore, that these main proponents of the PowerPC Reference Platform may end up shipping machines that are technically not compliant. Open Firmware is a standardised evolution of the Open Boot technology devised originally by Sun Microsystems Inc: its task, quite simply, is to ensure cross-system compatibility for add-on boards. The idea is that a machine that supports Open Firmware would be able to accept any board that supported the standard. It would not matter what type of processor the machine had, it would not matter what operating system it ran. The potential benefits are easy to see: a big unified market for add-on board manufacturers, a big pool of add-on boards for the machine makers. Gordon Stubbs, with the Motorola Computer Group in the UK, said the company is "still investigating" the Open Firmware issue, although the intention is to support it at some stage. "Initially we are looking at a post-boot load of the software," he said. Unfortunately, this would mean that devices involved in the boot process, such as external disk drives could not be used. Asked whether this meant that PowerStacks could become non-PowerPC Reference Platform-compliant next summer he acknowledged "to some extent that is the case". Motorola US said that Open Firmware's incorporation into its developers' kits was dependent on IBM's actions, but could not say why exactly. IBM's initial reaction, when asked whether its development kits would incorporate OpenFirmware was to argue that the standard was still incomplete. But since the Institute of Electrical & Electronic Engineers has awarded it a finished standard, and Menlo Park, California-based FirePower Systems Inc has successfully built it into its boxes, this seems unlikely. Engineers at specialist software developer FirmWorks Inc say that the standard is stable, but are concerned that the Open Firmware requirement may get quietly swept under the carpet. As we went to press IBM was still pondering its final thoughts on the matter.

### OXFORD MOLECULAR TO BUY CACHE FOR \$9m IN SHARES

In its second US acquisition since it went public last summer, Oxford Molecular Group Plc has conditional agreement to buy Beaverton, Oregon-based CAChe Scientific Inc for 8.35m new shares, valuing the target at £5.93m. CAChe does molecular design software, and last autumn launched Mulliken, a quantum chemistry program developed by scientists at IBM's Almaden Research Center in San Jose and designed to enable chemists to solve practical problems involving large, complex molecules with little effort. It is fitted with CAChe's graphical user interface, which is claimed to make prediction and visualisation of molecular properties simple, even for first-time users. It runs on the IBM RS/6000 and costs \$25,000. The latest generation of the company's WorkSystem molecular modelling and chemical properties prediction software runs on the Apple Computer Inc Power Macintosh, and features stereo three-dimensional display. The company's software also runs on the 68000 Macs and on Silicon Graphics Inc workstations, and a Windows version has been announced.

### HP SHIPS E&S GRAPHICS SUBSYSTEMS

Hewlett-Packard Co is now shipping 3D graphics accelerators for its Unix workstations that are based upon the Evans & Sutherland Corp Freedom OpenGL-based subsystems. The HP 715/100 workstation configured with the Freedom 3150, 64Mb RAM, 2Gb disk and 20" screen is \$84,350. The 715/100 fitted with the Freedom 3250 is \$124,000 and the same model with the eight-module Freedom 3400 is \$171,000. Uncoupled, the units are \$65,000, \$83,000 and \$135,000 respectively - video output is an extra \$1,200.

## ORACLE PITCHES FOR THE LOW END

Keen to dampen some of the hype surrounding its low-end venture, Oracle Corp last week unveiled its Workgroup 2000 line, positioning the venture as strategic technology direction rather than a set of products *per se*. It talked about developers more than users. That said, Oracle is a \$1,000m or more company that doesn't like Microsoft Corp and desperately wants some of its low-end action. Sure, Personal Oracle7 may not be for the casual user, but Workgroup 2000 is effectively a bunch of low-priced products aimed at the workgroup space where Microsoft plays. The five products in Workgroup 2000 are Personal Oracle7, Workgroup Server, Oracle Objects for OLE, Oracle Radio Objects and Oracle Power Objects. Personal Oracle7 will support Windows, Windows95, Macintosh and OS/2 but it isn't being touted as an alternative to Microsoft Access. It comes in standard and extended forms, the latter with data replication, database links and distributed queries - effectively user and developer versions. The standard is \$400, the extended form is \$600. Workgroup Server was launched in March last year for Windows NT. It will now ship on NetWare 3.x and 4.1 and OS/2 by the end of May; and on Santa Cruz Unix, Solaris, UnixWare and Power Macintosh in the summer. Pricing is from \$200 per server, \$100 per client. Objects for OLE links Object Linking & Embedding-enabled applications to the database, doing away with the need for external data drivers or Open Database Connectivity. Oracle says that developers working with Visual Basic, C++ or Borland C++, can build applications using Oracle7 data. It costs \$200 and comes with an unlimited run-time licence. Radio Agents is, a workgroup version of Oracle In Motion. It costs \$100 and links mobile users to the network.

### "More Visual than basic"

Power Objects, which won't ship until the summer, is the old Project X. It's a Visual Basic clone - "more visual than basic," as Oracle put it - although it has no licensing agreement with Microsoft. Oracle insists that Power Objects has been built from scratch and says it will include different features. It may end up looking very different from Visual Basic, however, as Visual Basic 4.0 won't now happen until Windows95 arrives and it ships as Visual Basic95. Power Objects uses the same scripting language as Visual Basic but is integrated into the database. It will run under Windows, Mac OS and OS/2; any application built with it is portable between the three systems. It uses the OCX standard, where Visual Basic uses VBX, and OLE. There will be native drivers for third party databases and ODBC links to others although no programming interfaces will be shown. It's \$400 per developer from June in Windows and Mac versions with OS/2 to follow. A client/server version is priced from \$2,000.

## HITACHI, GETTING CLOSER TO IBM, ADOPTS MQSERIES MESSAGING

IBM Corp and Hitachi Ltd, once the bitterest of enemies after Hitachi agents were caught red-handed trying to buy IBM mainframe secrets in the early 1980s, are now best friends, with suggestions circulating that a formal division of labour in the mainframe manufacturing field may be on the cards. In the latest proof of the cosy relationship, Hitachi, as briefly reported (UX No 521), has decided to adopt IBM's MQSeries messaging technology. Both companies will promote the MQSeries application programming interface as a standard for computer interoperability to create a common communications link that will give customers the power to run applications across Hitachi computers and any other computer that supports MQSeries technology. MQSeries is a middle layer of messaging software that serves as the communications backbone for connecting multi-vendor networks and building distributed computer applications. Initially, Hitachi will adopt it for its transaction management software for its workstations and large computer systems, but says it will later move it onto a wider range of systems.

## PEOPLESOFT ADDS NEW ACCOUNTING MODULES

Walnut Creek, California-based PeopleSoft Inc has added version 3 of its Financials software, including new Project Costing and Billing modules. It's also now offering PeopleSoft Distribution, a new line of software for logistics and materials management. Purchasing and inventory modules are out now, with order management and distribution requirements planning expected in the second half. In addition, the company has developed a tailored version of Financials for public sector organisations in conjunction with Andersen Consulting, which is available now. It's added support for Informix-OnLine Dynamic Server with the new release; a DB2 for AIX implementation is due mid-year. Prices start from \$100,000.

## DESPITE STRONG SECOND QUARTER SUN SHARES SLIP

It's as though Sun Microsystems Inc is jinxed. Almost without fail - no matter how sterling its performance - something happens to mar events. Last week, when it posted its second quarter results, the Street should have been pretty giddy with delight. Sun reported net profits up 86.2% at \$81.6m on turnover that rose 30.5% at \$1,475.3m. Mid-term net profits soared 98.7% to \$120.0m on turnover that rose 31.4% at \$2,748.8m. Instead, shares slipped more than a cent and a half on the news. Why? During its conference call with financial analysts that day, someone noticed a shortfall in projected growth. The quarter only showed orders up 18%, an otherwise credible amount, but the company's chief financial officer had told *Reuters* only last month that the number would be 25%. CFO Michael Lehman also said earlier last week that the company's revenues for fiscal 1995, which ends in June, will likely grow slightly less than 30% from the previous year. Analysts demanded an explanation but got nothing they were satisfied with. One said "it's frustrating there's always something". Sun has yet to break out of its Wall Street doghouse, leaving its CEO and largest single stockholder Scott McNealy feeling perpetually undervalued. Sun shipped more than 81,000 systems in the second quarter, an increase of 34% over year-ago levels. Turnover per employee exceeded \$400,000 and gross margin per employee exceeded \$165,000 for the first time. The company reports strong customer demand for the past three quarters, with second quarter orders of \$1,422m up more than 18% compared with the year-ago quarter. The company at last seems to have put its server woes behind it and it reports particular strength in servers, high performance desktops and multiprocessing systems. During the quarter the SunSoft Inc software unit distributed 109,000 Solaris licences.

## SPARC INTERNATIONAL LOOKS TOWARDS SPEC 1170 IN SCD 3

Sparc International (SI) is readying version 2.3 of its Sparc Compliance Definition test suite, which includes more work on the System V Interface Definition (SVID), Posix semantics, long data types, light threads, synchronous I/O, ELF and object file formats. There's some Sparc V9 architecture related work in there SI says, but most new stuff is derived from additional SVID and Posix work. Some of the SVID stuff will be replicated by the ABI Coordinating Committee which is composed of the respective Sparc, Intel, Mips and Novell ABI groups (the PowerPC camp is considering membership), which aims to bring all SVID specs broadly into line. Again more a question of semantics, SI says. SCD 2.3 is in SI's approval process. Planning for SCD 2.4 (or 3.0, depending on SI's preference) is underway. A major constituent will be Spec 1170 APIs. Work on the next iteration of Sparc version architecture specifications should begin in around six months or so. SI, which has given up its Sparcworks and Sparcbuilders verification and technology catalogue programmes to Sun's Sparc Technology Business is now down to seven staff which manage the SI specs, brand licensing, communication with buyers and information exchange. Fujitsu Ltd's OSSSI group has take over SI's Sparc Application Vendor application test suite programme and the one member of SI's staff on it. Despite the frequent squabbles and disputes between Sun and the rest of the Sparc community SI says it's not yet felt compelled to pull its ultimate legal card, an audit of compliance.

## BELLSOUTH BOUNCES ORACLE IN FAVOUR OF SYBASE FOR VIDEO TRIAL

Sybase Inc was last week claiming a stunning second chance victory over Oracle Corp as BellSouth Corp abandoned plans to use Oracle's video-on-demand software in its planned trial in Chamblee, Georgia and decided instead to use Sybase's Intermedia Server, Gain Momentum and Gain Interplay products. BellSouth is sticking with Hewlett-Packard Co's server, so will be using the same hardware-software combination as Singapore Telecommunications Ltd. The software will be used to provide interactive services such as video on demand and interactive education to a network of 12,000 homes. Scientific-Atlanta Inc is providing television set-top boxes. BellSouth declined to say why the memorandum of understanding with Oracle had not converted into an order, but stressed that performance was not the issue. Oracle will still provide database management and billing systems software for the pilot trial.

### **INTEL PAYS THE PRICE FOR PENTIUM FLAW BUT FIGURES ARE STILL IMPRESSIVE**

Intel Corp paid the price for its rotten customer relations with a vengeance in its fourth quarter figures, taking a hit of \$475m to cover the cost of the belated replacement-on-demand programme for the Pentium chip - a far higher figure than analysts had factored in. The company is growing so fast that the dent is very sustainable, and turnover grew a whopping 35%, shooting Intel to \$11,500m annual sales, which means that it will almost certainly be bigger than Digital Equipment Corp this year. Despite the concern about Pentiums during the quarter, Intel said shipments of the chip still doubled from the third quarter, and Pentium unit sales are expected to grow strongly this quarter. It is now shipping all good parts. The \$475m charge covers expected replacement costs, replacement material and writedown of the company's inventory of the earlier versions of Pentium processors. In dollar terms, orders for the Pentium exceeded those for the 80486 for the first time. Quarterly unit shipments of board-level computers also set a company record, Intel said, although it didn't give figures. And sales of Flash memory products set a new record in the quarter. Overall gross profit margin fell to 52%, from 55.5% in the third quarter. Capital spending is expected to hit \$2,900m in 1995, up from \$2,400m and it has \$3,630m cash. Intel's fourth quarter net profits were down 37.4% at \$372.0m after the \$475m charge, on turnover that rose 35.1% at \$3,228.0m. Net profit for the year to December 31 fell 0.3% at \$2,288m on turnover that rose 31.2% to \$11,521m.

### **DEC TURNS IN UNEXPECTED PROFIT FOR ITS SECOND QUARTER AFTER COST-CUTTING**

Digital Equipment Corp met its internal target of returning to profit for the calendar fourth quarter of 1994, surprising analysts by turning in a net figure of \$18.9m or \$0.07 a share for its fiscal second quarter - most analysts were expecting the company to report a loss, with the mean estimate being a loss of 30 cents a share. Turnover for the quarter also rose, by 7% to \$3,470m. The company said the big improvement was largely down to its energetic cost-cutting programmes over the past two years in response to the slump in demand for its VAX minicomputers: it has cut its workforce by 25% over the past 12 months, leaving it with 65,000 employees - and 8,200 went last quarter alone. How did it grow with so many fewer people? It did 58% of its business through resellers last quarter, up from only 43% a year ago. As a result of the stringent cost-cutting measures, total operating expenses declined 10% in the quarter to \$1,110m, and the company ended the quarter with \$1,130m in cash. Sales of Alpha RISC-based systems were up by over 150% on the year-ago period: orders grew strongly and product revenues rose 13% to \$1,870m. Geographically, growth was strong in Asia while the European operations, where cost-cutting measures are facing stiff resistance, made "excellent progress in restructuring" the company said, and the European business is now "positioned for profitable growth". Service revenues were up just 0.6% at \$1,600m, but the company faces an uphill struggle here as VAX sites go dark and maintenance contracts end. Service gross margins were 36.1% in the quarter, up from 35.5% in the fiscal first quarter but down from 39.2% a year ago. Overall gross margins were 33.1%, up from 30.2% in the first quarter but down from 36.1% in the second quarter last year. Second quarter net profits were \$18.9m against a loss last time of \$72.1m, on turnover up 6.7% at \$3,473.2m. The mid-term net loss was \$111.7m, after a gain from an accounting change of \$64.5m, down from a loss last time of \$226.4m, which included a \$51.0m charge for an accounting change, on turnover that rose 4.7% at \$6,595.7m.

#### **Standing start**

DEC's fiscal second quarter performance is impressive and the 7% rise in turnover comes despite the businesses it has divested this year, and is a result of better than expected performances by the businesses it didn't sell-on a like-for-like basis, growth would have been higher. Chief executive Robert Palmer said Alpha system sales contributed \$374m, or 20%, to product revenues, an "impressive achievement" from its standing start two years ago. But Palmer warned that another 5,000 staff are likely to depart by the end of the financial year in June, and no-one should get too carried away - the last quarter of last year saw the culmination of a period when recovering companies were at last in a position to install the new computers they had needed for some time, and almost all computer companies enjoyed a booming business climate. *Tim Palmer*

### **DEC AND OLIVETTI BACK TOGETHER WITH NEW PRINTER, ALPHA DEALS**

When Digital Equipment Corp sold its entire holding in Ing C Olivetti & Co SpA after the Italian failed to live up to expectations in its sales of Alpha RISC-based machines, and Olivetti started flirting seriously with the PowerPC crowd, it looked as if the pair were headed for divorce. But it turns out to have been no more than a trial separation, and the two are now back together again, older, wiser, and with more realistic expectations of each other. Under a new agreement, Olivetti has a contract to supply DEC with as many as 250,000 bubblejet printers - they use technology licensed from Canon Inc - which DEC will sell worldwide. Olivetti will also continue to support and market products based on the Alpha RISC. The two will work together and combine skills on large systems integration projects in Europe, and they will continue to co-operate in the personal computer sector, particularly in the manufacture of motherboards and casings.

### **TANDEM COMPUTER BUSINESS SHOWS STRONG GROWTH**

Tandem Computers Inc has reported first quarter net profits up 41.4% at \$35.2m on turnover up 12.4% at \$534.6m. Tandem says computer product revenues grew 24% compared with the same period last year. Business with communications service providers now represents 36% of computer product revenues. Unit volume of mid-range and high-end servers grew over 40% compared with the like period a year ago, despite anticipation of the introduction of the second generation of RISC servers. Version 2 of the NonStop Kernel operating system will ship next month with support for NetWare, Posix programming interfaces, high-performance TCP/IP, new application development tools, improved Open Data Base Connectivity access, and new decision support features in the NonStop SQL/MP database. The UB Networks unit scored \$90m in sales in its first quarter of 1995, up \$4.3m from the like quarter last year, excluding divested businesses, and operating profit was \$2.2m, up 83%.

### **DG's HUNGARIAN PARTNER, MICROSYSTEM, GOES BUST**

Data General Corp's partner in Hungary, Microsystem RT, has declared bankruptcy. Data General bought a 5% stake in the company in November 1991, but the link produced little substantive business for either company. The value of Data General's holding is not known, but Microsystem was turning over about \$30m in the year Data General took the stake. Microsystem had become increasingly burdened by loans it took out at high interest rates in the late 1980s.

### **RADSTONE, THOMSON'S CETIA TEAM UP ON POWERPC BOARDS**

Thomson-CSF SA's Cetia unit and Radstone Technology Plc are in the final phases of co-developing a PowerPC 603-based single-board computer that conforms to the PowerPC Reference Platform. The product, about three months away from delivery, will be available from either company, under the names PowerEngine CVME603 and PME PPC603, respectively. It uses a 66MHz 603, with 8Mb to 128Mb memory, 512Kb of system ROM, Ethernet and fast SCSI-2 interfaces, parallel and floppy port, 16-bit audio port, microphone-headset port and two PMC slots. Radstone, based in Towcester, Northamptonshire, is the management buyout of Plessey Microsystems, and floated in London early last year.

### **DEC's CZECH-SLOVAK BUSINESS BOOMING: TURNOVER HITS \$50M THIS YEAR**

The turnover of Digital Equipment Corp in the Czech and Slovak Republics topped \$50m for the first time, for the year ending June 31, reports the Czech News Agency. DEC's general manager in Slovakia, Peter Weber, said that turnover in Slovakia was \$13m and Czech revenues were \$39m. DEC currently has 110 staff in the Czech Republic and 60 in Slovakia, according to the agency, which reported that personal computer sales accounted for just 5% of DEC's overall turnover. The figures put DEC roughly level with Hewlett-Packard Co, but behind IBM Corp, which won more than \$100m worth of business in the two countries last year.

### NOW IBM HAS .GIF PATENT CLAIM? WEBBERS FOMENT RESISTANCE

In a further twist in the .GIF patent claim from Unisys Corp (UX No 520), it seems IBM Corp may also have a patent on the Lev-Ziv and Welch (LZW) algorithm which Unisys will attempt to enforce this year. A claimed former IBMer has turned up on the Web claiming that he is a co-inventor of a data compression technique which encompasses the LZW technique and saying that IBM filed a patent three weeks before Unisys did. In the US, the first to file does not automatically get the patent. A .GIF page on the WWW has become the focus for resistance for .GIF users to all attempts at patent enforcement. The page reports that modern manufacturers who use the LZW compression technique have ended up paying royalties to both IBM and Unisys for the use of LZW algorithms. Web reports suggest Unisys is well aware of the IBM patent, but believes it can prevail over IBM if it ever went to court. Unisys' Bob O'Leary denies that IBM has a patent claim on LZW, saying that the patent IBM has for data compression in .GIF relies on a different algorithm. Last week, Unisys had pulled back from the brink and decided it would not be pursuing claims for programs using the LZW algorithm in the .GIF format before 1995. The announcement was designed to quell the potential for bad publicity that Intel Corp recently suffered. Unisys won't be collecting on software which used LZW technology prior to 1995, but does want a royalty where a software developer comes out with a new release of software that uses the algorithm. Furthermore, Unisys will not require developers to license software which is used for non-commercial purposes. As far as Unisys is concerned, the announcement regarding the patent claim was only ever intended to alert users of commercial software to their patent claims, and the subsequent brouhaha has brought unwelcome publicity. Extracting itself further from potential flak, Unisys is defending itself by saying that it did not require CompuServe to pass on any fee to its sub-licensees or end-users, a decision in content and timing which was entirely at the discretion of CompuServe. Meanwhile, CompuServe says it is planning an alternative graphics file format, offering it free of charge.

### OLAP COUNCIL: ANY MORE THAN A MARKETING TOOL FOR MEMBERS?

Four software vendors have formed OLAP Council as self-described standards body for on-line analytical processing (ie the analysis of large volumes of data, quickly and efficiently, as with data warehousing). The four are Sunnyvale, California-based Arbor Software Corp; Comshare Inc Ann Arbor, Michigan; IRI Software Inc, Waltham, Massachusetts and Pilot Software Corp Cambridge, Massachusetts. Their aim is to "provide education about the benefits of OLAP server technology for business intelligence applications and to help position OLAP within a broader IT architecture". The Council was formed in the wake of what the four say is market confusion and the need for interoperability standards. It has already come up with a standard set of terms and definitions and in a meeting scheduled for this week will address how to expand its membership, complete its API and coordinate research analysis. It promises the API within six months. Gartner Group has rubbished the committee as likely to enforce its own brand of multi-dimensionality, believing it will result in the grouping becoming little more than a self serving marketing tool for its members. OLAP says its organisation is not set in stone and that the emergence of client/server architecture has necessitated the drive towards some form of common understanding. OLAP is looking to recruit new vendors which it hopes will submit ideas to solidify the object definition and API. It's hoping that membership will include vendors, analysts and end-users but the form this is likely to take remains for the present, unclear.

### INTEL GOES INTO OVERDRIVE

Intel Corp unveiled its first Pentium Overdrive processor this week. The CPU upgrade brings Pentium processor technology to Intel 80486-based systems. Based on the 3.3 volt, 0.6 micron technology, the OverDrive processor features superscaler architecture, branch prediction and the faster math co-processor, along with a larger 32Kb cache, 32-bit bus interface, on-package voltage regulator and new on-package fan/heatsink. It upgrades most 50 MHz IntelSX2, IntelDX2 and 25-MHz Intel486 CPU based systems, and operates at 63MHz. A second version will upgrade 66-MHz IntelDX2 and 33-MHz Intel486 CPU-based systems. This version, which runs at 83MHz, will be available later in the year. Intel says that it has also reduced the prices on its current range of Overdrive processors. Meanwhile, P6 is near to sampling, we hear.

### IXI READIES NEW VERSION OF PANORAMA VIRTUAL WORKSPACE

IXI Ltd is preparing to launch version 2.0 of its Panorama virtual workspace product, first launched two years ago (UX No 426). The Motif 1.2 compliant product has since blossomed into what IXI now calls "a lightweight graphical environment for demanding users". It is also, apparently, the only IXI product that the IXI technical developers use themselves for day to day work at their Cambridge, UK-based development labs. The original Workspace manager now includes an inter-client communication interface, available as a library for application developers and as a binary. It is based on the University of California at Berkeley's TCL tool command language. Also added is a client manager that provides a scrolled list of all the active windows in the virtual workspace, and the ability to set preferences using hypertext. IXI now bundles in the NCSA Mosaic World Wide Web browser. OSF's latest version of Motif, Version 2.0, described by IXI as "feature rich but unsupported and incompatible", contains its own hooks for workspace management, but as IXI points out, programmers must write their own applications that make calls to the Motif libraries containing these functions. Panorama 2.0 ships this quarter for SunOS and Solaris, with HP, IBM, DEC, SGI and SCO ODT to follow.

### 3D LABS SHIPS GLINT CHIP

Egham, Surrey based 3Dlabs is shipping its much fanfared Glint chip with a handful of companies expected to show the results of their collaboration at CeBit in March. Initially running its Glint 300SX, the TX is earmarked for a mid-1995 airing. The 3D processor chips will be applied to CAD/CAM, visualisation, animation and simulation. Using one million transistors the chip should enable board and system manufacturers to lower the cost, and increase the performance of 3D products with traditional workstation-based applications now moving to the PCs. Towards the end of the year 3Dlabs will shift its product design focus into the entertainment arena with Creative Labs, the sound and multimedia manufacturer. Areas of development include Soundblaster chips.

### WILL MICROSOFT NETWORK FLY?

Microsoft Corp is building the Internet corner of its planned Microsoft Network (formerly Marvel) out of NCSA Mosaic, which it's licensed as its World Wide Web browser from The University of Illinois National Center for Supercomputing Applications commercial distributor Spyglass Inc, and will gateway through long-time net-access provider UUNET Technologies Inc in which it's just acquired a stake. With UUNET it'll build a dedicated TCP/IP network so Microsoft Network users can connect directly to the net. Net access and the browser will be out by the end of the year. But is everyone going to throw away their existing Windows-based Internet solutions in favour of the Microsoft Network?

### RESEARCHER SAYS COMMERCE WILL CHANGE THE INTERNET

The Internet will undergo radical restructuring according to *Internet Adolescence*, a report by Cambridge, Massachusetts-based Forrester Research Inc. The catalyst for this will be the ending of the contract for direct funding of the US National Science Foundation's NSFnet - the high-speed backbone for the Internet - which will occur on April 30 this year. According to the report this will mean that profit-based Internet service providers with national networks will take over as existing operators disappear. The feeling is the Internet has already become self-sufficient and that agency funds will go into a pure research network, reports Forrester. To protect their interests when the backbone funding ceases the large Internet providers like EUNET, PSI and Sprint Corp will make agreements to carry each others' traffic, claims Forrester. The report also finds that software used will move away from free shareware toward commercial products. The author of the report, Jay Batson, says local area network independent software vendors are using Internet popularity to provide an outlet for their applications. Lotus Notes operates just as effectively on the Internet as on a local network and Novell Inc has introduced the Ferret information browser, which dissolves the edge between the local network internetwork and Internet, says Batson. He claims these and Mosaic viewers operating on local network-to-Internet electronic mail gateways, will draw users away from TCP/IP applications such as Usenet news, Telnet and File Transfer Protocol. As for security, commercial solutions will become increasingly available to provide data insulation such as router filtering, hacker-shielded applications software and global virus traps. The report is available from Forrester Research, but the price was not given.

# unigram·x

The weekly information newsletter for the UNDX™ community worldwide

**Pyramid Technology Corp** has reported first quarter net profit up 104.7% at \$1.3m on turnover up 3.5% to \$62.1m. Net per share rose 60.0% to \$0.08.

**Sun Microsystems Inc** has acquired a 10% stake in the Russian telecommunications software firm **Elvis+** which was established as NPO Elaz Zelenograd, 1993.

**IBM Russia** or IBM East Europe/Asia, as it calls itself, has opened an office in Vladivostok.

Huntsville, Alabama-based **Intergraph Corp** has won a monster \$120m eight-year contract with The Bureau of Emergency Services Telecommunications of Victoria, Australia to provide and operate a new computer-aided dispatching system that runs to the end of 2002. The system will assist police, fire and ambulance services in responding to emergency calls, and Intergraph reckons it to be the first contract of its kind in the world, and one of the largest public safety awards ever.

**Samsung Electronics Co** is looking at bankrolling personal computer major **AST Research Inc**, whose balance sheet has been painfully overstretched ever since it bought **Tandy Corp's** big computer manufacturing business. *Computer Reseller News* hears that Samsung is in talks with the Irvine, California company that could lead to the South Korean conglomerate paying between \$80m and \$100m for a 20% stake in AST. Samsung is one of AST's biggest component suppliers.

Within its \$5,641m turnover for 1994, **Compagnie des Machines Bull SA** says its newer businesses - Open Systems & Software, personal computers, Systems Integration & Services, Systems Operations and Emerging Technologies - saw an overall growth of 12% while enterprise servers - mainframes - and their maintenance, declined by 8%; the company had 27,902 employees at the end of 1994, down from 31,735 at the end of 1993; the firm's imbalance of skills meant that the latter figure includes 1,653 new employees.

When **IBM Corp** reports 1994 figures this Monday, **Salomon Brothers Inc** analyst John Jones believes the company will show a near \$3,000m net profit on turnover up 6% to \$64,100m. The problem - highlighted in *Businessweek* - is that a huge 68% of the company's gross profits came from mainframes, AS/400s and their related disk systems, up from 65% the year before - and in software, the \$11,000m business is dominated by mainframe software on margins of 60% to 70%, all of which explains last week's panic reorganisation, because none of those numbers are sustainable for very much longer.

**Digital Equipment Corp** and Leeds-based **Electronic Systems & Spares Ltd** have won £2m order to supply Barclays Bank Plc with 2,000 of DEC's StorageWorks disk storage subsystems to be integrated with IBM Corp RS/6000 AIX Unix systems in the bank's branches in the UK.

Richardson, Texas based **Convex Computer Corporation** has joined the Petrotechnical Open Software Corporation in order to push its Exemplar MPP boxes to oilmen.

**Oracle Canada Inc** has plucked the president and general manager of **Amdahl Canada Ltd** Ken Wilson and turned him into its senior vice president, sales.

Chuck Boesenberg, president of the then-independent **Mips Technologies Inc** during the ill-fated Ace Initiative, who's been off being executive VP of the **Central Point Software Division of Symantec Corp**, the company he sold Central Point to, has now jumped to **Ashtech Inc** as president and CEO. Ashtech is in the business of making Global Positioning Systems (GPS) receiver systems.

Trailing **IBM Corp's** lead in US patents awarded last year (UX No 521) were **Canon KK, Hitachi Ltd, Mitsubishi Denki Ltd** and **Toshiba Corp**.

**Santa Cruz Operation Inc** chief Alok Mohan is sweeping a brush through the ranks, appointing David McCrabb as VP marketing, replacing David Hancock. McCrabb, on-board from Mohan's old stomping ground, **AT&T's GIS** unit, where he was area VP for the Northeast region, will be responsible for all of SCO's marketing, strategic alliances, programs events, PR and market research.

**A D.H. Brown Associates Inc** study of Unix software distribution technologies awards **Tivoli Systems Inc's** Tivoli/Courier top marks, ahead of IBM's NetView Distribution Manager/6000, Hewlett Packard's HP OpenView Software Distributor, Legent's DistribuLink UNIX and Sun's SunDANs in that order. Tivoli garnered twice as many points as the last-placed SunDANs.

**Objectivity Inc**, Mountain View, California, has added version 3.5 of its Objectivity/DB database which come with a choice of deployment architectures, for central, multi-threaded systems or distributed environments. Prices start at \$1,750.

Sunnyvale, California-based **Amdahl Corp** say its got a 12-way 12670M mainframe installed at a customer site in Germany. General availability is scheduled for the end of February (UX No 517). Meanwhile, its Xplorer 2000 database ships next month (UX No 489). Amdahl claims it's sold all of its System 390-alikes with orders backlogged to the second quarter.

**Computervision Corp** is offering Pelorus as an event-driven, object-oriented system for developing automation applications from Unix and Windows with most popular design languages. It's got Pelorus Powered desktops underway with Framatome SA for plant design.

**Evans & Sutherland** is restructuring to cut some \$13m from its operating expenses, eliminating 200 jobs, or 20% of its workforce. It'll take a one-time hit of \$11.5m against its fourth quarter to the end of December 1994 to cover the cost. Its numbers are due in the third week of next month and will show a loss for the year. E&S blames changing markets for the move.

Mike Harrison, who last Wednesday became the ex-managing director of **Oracle UK**, has turned up as regional vice president, Northern Europe, with **Informix Software** (UX No 521).

**AT&T Global Information Solutions** has snared Wal-Mart Stores Inc for the largest MPP Teradata 3600 installation so far, a 476 processor system with a thousand disk drives housing 2.7 terabytes.

We hear vendors are re-thinking the usual option of throwing MS-DOS on to base configuration or backup **Intel Corp** server models as **IBM Corp** is apparently willing to practically give OS/2 Warp away to get it on to boxes.

Now shipping 40,000 to 50,000 systems a month in total, **Acer America Corp** says it's lucky if it gets anywhere near a hundred SMP units away in the same period. Acer's planned IPO is now set for the first half of 1996, by which time it expects to be doing some \$1,200m a year. It's not doing it for the money, obviously, but to raise its profile.

**Sun Microsystems Inc** has lured Anne Schowe away from **AT&T Microelectronics Group**, where she was managing director of the visual solutions business unit, to be VP and general manager of its interactive services business.

Capitalising on developments in multiprocessing PC technology and leveraging its position as number one PC server supplier, **Compaq Computer Corp** expects to be going head-to-head with the likes of IBM Corp, DEC and HP within three years as a complete computing company. "We'll do it in stages. We'll get there over the next three years," VP corporate development Robert Stearns told the *Wall Street Journal* last week. By the end of the decade there will be no computing task that can't be performed on a PC-based server, Compaq reckons.

Object World in Boston March 19-23 will be keynoted by **IBM Software Solutions** general manager Steven Mills and **Enterprise Engines Inc's** founder and president David Taylor. There are now supposed to be Object Worlds in London on June 20-23, Sydney on August 1-4, San Francisco on August 13-17, Frankfurt on October 9-11 and tentatively in Tokyo on November 15-17. Phew!

The industry is planning a Unix95 love-in at UniForum.

**SAP AG's** R/3 3.0 is on track for a summer debut and could be with beta sites soon.

**IBM Corp** is assembling the discontinued ValuePoint PC at the Kvant plant in Zelenograd near Moscow: IBM says it is also evaluating the assembly of its RS/6000 Unix workstations there.

**DEC's** Turbo Laser has apparently been delayed and won't ship until March or more likely April. DEC watcher Terry Shannon now says it won't be called the AlphaServer 7000 either. The designation 21000 has also been scrubbed.

**DEC** is reportedly going to do that Solaris-to-AXP executable image translator it was toying with and try to suck Sun programs over to Alpha.

**Microprocessor Report** editors reckon PowerPC, RISC's great white hope, will have a 10%-15% share of the systems market by 1997 with Apple Computer Inc claiming most of that slice. By 2000, it could be 20%-30%. They note that the effort could take IBM Corp porting MVS to the chip. Concomitantly they give iAPX-86 60% of the PC market by the year 2000, with the rest split up among Intel/HP, PowerPC and other RISC chips though they're very dubious about the long-haul potential of Sparc and Mips.

One of our readers asked us to explain how it was OS/2-for-PowerPC brand manager Miles Barel could claim to *InfoWorld*, we think it was, that **IBM Corp** has a finished version of AIX ported to the microkernel and waiting for delivery when the company's delayed PowerPC desktops finally ship. Well, Virginia, the truth is he's talking through his hat. IBM doesn't have a finished version of AIX for the microkernel.

Unigram.X is published by Unigram Products Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)71 528 7083 Fax: +44 (0)71 439 1105.

Editor: William Fellows. Deputy Editor: Catherine Everett. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: UK & Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: unigram!george@uunet.UU.NET

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Registered at the Post Office as a Newspaper

# unigram X

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13 FEB. 1995

The weekly information newsletter for the UNIX™ community worldwide

London, February 13-17 1995

Number 525

## DEC TRYING TO STYMIE "SAFE WINDOWS" SPEC

Proponents of the Public Windows Initiative API specification indicate that the Redmond factor may lie behind DEC's decision at a recent European Manufacturing Association (ECMA) General Assembly meeting to vote down continuation of the specification work that's been taking place in an ECMA technical committee. A mail vote, the result of which is due by the end of February, will decide whether DEC's nay saying becomes policy or whether the spec, now officially dubbed APIW, goes forward as planned, into an ISO fast-track process. After getting the cold shoulder from X/Open Co Ltd because of its copyright concerns, SunSelect, the former Sun Microsystems Inc planet responsible for PWI and Wabi, took its notion of porting and running Windows applications on Unix via a publicly available set of interface specifications to ECMA last April, calling it a "more official standards body than X/Open" (UX No 484). It picked up support from a bunch of Unix vendors along the way, including Novell Inc, and secured the attention of the US Defense Information Systems Agency, which has and is funding continued development. Some 60% to 70% of the documented and undocumented Windows API calls have now been compiled, the next stage will be to build test suites. If the ECMA vote goes against Sun it won't be the end of the project - though it's a rather large dent in the spec's possible standing - and the work will require a new home to finish the spec and develop test suites. In parallel with the ECMA effort, APIW supporters have also been trying to breath a Pre-Structured Technology process into life over at the Open Software Foundation. It's had an architectural planning review, but nothing's gone by the OSF board yet as there's none of the standard reference implementation work to show, or even a finished spec, just several hundred pages of documentation. However, with Mitre Corp apparently prepared to back a PST as contractor, the DoD contributing, and OSF staff backing the project, APIW supporters are hopeful a PST will be born for what's been dubbed "Safe Windows" in some quarters.

## IBM RAISES DESKTOP BAR WITH NEW RS/6000...

IBM Corp has rigged a RS/6000 workstation with its highest performing multi-chip Power2 RISC engine, claiming the Model 3CT is the fastest desktop available for under \$40,000. The 67MHz Power2 - actually part number RS2G, which has at times been referred to as Power2+ - has a 128-bit wide memory bus, 128Kb cache and supports up to 2Mb Level 2 cache. The new workstation does 267 SPECfp92 and 130 SPECint92 - 104 CINT92 and 225 CFP93 baselines - around 30% better than the Model 3BT introduced last May (UX No 489) and shooting IBM ahead in the floating-point stakes. With 64Mb to 512Mb RAM, 1Gb to 18Gb disk, 32Kb instruction cache, 128Kb data cache, 2Mb L2 cache, SCSI 2, three MCA slots and AIX 4, the 3CT is from \$38,800. The part is also being hosted in a new desktop server, the 39H, which is estimated at 1,000 TPM and costs from \$41,900 with 64Mb to 512Mb RAM and 2Gb to 13.5Gb disk. Both are available this month. The RS2G Power2 already features in the 59H server and rackmounts, also introduced last May. A new graphics adapter, the \$1,100 GXT150P brings 8-bit MCA-based 2D graphics to the PowerPC 601, PCI bus Model 40P.

## ...CHALLENGES NCD WITH 603-BASED X-TERMINAL

IBM has also unveiled its first PowerPC 603-based product, the Xstation 160, rated at 5 Xmark93, which runs a 56MHz part, comes with 8Mb to 96Mb RAM, 2Mb to 22Mb flash memory, 2Mb to 4Mb video RAM and costs \$5,000 from the end of the month. IBM is clearly targeting Network Computing Devices Inc's superfast HMX units with the new Xstation, though it offers no Xstone performance comparisons.

## IBM WORKPLACE UNIX LEAVES DEVELOPERS FOUR CHOICES

Assistant general manager worldwide marketing at IBM Corp's RS/6000 division, Jeff Mason, described the Unix 'shadow' being cast on the Intel Corp and PowerPC-hosted Workplace microkernel following the abandonment of the full-blown AIX personality (UX No 524), as a Spec1170-compliant subset of AIX. The little-endian system - incompatible with big-endian AIX - is dubbed Workplace Unix and is being developed entirely by Lee Reiswig's Personal Software Products division. IBM claims it'll be as easy to port between Workplace Unix and AIX, as porting between other Unixes. Workplace Unix will be hosted directly on the microkernel and won't need the OS/2 personality present to run, which sounds like possible competition for AIX, despite what IBM is claiming. Meantime, the fact remains that Unix developers targeting IBM's PowerPC boxes will be faced with four choices: 1. Develop to the AIX API and ignore the Workplace Unix user base; 2. Develop to the Workplace Unix base and ignore the AIX users; 3. Develop for both; 4. Use a subset of APIs that are common to both and end up with a lowest common denominator application.

## UNIX BRANDING PROGRAMME DUE NEXT WEEK

After being shut in a room late January by its board members and told not to emerge until it had done all of its sums X/Open Co Ltd has, we're informed, now straightened out terms and conditions for licensing its single specification Unix 95 brand. Conformance to Spec1170 and other X/Open test suites - plus a licence to use the brand mark - is expected to spawn a rash of operating system name-changes over the coming months so that IXes, UXes and others will become Unix this and Unix that. Fearful lest the long-awaited Unixification process - or at least institutionalisation of a common set of APIs - would go unheard left to X/Open's internal mechanisms, the board also had the standards body hire itself a PR (Regis McKenna) to bring some noise and visibility to the proceedings next week. At press time vendors were apparently figuring out whether to announce their individual branding activities at the same time. Whether anyone's going to have a branded Unix 95 OS by UniForum time is apparently a close call right now, though several vendors, including SCO have their eyes on the prize. As well as paying licence dues, vendors' products must conform to the VSX4 updated basic X/Open API suite, the ApTest Inc-prepared VSU4 Spec1170 APIs, the VSC4 commands and utilities pulled together by Mindcraft Inc and demonstrate their intent to meet the now just shipping VST XTI networking interface and internationalised curses.

## DEC READIES ENTRY-LEVEL ALPHASTATION 200 4/100

DEC is readying a new member of its PCI/ISA bus AlphaStation 200 desktop family, the entry-level 4/100 workstation. It's possibly the long-sought "Grandson of Mustang" which our sister publication *Client Server News* has been hunting for. Originally cast as a Windows NT box but disowned by its creators, the 4/100 has been adopted by the Unix side of the company which own, position and market it, though NT and OpenVMS will be options. DECwatcher Terry Shannon noted its use of a 100MHz 21064 makes it an inefficient engine for NT but not for OSF/1. Internally known as the LX, the 4/100 is seen as a mechanical CAD, CASE and GIS box. With OSF/1, the base unit is estimated at 92 SPECfp92 and 74 SPECint92 and costs \$6,000 (around \$3,700 to VARs) with 32Mb RAM (upgradable to 192Mb), 535Mb disk, 15" screen, one PCI/ISA combo, a PCI and an ISA slot. DEC is pitching the thing against the IBM 40P (\$6,000 similarly configured, \$4,100 to VARs), HP 712/60 (\$6,300 and \$4,200 to VARs), Sun SS5/70 (\$5,600 - \$3,730 to VARs) and SGI's Indy PC (\$7,000 and \$5,000 to VARs). The NT unit is priced from \$5,200 with a reduced configuration - \$3,220 to VARs. The CPU is upgradable and DEC wants to get 21064A upgrade kits out forthwith. The AlphaStation 200 and 400 series - 200 4/100, 200 4/166 and 200 4/233 desktops and 400 4/233 minitower - replaces the firm's DEC 3000 Turbochannel bus workstations, the 300LX and 300X.

### IBM ADDS THIN NODE 2 PARALLEL SP2 OPTION WITH 67MHz POWER2 CPU

IBM Corp's Power Parallel division has added a new Thin Node 2 SP2 option using the enhanced Power2 CPU - *see front page*. It now offers a ~~66MHz Wide Node, 62MHz Thin Node and 66MHz Thin Node 2~~ - thin node systems are less expandable. A Wide Node 2 with the new Power2 would complete the picture. As well as dropping the price of an existing thin node SP2 by 10% to \$138,000 - effectively two 62MHz RS/6000 engines with no L2 cache, 128Mb RAM, 2Gb disk and the high-performance switch - the company says that a crucial commercial software component, version 3.1.1 of AIX High Availability Cluster Multi-Processing/6000 is now available for SP2s. HACMP/6000 3.1.1 provides support for clusters of up to eight SP2 nodes and costs from \$8,000 per node in high-availability mode, \$15,500 per node for concurrent access. NetView for AIX, Systems Monitor for AIX and Trouble Ticket for AIX are also now up on the line. It says its got beta sites running PowerQuery, its DB2 Parallel Edition for AIX, RAID and consulting combo. Power Parallel claims 350 PowerParallels installed, 120 at commercial sites. It expects to sell more technical than commercial systems this year.

### 133MHz P6 IN SILICON AT 190-220 SPECINT

A few more Intel Corp P6 blanks were filled by technical papers leaked to *The Wall Street Journal* last week. As we know (UX No 522), P6 is in silicon and will debut in systems next year. P6 will have more than 5.5 million transistors and perform 250 to 300 MIPS. Intel is, as expected, using the 0.6 Micron BiCMOS process it uses for its high-end Pentiums (UX No 490). The P6 will reside in a 387-pin multichip module with a 256Kb off-chip cache - probably not destined for desktop parts - and 8Kb on-chip cache. The chip will support out-of-order execution, speculative execution, register renaming and contains three decoders to translate iAPX-86 instructions into micro-operations. Performance is estimated in the 190 to 220 SPECint range at 133MHz. The system bus can run at variable speeds, clearing a path toward 198MHz and 264MHz versions.

### TATUNG ADDS FIVE MORE SUPERSPARC IIS

Tatung Science and Technology Inc is already selling Sun Sparcstation 20-compatible systems with the 75MHz SuperSparc II chip. Tatung got the processors late last year and is now coming out with four desktop workstation configurations and a server using the chip. The 32Mb SuperCompstation 20S series includes a single-processor model with 1Mb of external cache and a dual-processor model with 1Mb of external cache per CPU. An entry level configuration, priced at \$16,070, contains two MBus slots, four 32/64-bit SBus slots, a 520Mb hard drive, Turbo GX graphics, 16-bit audio capabilities, a 20-inch colour monitor and support for 24-bit SX graphics. The lower-end SuperCompstation 20SL series also comprises a single and dual processor with essentially the same configuration as the 20S but without 24-bit graphics support. These machines start at \$15,470. Performance ratings for the systems are about 125 SPECint and 121 SPECfp for each CPU and 5569 SPECrate\_int92 and 5515 SPECrate\_fp92 for the multiprocessors. Tatung employed a slide-in motherboard cabinet design so that users can add up to four CPUs. Tatung is also using the SuperSparc II chip in a new deskside server with 10 drive bays and capacity for nine SBus expansion slots. Solaris 1.x and 2.x are preinstalled in all the new systems.

### APPLE'S NEW ROW WITH MICROSOFT, INTEL

A new row is brewing between Apple Computer and Microsoft Corp, this time over Apple's Quicktime. At the end of last year Apple accused San Francisco-based software house Canyon of passing on some of its code to Intel Corp, and thence to Microsoft. Canyon had been helping Apple convert Quicktime - which speeds video performance and is much used in Macintosh multimedia software - to run under Windows, and then went on to work on a subsequent project for Intel. Intel is alleged to have passed on the work to Microsoft as part of the Display Control Interface agreement between the two. According to last Friday's *Financial Times*, Apple is now seeking an injunction to halt distribution of Microsoft's Video for Windows, which it claims contains "several thousand" lines of its code. With the rise of multimedia, Quicktime is becoming an increasingly important differentiation between Apple and Microsoft.

### BANYAN SPRING CLEANING PRODUCT SET

Westborough, Massachusetts-based Banyan Systems Inc will offer a new release of the Vines StreetTalk directory service in version 6.0 of its Vines network operating system due in April (UX No 504). ~~The directory operates on each server, providing a single, integrated~~ view of the network. Vines 6.0 will provide for replication of groups as well as directory synchronisation. Following SCO and HP-UX ports, Enterprise Networking Services (ENS), the stuff Banyan has stripped out of Vines and made platform independent, will ship on Solaris in April, with a second generation ENS for NetWare due at the same time. ENS consists of messaging, directory, security and management services including file and print sharing capabilities. Products based on its DeMarc implementation of HP OpenView for Windows and the fruits of alliance with SNMP Research Inc of Knoxville, Tennessee (UX No 504) will ship in the second quarter. Meanwhile Banyan has also announced an ENS Enterprise Client for TCP/IP, with other TCP/IP kernel-level products promised, at \$500. Fifty licences to Banyan's TCP/IP suite of Windows, DOS and OS/2 client applications and utilities is \$5,000. The kernel stuff will be integrated back into ENS and StreetTalk.

### DANSK DATA ADDS R4400 SUPERMAX

Dansk Data Elektronik (DDE), the Herlev-based Danish Unix multiprocessor system builder has launched a new generation of its Supermax Enterprise Servers running up to 56 Mips R4400s and Unix SVR4.2MP. Most of the software solutions it offers are based on Oracle, though it supports Informix, Progress and Sybase too. Dansk is a pioneer of Unix multiprocessing, having got its first Motorola-based systems out of the door as early as 1982. It made the transition to Mips in the late 1980s. Its innovative symmetric multiprocessing architecture consists of three types of module boards - CPU, memory and I/O - which can be mixed and matched to suit. CPU boards each have four Mips R4400s, and in theory up to 14 boards can be added to make up a maximum 56 processor configuration, the processors having both shared and local memory. Two 267 MByte/sec buses connecting the modules, and Dansk's load-balancing kernel scheduler also help to support the unusual levels of scalability. But Dansk is hedging its bets, and says that in the future it will implement a combination of SMP and shared memory clustering (SMC), allowing users to scale up via SMP or - if any new SMP bottlenecks are encountered - via SMC. The boxes come with high-availability features, in-cabinet RAID, the Veritas file system, volume manager and visual administrator and the option of a real-time Unix implementation. Dansk, a 20-year-old, 400-person, \$21.6m operation, has lost money for two consecutive years, and its current installed base of 2,500 does not appear to have grown since 1992. There are only 12 machines in the UK, but in Denmark, Dansk still has a 56% share of the Unix mid-range market. Most of the machines sold are in the 4-6 processor range.

### TRANSARC STRIPS DOWN DCE FOR THE VERY LOW-END

As well as its anticipated Windows NT port, Transarc Corp last week trotted out DE-Lite at its Decorum '95 bash in La Jolla, California, a cut-down DCE client intended for use on PDAs, PCs and Macs used in banking, inventory control and point-of-sale retail systems, the company says. A DE-Lite client can access DCE and Encina services through a DCE server running DE-Lite gateway software. DE-Lite is up on Windows 3.1 clients with NT and Windows 95 versions expected. The gateway software runs on HP, IBM and SunSoft Unix. DE-Lite, now in beta, lacks large chunks of DCE-like security, support for nested transactions and full DCE and Encina APIs. Meantime, Gradient Technology Inc's full DCE-on-PC implementation is now shipping and is available from Transarc through an agreement its parent IBM has struck with Gradient. A developers kit is \$700 - runtimes are \$65 for the first, and \$55 thereafter. Two developers kits and ten runtimes are bundled for \$1,700. In other Transarc-related news, New York city-based second generation application developer Magna Software Corp also announced the promised Encina version of its Magna X environment (UX No 514). An early entry program begins April 1st at from \$20,000. And JYACC Inc has added an Encina interface to its JAM 6.1 development system as JAM/TPi which is priced at from \$2,600 for Windows and \$7,800 for Unix clients and \$8,000 for the server.



### SILICON GRAPHICS TO PAY \$500m IN SHARES FOR ALIAS, WAVEFRONT

Silicon Graphics Inc is investing \$500m in shares to get into the graphics and multimedia applications software business with the acquisitions of Toronto, Ontario-based Alias Research Inc, and Wavefront Technologies Inc, Santa Barbara, California. Alias, a \$50m company, provided key software used in the making of Jurassic Park. Wavefront is an imaging and animation software company with revenues of \$26.5m that had been bankrolled by CSK Corp of Japan which bought Thomson-CSF SA's Thomson Digital Image Inc for Wavefront. Alias holders will get 0.90 SGI shares for each Alias, valuing the company at \$365m - Wavefront holders get 0.49 SGI shares for each Wavefront, putting its worth at some \$135m. The acquisitions will account for about 9% of the enlarged SGI entity. SGI will put them into a new wholly-owned independent software unit to develop tools for the creation of digital content under Rob Burgess, currently president of Alias. Burgess described Alias as a company which "invents new math to simulate fog, skin, fire....etc". Its software is being used by SGI partner Nintendo Co Ltd. All Wavefront software is up on SGI machines - the company is still running SGI box serial number 007. The new unit will team with SGI's existing Silicon Studio subsidiary formed last year to develop a suite of tools called FireWalker for integrating digital source material into video games, CD-ROMs, interactive TV and the like. The as yet unnamed unit - Power Tools was the suggestion of SGI chairman and CEO Ed McCracken. It is seen as part of a general "re-tooling" to prepare the entertainment industry for digital studios of the 21st century, envisaged by the likes of the Steven Spielberg and Jeffrey Katzenberg, according to McCracken. With its acquisitions, SGI will now be competing directly against some of its existing tool partners. It says it'll take a one-time charge in its fiscal fourth quarter of about \$25m to \$35m to write off research and cover other costs associated with the acquisitions. Analysts expect the new software subsidiary to generate \$75m in revenues for SGI's fiscal 1996. McCracken, who expects to add some 3,000 staff over the next 18 months, says the entertainment industry now accounts for some 15% of SGI revenues - it's heading for around \$2,500m this year - up from 7% a couple of years ago, and heading towards 25% by fiscal 1997. "No other market will be as valuable as the entertainment market to SGI," McCracken maintains.

### OSF ROUNDUP

Despite IBM Corp's optimism (UX No 521), the Open Software Foundation has yet to get the joint development contract for DCE 1.2 inked. It hopes the technology contributors, DEC, Hewlett-Packard, Hitachi, IBM and Transarc, can resolve their differences in time for it to announce DCE 1.2 at UniForum in Dallas next month.

Meanwhile, commenting on reports that it's ditched its technology roadmap, OSF says it had never planned to present a list of deliverables and timescales in the first place, but had hoped to delineate a long-term open systems technology strategy acceptable to all of its members. With such a diverse collection of bedfellows to satisfy it now admits this hope was pretty naive and has pared the roadmap back to an architectural framework document providing guidelines on how technology can be brought to the open systems world through OSF processes. There's no word on when it'll see the light of day.

At the same time, with most of its engineering staff gone and a host of executives departed, OSF has recast its management team under David Tory, who remains president of the organisation. David Lounsbury becomes VP technologies following VP engineering Roger Gourd's retirement. Peter Shaw is VP sales and marketing; as senior VP administration and finance and treasurer, Norma Clarke, looks after all financial and personnel operations; whilst Ira Goldstein is promoted to executive VP and chief scientist. Of some 200 staff, one half now work in Goldstein's Research Institute, which retains also its French unit with some 20 staff in Grenoble.

### TWO YEARS ON, FIRST CDEs EXPECTED AT UNIFORM

The COSE folks, remember the Common Open Systems Environment, are expected to activate their Common Desktop Environment 1.0 strategies at UniForum next month, some two years after they banded together and got Sun Microsystems Inc to utter the 'M' word. Santa Cruz Operation Inc, which had technology in the UniForum '93 demo has since left the original nucleus of HP, IBM, Novell and Sun, eschewing Unix on the desktop in favour of its Windows Friendly gambit. Keen for all the raison d'être it can muster, the Open Software Foundation says the proposed CDE 2.0 PST will keep a bunch of the COSE ideals alive as well as converge the Motif 1.2, 1.2.5 and 2.0 releases. But it's yet to get the nod from CDE 2.0 sponsors DEC, Fujitsu, HP, Hitachi, IBM and Sun.

### DEC'S CHINA EMULATION SET AT \$10,000

Chinet, DEC's anticipated Alpha minitower desktide is expected to debut as the 166MHz 21064 (EV4)-based AlphaServer 400 4/166 (UX No 511). It will accomodate 512Kb cache, 32Mb to 192Mb RAM, three PCI and three ISA slots, five spare bays and 1Gb to 8.4Gb disk. With OSF/1, 32Mb RAM, 1Gb disk, CD-ROM and Ethernet it'll debut at \$10,000. OpenVMS and Windows NT versions are \$10,000 and \$9,315 respectively. Insiders have talked about a street price of \$7,600 for the low-end configuration. It estimates 100 tps. DEC is pitching the thing against the Compaq ProSignia 4/66, HP's 40MHz PA-7100LC-based 9000 E25, IBM's 80MHz PowerPC 601 PowerServer 5 and Sun's 70MHz SuperSparc SparcServer 1000. Chinet will apparently do remote management via a simple serial link and handle RAID, though it includes no ECC memory. It's meant to upgrade to faster Alpha CPUs. DEC apparently got its code name from those up-market paper plates used at garden parties - a china emulation.

### BRISTOL SHOWS EARLY OLE 2.0-FOR-UNIX CUT

Bristol Technology Inc, Ridgefield, Connecticut, will introduce version 2.1 of its Wind/U Windows-on-Unix environment at Software Development '95 this week in San Francisco. 2.1 supports Microsoft Corp Foundation Classes 3.0 for stuff like docking toolbars and property sheets Silicon Graphics Inc Irix V workstations and Visual C++ 2.0. The Windows source house is still promising its Unix port of OLE 2.0 by summertime and will have an early cut up and running at the software event with sample application code such as Microsoft 'drawcli' and an in-process server DDL showing in-place activation, compound files and compound object model functionality. Bristol's next challenge is to find Windows applications houses that want to port their stuff to Unix. It's got a handful already lined up, it claims.

### OMG SEEKS OBJECTS FOR FINANCIAL MARKET

With its Corba 2 backbone in place, Object Management Group is going after objects for vertical markets, starting with a call for information on what's needed to support the financial services and accounting industries. Responses to the Request for information are due August 25 and a Request for Proposal (RFP) for technology will follow. Meantime, the OMG's common facilities task force has issued an RFP for internationalisation and time operations facilities. The object request broker task force has issued an RFP for and data type extensions to the OMG Interface Definition Language, including wide character types, and extended integer and floating point types. Letters of intent to submit are due June 23, actual submissions are due August 22.

### SUNSOFT TAKES CRAYSOFT FORTRAN90 COMPILER

SunSoft Inc has licensed CraySoft Inc's Fortran90 compiler which will feature in a new version of its WorkShop programming and development environment next quarter. The compiler, currently at beta sites, won't replace WorkShop's existing Fortran77 compiler, though the Fortran90 language includes a more modular design and support for array processing. SunSoft expects technical and high-performance numeric computing users to take advantage of the new compiler.

### WIND RIVER SPEEDS WORK TO SUPPORT 601, 603, 604 & 403GA POWERPC BITS

Wind River Systems Inc has broadened the PowerPC support for its VxWorks real-time operating system. The Alameda, California company says software developers' kits are now available for Motorola Inc's 1603 and 1604 VMEbus boards, Ceta SA's PowerEngine, and IBM Corp's 403GA evaluation board. The support was originally scheduled to be available in mid-1995, but Wind River says it has accelerated its PowerPC effort "to meet current popular demand". Where is that demand coming from? "PowerPC is displacing the 68000 family more than anything else," said David Wilmer, Wind River's vice-president of marketing - it appears that despite the blandishments of the new top-end 68060 microprocessor, a number of traditional 68000-family users are already turning their eyes RISC-ward. However, Wilmer said work is still hampered to an extent by the state of PowerPC software development tools: "The tools are there, but they are pretty immature." The only chip missing from the company's portfolio is Motorola's MPC 505 embedded processor version of the PowerPC, but Wilmer says this is purely because they have not received any evaluation boards yet: "We've been talking to Motorola on a weekly basis - they have been promising the boards, but we have seen nothing yet." But Motorola claimed that the MPC 505 evaluation boards, at \$975 each, are sampling now and that manufacturers should have no problem getting hold of the boards.

### ITSOLUTIONS WEB AUTHORIZING SYSTEM USES NEXTSTATION

Chicago-based systems integrator ITSolutions Inc reckons that Canon Computer Systems Inc's 100MHz 80486DX4 NeXTstep-specific object.station 41 provides the ideal base for creating a dedicated World Wide Web authoring system. It has integrated it with San Diego, California-based Pages Software Inc's World Wide Web object-oriented authoring tool, WebPages, to offer an off-the-shelf system to organisations keen to become major publishers on the Internet. Called the Neticity Workstation, the integrated kit is said to enable users to create what-you-see-is-what-you-get HyperText Markup Language documents and Web pages without requiring any knowledge of the language. Pages Software and ITSolutions say that Canon's workstation, which was built from the ground up to optimise NeXTstep, was chosen because its multi-tasking capabilities made it ideal for graphically-intensive work, like creating World Wide Web information. The Pages software simplifies document linking and makes it possible to create documents without the use of graphical editing tools, although the workstation comes with such a tool. Documents created in WebPages use a drag-and-drop user-interface that adds heads, graphics, and links to other documents. Pricing for the Neticity Workstation starts at \$10,000 for a completely integrated ready to use Web Authoring system. For this users get a 32Mb, 1Gb disk workstation with a 17" colour monitor, the NeXTstep operating system, WebPages, a graphical image editing tool, and a library of images, icons, and some sample Web pages.

### OPTIMAGE TO USE DEC'S VIDEO SERVER IN INTERACTIVE TELEVISION SYSTEM

Despite having bizarrely sold off some of its key interests in the field, Digital Equipment Corp remains keen on the television field and has now teamed up with OptImage Inc, in Des Moines, Iowa to create "the industry's first comprehensive interactive television application development system". The system, to be ready this summer, will include a full set of tools for developing and testing interactive television applications for public and private networks. OptImage will sell the complete system, giving developers a single supplier for all the hardware and software. The system combines OptImage's MediaMogul authoring, conversion and simulation tools; a software module from DEC enabling users to make server calls from MediaMogul applications; DEC's application development media server; a David-compatible set-top decoder; and an authoring board for Macintosh or Windows machines. MediaMogul is designed to facilitate the combining of video and audio segments such as images, drawings, animation, full motion MPEG digital video, speech, music and sounds - into sequences and interactive branches that respond to user input. The DEC media server is built around the 64-bit Alpha AXP RISC and includes object-oriented middleware that links the server with StorageWorks disk arrays and digital tape library system.

### STORAGE STEALS MARCH WITH NORDIQUE, FALLS FOR TIMBERLINE

Storage Technology Corp has announced general availability of Nordique, its RAID Level 5 device, and the TimberLine half inch tape cartridge system. It also finally announced the long-awaited Redwood tape system, based on Matsushita Electric Industrial Co's helical scan recording technologies, first mentioned in 1991. With these announcements, StorageTek claims it has overtaken IBM Corp, for so long the company from which it took its cue, and claims it is IBM that is now trying to catch up the Louisville, Colorado-based company. Stealing a march on IBM is getting to be a habit with StorageTek, whose much delayed Iceberg RAID system still managed to beat IBM's Ramac to market. But in the delay between announcement and product, Hopkinton, Massachusetts-based EMC Corp launched Symmetric, its disk array system, which has made huge in-roads into StorageTek's potential market. Still, StorageTek claims that worldwide since the launch of Iceberg in the middle of last year it has captured 8% of the world-wide high end mainframe-based storage system market from a standing start, perhaps helped by IBM fluffing its disk array fight back in September, when having launched Ramac, it then had to put it on allocation. Nordique disk array - using Data General Clariions - can serve both IBM mainframes and Unix servers. Nordique is a low-end product in the third level of a three-tiered strategy to enhance market coverage in disk arrays, a field in which StorageTek was slipping. The primary level of the strategy is Iceberg, the RAID 6+ device designed for performance-intensive, continuous-operations environments, which was developed in-house. For the second level, StorageTek bought Amperif Corp in 1993 and used its Viking RAID 5 system for the IBM-compatible mainframe disk market which has since metamorphosed into Arctic Fox and Kodiak. Arctic Fox is designed for IBM's parallel Sysplex machines. The Kodiak disk system is for run-of-the mill data with capacities from 100Gb to 1Tb. It is a RAID Level 5 device and aimed at low end systems. These products should be out by the end of the year: Amperif had planned to have Viking-based products out in 1993. Nordique was intended to appear in 1994 but here it is now completing the trinity and providing StorageTek with what it believes is complete disk coverage. Nordique is attachable to both IBM-compatible mainframes and Unix boxes and has something called Shared Storage Resource that enables partitioning of the storage capacity so that one portion can be attached to a mainframe and the other to a Unix system: StorageTek says that in this way users can shift from mainframe systems to open ones. The systems it can connect to are Sun Microsystems Inc workstations, IBM Corp's RS/6000, Digital Equipment Corp's VAX, Hewlett-Packard Co's Unix offerings, Novell Inc networks and Microsoft Corp's Windows NT environment. It connects to IBM-compatible systems through Enterprise Systems Connectivity, Escon, and, Unix through SCSI-2. Capacity for Nordique ranges from 15Gb to 544Gb for mainframes and 16Gb to 256Gb for open systems, using 2Gb or 4Gb disks. Like all StorageTek's disks arrays, it uses 3.5" disks and has been shipping in the US for some time; StorageTek does not say which company is supplying the disks, but the array subsystems are Clariions from Data General Corp, which has won a string of similar big OEM agreements with its RAID disk array line from the likes of Memorex Telex NV and Compagnie des Machines Bull SA. Prices "depend on configuration".

### HEILIG-MEYERS PICKS AS/400 OVER UNIX

The RS/6000 people are less than grunted because whenever a big server or downsizing bid comes up, IBM Corp always first bids the AS/400, and only if it is clear that only Unix will wash does it call in the RS/6000 business - by which time the likes of Hewlett-Packard Co and Sun Microsystems Inc will have made copious pitches, the RS/6000 people have to start by bettering their rivals' best bid, and the business ends up going out of house - but just occasionally, the strategy, laid down because margins on AS/400 are so much better than on RS/6000, does pay off in a big way. Heilig-Meyers Inc, a major home furnishings retailer, has bought 700 AS/400 Advanced System Model 200s to support its US-wide expansion after evaluating Unix systems from Hewlett-Packard and Sun, going for the AS/400 because of its ability to connect to a variety of different systems and peripherals; AS/400s will manage inventory levels in each of the 626 showrooms, and will be used to schedule deliveries from the seven distribution centres via satellite; the machines list for \$10,500 each.

## NEC IN VOLTE-FACE DECIDES TO TAKE TOP-END HP SERVERS OEM

In a stunning about face, NEC Corp last week abandoned the high-end R-series RISC-based servers it has been developing and ~~decided to cut its losses and adopt the market leading Hewlett-Packard Co machines, primarily in Japan.~~ As a face-saver, it will join Hewlett-Packard in developing and manufacturing next-generation large servers, bringing to the party its mainframe technology. Reason for the sudden about-turn on NEC's part is that its mainframe base in Japan is clearly defecting to client-server computing at a faster rate than the company anticipated, and it can't afford to wait for its own developers to come up with the goods. The agreement benefits Hewlett-Packard because its own marketing operations in Japan are limited, but Yokogawa Hewlett-Packard will continue to market the servers too. NEC says it hopes to sell 300 of the current HP 9000 Series 800 servers worth over \$100m over the next three years. NEC will stand by and continue to enhance its current mid-range NEC 4800 Series of R-series RISC-based Unix servers, and plans to convert Hewlett-Packard's HP OpenView system, network and application management software for the NEC 4800 Series, and will put some of its own software up on the HP 9000s. The pact underlines the folly of allowing politicians to interfere in the running of computer companies: NEC's strategic European partner Compagnie des Machines Bull SA was seeking a second foreign investor and partner three years ago and IBM Corp and Hewlett-Packard were presented as the alternatives. Bull favoured Hewlett as its investing partner, but Premiere at the time, Edith Cresson insisted on IBM, and President Mitterand backed his Prime Minister.

## SEQUOIA SYSTEMS OFFERS ROCK-BOTTOM FAULT-TOLERANCE

Marlborough, Massachusetts-based Sequoia Systems Inc still has not made the transition to RISC, but it is so far down the learning curve on its 68040-based fault-tolerant Unix systems that it can undercut just about anyone in its market, and has come out with a new line intended to do just that. The 33MHz 68040-based Series 500 has an entry-level price of \$86,000, the lowest ever offered by Sequoia. It also introduced a new high-end system, the 40MHz 68040-based 440ES, Extended System, with an entry price of \$390,000. The Series 500 is at least 50% cheaper than similar configurations of past Sequoia products. The company accomplished the price reduction by tighter integration of components on boards, reducing the number of discreet components, using newer technologies and improving manufacturing efficiencies. The new multi-user Unix systems are pre-configured with the Sequoia Pick database for 32 users, and are expandable to thousands of users. An entry Series 500 is not really fault-tolerant because it has only one processor element, two memory elements and one input-output channel. It supports 32 users; a 400-user configuration has four processor elements, six memory elements and 16 channel controllers. The 440ES goes to 32 processor elements, 4Gb memory and 30 channels. They are out now.

## BULL GOES TO NETTECH FOR ITS UNIX MAINFRAME TOOL: PLANS INTEGRATION

NetTech Inc's EView/Open application, a Unix-based tool for managing IBM Corp MVS and SNA mainframe environments via VTAM, Virtual Telecommunications Access Method, is being integrated into Compagnie des Machines Bull SA's Integrated System Management software. EView/Open is aimed at problem and fault management, providing an LU6.2 interface between SNA legacy systems and open systems. It requires only "minimal" changes to existing hardware and software, Bull says. As well as providing a graphical user interface, the software is claimed to reduce mainframe costs by downsizing SNA management functions to the Integrated System Management workstation, and will come with a wide range of automation and consolidation capabilities. Bull now has nine Integrated System Management application providers, including 3Com Corp, Cabletron Systems Inc, Raxco Inc, Epoch Systems Inc, Orsyp SA, Remedy Corp, Unilog SA and Bay Networks Inc.

## IBM TEAM TO CHALLENGE AT WORK WITH POWERPC?

It's not often that Microsoft Corp announces a major new product initiative and finds it greeted with roars of apathy, but that is pretty much what happened with its Microsoft at Work concept for embedding Windows-derived intelligence into office equipment. But two other major companies, Novell Inc and IBM Corp certainly don't believe the concept to be a dead one - Novell has just launched its Novell Embedded Systems Technology and now IBM has begun discussions with Japanese majors on its own software standard for linking personal computers and office equipment. "Details have not been set, but we expect the participants certainly to exceed 10 firms," IBM Japan told Reuters without elaborating. The Nippon Keizai Shimbun said 15 firms, including IBM, Toshiba Corp, Matsushita Electric Industrial Co Ltd and Canon Inc, would form an organisation in March to promote the standard. Given the participants it sounds as if it is intended to use the PowerPC RISC. The paper said that details of the standard would be announced in May, and the first products using it would likely be introduced in a year or two. NEC Corp, which sells At Work printers and facsimile machines, said it was considering an invitation to join the IBM group.

## NO BUS: CONCURRENT COMPUTER VIDEO SERVER USES CROSSPOINT SWITCH

Concurrent Computer Corp of Oceanport, New Jersey yesterday introduced its Maxion/IMS interactive multimedia server based on the Maxion multiprocessor R-series RISC-based system. It uses Concurrent's own Ultrasmart technology that replaces the system bus by using a crosspoint switch, which provides six independent high speed ports that can connect to any other port. Each port is supported with a peak bandwidth of 400Mb per second, amounting to a system bandwidth of 1.2Gb. This cuts out bus bottlenecks and the need for system drivers and transceivers, making the board space smaller and enabling it to conform to the Air Transportable Rack form factor industry standard. The company is in talks with suppliers to airlines to fit the system to commercial aeroplanes. It said the Maxion/IMS video server can deliver up to 100 video streams for around \$1,000 per stream and will be out in production quantities in the summer.

## CRAY SELLS RUSSIANS THEIR MOST POWERFUL OPEN SYSTEM

Cray Research Superservers Inc with Russian Integrator Open Technologies has sold a CS 6400 super server system to MMM Invest. The 16-processor Sparc machine plus an Oracle7 licence will have cost the Russian financial company a minimum of \$2m. According to Sergey Kalin of Open Technologies this could be the most powerful single open system ever sold in Russia. The system was paid for in advance in the summer and is currently being installed by Open Technologies. Final agreement was in August with delivery in October. The Cray system has been sold with several other Sun Microsystems Inc servers. MMM Invest plans to develop its own software using Oracle tools. It was purchased to establish a database of all MMM share holders. MMM Invest is a significant securities trader, dealing in Russian privatisation vouchers. Its reputation was seriously tarnished by the dramatic collapse in value of share certificates distributed by A/O MMM last summer - a company in the same group. Sergey Kalin says MMM Invest also hopes to use the system as a means of accessing world wide financial market data. Cray Research Superservers plans to open an office in the Russian capital in a month or two. It also works with Russian value-added resellers Fors, the Moscow Sparc Centre and Jet InfoSystems.

## WORKSTATION SALES RISING; MARKET WORTH \$210m THIS YEAR

Sales of workstations in Spain have increased by an average of 38.6% per year since 1991 according to a report by the European Information Technology Observatory. This growth rate is considerably higher than the European average. In 1991 4,124 workstations, worth \$84m, were sold. In 1993 that figure was 10,659 and the value was \$162.2m. The observatory estimates that in 1994, 15,240 workstations were sold at a value of \$210.2m. With respect to the number of workstations in public administration, Spain has 12.9 workstations, personal computers and terminals, per 100 staff. This is somewhat less than the UK figure of 24.8 per 100 staff, France's 18.8 and Italy's 16.3, but ahead of Germany where there are only 10.8 to every 100 staff.

## In Brief

**Informix France SA** says it has broken the Unix supplier monopoly that existed at France Telecom, with a deal to supply Informix On-Line, version 5, and ESQL/C for a database for future applications: it says the products are already being used in two applications, Automated Call History Calculation and Local Need Forecast Adjustment.

**Convex Computer Corp** has reported a fourth quarter net loss of \$4.6m, down from a loss last time of \$15.7m, which was after a \$4.5m pre-tax restructuring charge, on turnover that fell 3.6% to \$44.3m. Net loss for the year to December 31 was \$61.0m after \$18.3m in pre-tax restructuring and other charges, down from a loss last time of \$63.8m on turnover down 25.3% at \$144.2m.

**Digital Equipment Corp** and **Alcatel Alsthom SA** have signed a non-exclusive co-operation deal to integrate DEC's media server with Alcatel's network switching equipment; Alcatel will also provide systems integration expertise. The two are involved in the Belgian video-on-demand trial where **Apple Computer Inc** is supplying the set-top boxes.

Cambridge, Massachusetts-based **Praxis International Inc** has signed for **TechGnosis Inc's** SequeLink middleware for use with its forthcoming OmniReplicator database replication software due in March. Praxis claims OmniReplicator will provide bi-directional replication between DB2, Oracle, Sybase and Model 204 databases. It will offer one-way replication to Informix, Ingres, Rdb, System 1032 and Teradata. SequeLink provides database access over TCP/IP, NetBIOS, NetWare, APPC, Apptalk and DECnet.

**Legent Corp** has reported first quarter net profit up 24.5% at \$19.0m on turnover that rose 6.4% to \$122.1m.

Lake Havasu, Utah-based **Utilities Unlimited International** CEO Jim Drew has told our sister publication *PowerPC News* that his Intel Corp emulation software will be available by the end of this quarter. The 'e586DX' emulator has been dubbed 'PowerClone' and is in beta although the stuff won't be complete until its 'brother' is released on the Amiga platform. Utilities Unlimited's claim to fame is Emplant - a software package that emulates a Macintosh on the Amiga (with the aid of genuine Apple ROMs). The company announced it would extend this work to emulate Intel processors a few years ago, since when Amiga customers have been waiting impatiently. Then last year it emerged that the company was intending to port this Intel emulator to the PowerPC. There were many extraordinary claims about its size and speed.

**Rational Software Corp** has acquired Wisconsin-based **Palladio Software Corp**, a software-engineering firm that provides tools and training for object-oriented development. Palladio shareholders get an unspecified amount of cash as well as Rational common stock. Palladio employees and technology go over to Rational. Palladio developed the object-based Windows analysis and design software that Rational licenced and integrated with its own Rational Rose technology.

Breathing life into old 68k-based systems, **Motorola Inc** has teamed up with Newbridge Networks's Kanata, Ontario-based **Newbridge Microsystems** to develop a PCI to 68k bridge product family.

Derek Lambert, CEO of **Imperial Software Technology**, has been appointed Chairman of the **European X User Group** (EXUG).

New York firm **Information Builders Inc** is developing its Focus 4GL for DEC OSF/1 Alpha platforms. Focus for Open Environment together with the Focus Reporter for Motif reporting system the environment is priced from \$1,900 for a single user.

**UniDirect Corp** has formed a new division to push Santa Cruz Operation Inc products, including upgrades, services, training, SDKs and other programs, to SCO VARs.

**Insignia Solutions Inc** has promoted Brian Fawkes to VP marketing communications.

**Versant Object Technology Corp's** database is up on DEC OSF/1.

Irvine, California-based **Sync Research Inc** is offering to make NetView for AIX, HP OpenView and Sun NetManager network managers appear and behave like NetView SNA with Sync/Manager and Sync/Monitor applications priced from \$3,000 each.

Telecoms giant **Ericsson Group** has signed a two-year deal for Santa Cruz Operation Inc unit **Visionware Inc's** XVision PC X server.

**Hewlett-Packard Co** has added Motif and Windows front-ends to its HP WorkManager 2.1 workflow manager release.

Fremont, California, **Aries Research Inc** has an Marixx SI/75 MBus workgroup server configured with two 75MHz SuperSparc processors.

**Tangible Vision Inc**, Downers Grove, Illinois will debut version 1.0 of a new CASE tool called Imprimis generating object-based applications for real-time manufacturing systems at the Integrated Manufacturing show in Chicago between March 13 and 16

Responding to a CompuServe Forum query, IBM Corp says it takes just 20 minutes to get Windows NT up and running on its PRep-compliant RS/6000 40P.

Siemens has chosen **Apertus Technologies Inc's** Express mainframe connectivity software for a German government project which is expected to net the firm \$2m.

Markham, Ontario-based **Cybermation Inc** has added a Unix extension to its ESP Workload Manager job scheduler for integrating RS/6000s workloads into MVS mainframe environments, with further Unix, OS/2, AS/400 and Tandem extensions over the next few months.

**Los Alamos National Labs** has chosen Expersoft's XShell 3.0 for use in building an object-oriented infrastructure for prototype "telecommunities" in the its Digital Village Project.

**Harris Computer Systems Corp** is getting into Russia, signing a deal with Moscow-based **Lukon Financial-Industrial Corp** under which Lukon will sell Harris kit to Russia's aerospace and defence industry. Lukon has already sold two Night Hawks for the Ilyushin IL-96M passenger jet simulation project.

Atlanta, Georgia firm **The System Works Inc** is offering a Unix version of its capital asset management system as Enterprise MPAC supporting Oracle and Sybase. Prices start at \$200,000 in April.

**ISA Corp**, Bellvue, Washington, has been demonstrating version 4.0 of its mainframe-style SQL Operator system management software under Windows, Motif and Open Look. It is priced from \$10,000.

**Legato Systems Inc** is offering NetWorker Archive, the second of its data management services applications, this one for archiving, priced at \$3,500 on AIX and Solaris. It's also added version 4.1 of its Networker backup and recovery software.

**Unisys Corp** is offering what it says is the airline industry's first origin and destination system, True O&D, based upon the Scandinavian Airline Systems (SAS) technology it acquired in 1993. True O&D determines the value, or bid price of an airline's available seating so that only bookings at or above the price are accepted.

RPC house **Netwise Inc**, Boulder, Colorado, is supporting **Forte Software Inc's** application development environment in its Windows-based Application/Integrator Workbench for generating mainframe Cobol, IMS and CICS code - the code can be used to generate Forte APIs. Prices are from \$70,000.

**Real Time Systems**, the Isle of Man-based systems software house is offering **JMI Software Systems Inc's** C Executive real time kernel for use with Intel's i960 P110 and IBM's PowerPC 403GA embedded chips from the first quarter.

**Hewlett-Packard** is offering a Solaris 2.x version of its Oadapter object/relational adapter that allows objects to be created, managed and stored in Oracle7 running on HP, Sun and IBM Unix boxes. It's also added dynamic link library support for Windows NT-based clients.

**Brio Technology Inc** and **Taligent Inc** are developing a Data Access framework for Taligent's CommonPoint to provide direct access to databases.

**Aurum Software Corp**, Santa Clara, California, has installed former VP marketing Mary Coleman as president and CEO. She replaces Tom McNeight who is heading back to Atlanta.

## SIEMENS NIXDORF ANNOUNCEMENTS

**FED UP OF WAITING FOR HELP SIEMENS NIXDORF PLANS GATEWAY BRIDGE ALONE**

Siemens Nixdorf Informationssysteme AG is centERing its application software strategy around what it calls 'software bus' technology. The software bus concept is Siemens Nixdorf's answer to the continuing conflict between Microsoft Corp's Object Linking & Embedding technology and the Object Management Group's Common Object Request Broker Architecture. The company appears to have grown impatient at searching for partners to assist in its task to link the pair, and has decided to start developing the link itself. Peter Page, who heads the Munich-based company's application software unit explained that such a technology is necessary as software is being developed on a gradual evolutionary basis, using heterogeneous software components. The days when everybody was geared up for the changeover between one homogenous system and another are fading fast, Page believes. Horst Nasko, vice-chairman of the company's management board, had an even more pragmatic explanation: he said Microsoft will dominate the future of object-oriented technology and has no intention of falling in with Object Management Group - and Siemens Nixdorf simply cannot stand around waiting for someone else to link the two standards. The company will still consider partnerships since Page admitted the company has no idea how much development work will be entailed in linking the two. Another key concept in Siemens Nixdorf's strategy is what it calls 'client-client' oriented applications. This is an extension of existing office-based messaging protocols so that applications can be linked using an X500 distribution mechanism. Security and data integrity are high on the company's list of problems to be solved before this can be implemented. But before any of this can be achieved, Siemens Nixdorf needs to complete its internal restructuring so that it can react to customer needs, or "answer market pulls," as Page said, adding that was time for developers to stop fighting and accept and support the personal computer on the desktop.

**Prototype of video-on-demand RM400 server a prelude to launch of full-blown system at CeBit**

Siemens Nixdorf Informationssysteme AG plans to join the crush of companies offering servers for video-on-demand systems. It says the market in Europe at least is likely to remain a consumer-based one and so it is working on multimedia servers that can handle hundreds of clients. In March at CeBIT in Hannover it will be showing a prototype of a video-on-demand and multimedia server based on either an expanded RM400 or RM600. The prototype it had at its London pre-CeBIT was a RM400 attached to an Asynchronous Transfer Mode fibre optic line leading to what it described as a service broker; from there it was linked via Ethernet to about half a dozen personal computers and televisions.

**Personal computers and services to be Siemens Nixdorf bread and butter businesses by year 2000**

Personal computers will become Siemens Nixdorf Informationssysteme AG's most important hardware business, and it expects to shift 2m worldwide a year within the next 18 months; last year it sold 450,000. In regional terms, the Pacific Rim will see the largest growth and Siemens Nixdorf has set up a joint venture in China with Top Victory Electronics Ltd to exploit this. So far this has produced about 2,000 to 3,000 units. Walter Rossler, the executive vice-president of the personal computer business unit, said his division will turn a profit this financial year and its goal is the number three market position in Europe in the 1996-1997 financial year, which it will achieve through increases in volume and efficiency. It is currently number six in value terms and number eight in units in the European personal computer market. He said a key factor in any success will be the time to market rather than service back-up as the consumer market expands. Siemens Nixdorf has accepted that the mainframe as a business is dwindling for everybody and says its plans to convert its BS/2000 operating system to run on R-series RISC chips will only delay the inevitable decline in its mainframe business, not halt it in any way. Siemens Nixdorf, which announced that it would be using MIPS Technologies Inc's forthcoming R10000 as the basis of its hardware systems at its pre-CeBit conference in London, said the shift would offer customers a better price-performance ratio. It expects to have the first models targeting the low-end mainframe performance segment by its 1996-1997 fiscal year. It says mainframes will "remain one of the pillars of our business in the years to come" but from amounting to a third of its business, when mainframe hardware, software and services are added together, this proportion will slowly decline as personal computers and Siemens Nixdorf's service business increases. The company is also planning to split the into three quite distinct units, products, services and what it is calling "solutions," although use of the word usurps the customer's sovereign right to decide whether an offering really is a solution to his problems.

**Value-added division**

This will be what it calls its value-added division, a fact it mentioned at its end of year results in November. Its service business, which it describes as traditional technical services, training, facilities management and large projects, is expected to grow at 9% a year, until it accounts for 52% of turnover by 1997. And the company has plans to move itself closer to its customers. With a large number of new executives having just joined, Siemens Nixdorf is busy trying to make itself a truly international company. Gerard Schulmeyer, chief executive since November 1, has made English the company's *lingua franca* and Wolfgang Jaeger, executive vice-president, said much more effort was going to be made in the non-

German speaking market. Jaeger outlined vague plans for the "solutions" business which will see the establishment of competency centres in various countries close to customers certain markets that Siemens Nixdorf is targeting. Jaeger says the basis for these teams is more or less established and that it is really a matter of refocusing groups. In the end he expects around 10 to 15 of these centres globally providing specific offerings for banking and insurance, the public sector and telecommunications, and industry. Profit and loss will be associated with the centres in the future which will be a shift away from the company's more general geographical breakdown.

**MAPINFO PLANS NON-PROPRIETARY MAPPING SOFTWARE WITH PARTNER PROGRAMME**

MapInfo Corp, the Troy, New York-based desktop mapping software company, plans to make its software non-proprietary when it launches a Data Partner Programme called MapOpen this year. According to Brian Owen, MapInfo's president and chief executive, the move will lead to consistent documentation and also assist in the merchandising of MapInfo's software. Partners in the programme are yet to be announced, but the chances are that Microsoft Corp will be included since both companies have recently signed an agreement whereby a sub-set of MapInfo's Mapping technology will be integrated into future versions of Microsoft Office and Excel. Owen says integration will ensure that software is kept intuitive. MapInfo has chosen to limit the functionality of the final integrated product in order to avoid cannibalisation of the existing market for its higher end product. Microsoft software will incorporate sub-sets of MapInfo data to give users 'best guess' scenarios, making it easier for them to analyse data from Office and Excel. MapInfo predicts that the Office product will ship in late spring this year once Windows95 has been launched - but of course Windows95 has been put back to August. Owen says the agreement with Microsoft is a key element within the company's business strategy to broaden the desktop mapping market and also to strengthen its global presence within this market. MapInfo moved into Europe in 1989 and intends to step up activity within Europe in the forthcoming fiscal year. The company feels that the potential for its mapping software is immense. MapInfo currently derives 27% of its \$30m annual business from international markets and has set its sights on "high double digit growth in this market" in the next couple of years. According to Rikke Helms-Wienszczaek, European managing director, "The software market is poised on the edge of the next big corporate application category." She predicted that the mapping technology market will go the same way as the spreadsheet market, which started out as a financial niche market but expanded into general usage. According to Ms Helms-Wienszczaek, selling to European markets is radically different from doing it in the US because European governments decide what type of data can be used commercially. This subsequently affects the applications the company can develop. She sees the market for MapInfo software in the UK taking off, now that the Royal Mail has made postcode information commercially available. MapInfo has released a UK postal data product that provides a mapped display of a user's database by postcode. UK Post Code Units is a data set that matches a postcode from the customer database to the corresponding postcode in the data file, enabling the user's data record to be plotted on a map. MapInfo says potential applications include accurately targeting mail shots for direct marketing activities and sales territory analysis, where the tool can precisely pinpoint where the most profitable areas of business are. The Post Code Data Unit product runs under Windows, Mac OS, Solaris and HP-UX systems and is shipping now for \$2,000.

# unigram X

The weekly information newsletter for the UNIX™ community worldwide

**Informix Corp** has reported fourth quarter net profits up 32% at \$23.8m on turnover that climbed 48% to \$150.1m; net profit for the year to December 31 was 18% ahead at \$66.2m on turnover that rose 33% to \$468.7m. It says North American revenues rose 40% to \$215.5m last year, while European revenues rose 22% to \$176.0m, and Intercontinental region sales rose 42% to \$77.2m; in the fourth quarter, annualised sales per employee climbed to \$271,000.

The last time we looked **Candle Corporation's** chief technologist Sam Greenblatt was busying trying to smooth the way for the **DEC-Microsoft Common Object Model (COM)** to talk to the **Object Management Group's** Corba stuff and the next thing you know the boy pops up working for **Computer Associates** as VP for research and development, accelerating CA-Unicenter development. Also now there is Nigel Turner, CA's new VP of open systems strategy. He's a refugee from **OpenVision** where he was VP, application engineering.

Los Altos, California-based **Pure Software Inc** has opened European headquarters in Amsterdam. It has also opened sales offices in Reading, Berkshire, Paris and Munich, bringing to 20 the number of staff in Europe. There are also plans for an Asian headquarters in Japan. The five-year-old start-up has 130 employees and what it claims are 11 profitable quarters behind it with \$30m revenues.

**IBM Corp** claims it has now shipped an aggregate 350,000 RS/6000s into 70,000 customer sites in the almost five years that the AIX Unix family has been on the market.

Javaid Aziz's departure from **IBM UK Ltd** may have looked abrupt, but he did have another job lined up: he is to become senior vice-president for Europe at **Silicon Graphics Inc**.

OEM sources contend that **DEC** could be at least six months behind in getting any of its bleeding-edge 266MHz and 300MHz 21164 chips into marketable boxes because of problems it's had with the 21164-compatible chipset, the part officially called the 21171 and also known as Alcor.

**Chorus Systemes SA's** illusive but long-promised telecoms partner (UX No 509) is **Bosch Telecom** which will use the Chorus microkernel alongside object-oriented technology in its telephony equipment.

**Tivoli Systems Inc** has 13 firms building event adapters which will provide event information to its Enterprise Console automated event management application from a slew of operating systems and LANs.

Having re-cast its Deploy project for API porting and testing once again (UX No 521), **X/Open Co Ltd** and other project members have decided to get their hands dirty and begin creating code for the automatic generation of platform-specific API test suites.

Willie Shih, who left **IBM** 18 months ago where he was director, Personal RISC Systems, to go to **DEC** as VP, Alpha Personal Systems and became, after various reorganisations, the VP responsible for product strategy and alliances inside the Alpha-based Systems Business Unit, has now left that post heading for an unspecified job at **Silicon Graphics**. He starts next month.

The bug fixes in Motif 1.2 that have been poured into CDE 1.0 will be bundled together in a dot 1.2.5 release by the end of this quarter. Although ISVs seem to want it, OSF says it hasn't decided whether to take 1.2 any further forward.

**Santa Cruz Operation Inc** is merging the sales forces of its **IXI Ltd** and **VisionWare Ltd** acquisitions under IXI Americas general manager Randall Brem in the US and VisionWare's Andy Kitchner in Europe. There's no relocation on the cards, yet, apart from VisionWare UK's move to a more salubrious neighbourhood.

**Allied Telesis KK** is localising **AGE Logic Inc's** XoftWare/32 for Windows.

As rumoured, **IBM** plans to sell its bulkiest piece of old-fashioned hardware - its 30 year headquarters. CEO Louis V. Gerstner Jr. wants to build something cozier and better-equipped on the 450-acre wooded sprawl IBM owns in suburban Armonk, New York. Gerstner is reportedly willing to shell out up to \$70 million to construct a soothing, properly high-tech nest in the woods for his flock of 800 headquartered workers.

Meanwhile, employees at **IBM's** headquarters were instructed recently that casual dress was now welcome; read encouraged. Indeed, they were apparently told to wear anything they thought was acceptable, which, in the new corporate culture, may render many a poor soul's solemn wardrobe unacceptable.

Unix Expo '95 was held last week at the Krasnaya Presnya Exhibition Center in Moscow. More than 60 companies from the US, Russia, Germany and Singapore showed-off their open-system technologies for networks, banking and commercial information processing at the week-long Unix-fest. **Novell's** General Director in Russia, Konstantin Stovolosov, told *Tass* that Novell is opening training centres in Moscow and St. Petersburg and plans to step-up product distribution throughout the former Soviet Republics.

Sorry, wrong HDS. In our X terminal report we awarded **Hitachi Data Systems** a 3.6%, \$23.5m share of the market. We should have said **Human Designed Systems Inc** of course.

**Frame Technology Corp** has signed for **HaL Computer Systems Inc's** Olias document delivery system which displays SGML and world wide web documents. Frame will develop future versions of Olias for Windows, Mac and Unix under an agreement with HaL parent **Fujitsu Ltd** Olias is up on **HP** and **Sun** workstations.

Left with little to market following the acquisition of **Powersoft** as the wags would say, Kieran Kilmartin, product marketing manager for **Sybase** development tools in Northern Europe, is to manage Powersoft's European product marketing including the 4.0 roll-out there.

Unix Expo has nabbed **NeXT** chief Steve Jobs as its keynoter for the show in September.

**IBM Corp** is apparently set to use Paris-based **Ilog SA's** C++ Views 2 environment to create a portable application development system. **Hewlett-Packard Co** uses parts of Ilog tools in Softbench, which IBM resells as Workbench.

**Novell Inc**, Provo, Utah appointed retired **Hewlett-Packard Co** chief executive John Young to its board of directors to fill the vacancy left by Ray Noorda's retirement.

**Sybase Inc** has named Michael Bealmear, formerly a senior VP at **SHL Systemhouse**, to the newly-created position of vice president worldwide consulting, where he will oversee all service operations, including Sybase's OASiS re-engineering subsidiary in London.

**Ing C Olivetti & Co SpA's** head of strategic alliances, Gianni Granata, is promising to have re-badged Alpha RISC machines at CeBit delivered through the company's renewed acquaintance with **DEC** (UX No 522).

**Sun Microsystems Inc** has installed its deputy general counsel Piper Cole as its first director of public policy, or government-watcher.

OLTP specialist **Independence Technologies Inc**, Fremont, California, is now offering version 2.0 of **Novell Inc's** Top End OLTP monitor for HP-UX.

The first HP-UX developers conference takes place in La Jolla, California between March 27 and 30.

Mexico's Grupo industrial Bimbo food giant is taking 500 **Sun Microsystems Inc** boxes for what's claimed to be the largest enterprise-wide commercial client/server network in the country.

**Sun Microsystems Inc** and **IBM Corp's** plan for DB2 on Solaris calls version 1 running on Sparcs with Solaris 2.3 and above in March, with beta versions of Query this month, Data Propagator/Apply in March, and DataHub/Unix and DataJoiner in June. Timescales for version 2 have yet to be decided.

San Jose based-**Mercury Interactive Corp** is to offer an object-oriented version of its test software for testing applications developed using Parplace VisualWorks. A new VisualWorks API will be integrated into Mercury's WinRunner/XRunner to recognise GUI objects created by VisualWorks. Product is expected next quarter.

**Sun Microsystems Inc** is using a multi-chip memory module that accommodates four SRAMs, meaning it can double the cache on workstations without taking up more space, according to *Electronic Engineering Times*.

**Novell Inc** and **Microsoft Corp** are scheduled to meet this week to discuss Xenix compatibility.

**Santa Cruz Operation Inc: The Next Generation.** SCO's quarterly rah rah last week was decked-out in trekkie garb and **IXI** boss Ray Anderson delivered his message to the crew dressed as Captain Picard. He spelt out how the next-generation SCO Collective should replace the company's Federation-style *modus operandi*.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram · X

20 FEB. 1995

KBN

The weekly information newsletter for the UNIX™ community worldwide

London, February 20-24 1995

Number 526

## “JEKYLL & HYDE” APIs TO TILT AT CDE SHORTCOMINGS

Although they swear they don't intend to upstage the Common Desktop Environment folk at UniForum, a collection of X Windows ISVs and X terminal builders and others plan to “pick up the balls COSE has dropped” with APIs extending CDE for stuff like Unix database access from Windows, deployment of Windows-based C++ code on Unix and Internet access. The initiative - which is still seeking a name for itself - has been coralled by Santa Cruz Operation Inc and its IXI Ltd and Visionware Ltd units as a way of propagating their “Windows Friendly” strategy, which sees Unix (with CDE/Motif) on servers and Windows on the desktop as the logical client/server model. In particular, the effort will lever IXI's Eye2Eye technology which, via the use of intelligent agents, gives Unix applications and utilities the appearance, behaviour and some of the functionality of Windows when accessed from a PC through a local PC X server or hosted on a Unix client. X Windows technology suppliers - including X terminal vendors - have been attracted by the prospect of reaching new markets such as the growing demand for “thin” PC clients hooked-up to Unix systems, of which there are now estimated to be more than two million. Motif development house Integrated Computer Solutions Inc is expected to weigh in with ODBC-to-Unix databases access technology, others will provide APIs for deploying code developed with Windows-based C++ tools on Unix. The protagonists, united in their belief that CDE is “too little too late,” will seek to shift the pre-packaged CDE product mindset they say will characterise TriTeal Corp's CDE pavilion at UniForum towards a culture of CDE specifications enhanced with their APIs. It's stuff COSE won't be able to deliver for at least a couple of years, they figure, and only then if COSE vendors don't get distracted by other concerns meantime. The initiative draws on an internal IXI project called Jekyll & Hyde to persuade users to adopt Windows/Unix strategies rather than “one-eyed” Unix solutions (Mr Hyde).

## IBM FINDS SOM MESSAGING IN PIPES...

IBM Corp has turned to San Francisco, California-based PeerLogic Inc's eponymous PIPES messaging system to provide a dynamic naming service and cross-protocol communications for its System Object Model (SOM). A PIPES kernel sits between applications, operating system and network protocols on each machine, combining to form a logical network handling all network input/output. OS/2 3.0 versions of PIPES-enabled SOM supporting TCP/IP, IPX, DLC and APPC are due in the third quarter. “The ability to dynamically reconfigure applications to run over different protocols removes the burden from the developer to know where the application is going,” says IBM's manager of object technology enablement, Anthony Brown. OS/2 and AIX versions of SOM are out of the blocks; MVS is in beta, AS/400 support is coming with versions for Windows and HP-UX and development tools like C++ due. Taligent pieces will run atop for those that want them. A new version of SOM will debut in the third quarter - support for OMG facilities are due in the meantime. IBM admits that not all of its strategic guns were pointed away from SOM this time last year but says that it is now established as the company's basic object building block technology. It's using the terms SOM and Distributed SOM interchangeably.

## ...PLANS INTER-ORB CONNECTIVITY TOO

More interesting perhaps is IBM's planned support for a second release of PIPES in which Peer Logic will implement OMG's Corba 2 General Inter-ORB Protocol (GIOP) message format for connecting different Corba-compliant object request brokers. GIOP can be hosted on TCP or DCE-CIOP transports and as IBM plans TCP/IP and DCE RPC flavours of SOM “within a year” PIPES should offer a means of deploying objects across different SOM implementations and other PIPES-enabled ORBs without modification. Peer Logic, supported GIOP at OMG's Corba 2 vote and says the very thought of “doing object computing on RPCs was a bizarre notion.” It hopes that in future it will be able to lever PIPES for use in bridging the Microsoft COM-to-ORB worlds.

## AIX: DELIVERIES TO MID-1996, “PLACE-HOLDERS” THEREAFTER

AIX honcho Donna Van Fleet now carries pieces of paper with her to calm customers and prospects apparently perturbed over recent reports about the future of IBM Unix. Donna flourished the papers in front of us during the RS/6000 division's AIX strategy briefing at EuroDisney last week, although we weren't able to make out anything but a blur under a 1997 headline, and IBM isn't saying what, if anything, there is written here. The company maintains it has an 18-month roadmap of technology deliverables scheduled until the middle of 1996 with “place holders” thereafter. It says it has 800 staff working on AIX, a business worth some \$200m, though with SMP functionality mostly cooked there will be further rationalising of the development team, some of whom - those with experience from the scuttled AIX Workplace personality project - have already been moved to work on the PowerPC OS/400 microkernel. IBM's hurt that “wanting to make the product profitable is being interpreted as disinvestment.” Mid-year enhancements to AIX 4.1 will include eight-way scaling, further OS/2 and Windows connectivity, Internet access and more multimedia integration at the interface. AIX 4.2, due to beta by year-end, will include support for 64-bit addressing, PowerPC 620 and some object stuff. There are no details of what's beyond 4.2, though by the end of 1996 we should expect an object-based AIX borrowing heavily from Taligent with further scaling for additional processor support, IBM says. (For more AIX details see page 7).

## X TERM FRENZY

Recent IBM and Sun X terminal announcements have started a feeding frenzy amongst the rest of the pack. Hewlett-Packard Co will this week add four new ‘performance’ models to its Intel Corp i960-based Envixez X term line aimed at technical and engineering users. They come with from 6Mb to 102Mb RAM, one parallel, two serial and two PS/2 connections. Options are a 100VG-AnyLAN adapter for the emerging network protocol, Token-Ring adapter (\$500), PCM-CIA slot, FlashROM support, SCSI adapter kit (\$250), floppy drive (\$125) and a multimedia bundle with audio card, floppy drive and 10Mb RAM pre-installed (\$500). An enhanced version 6.0 of HP's Enware software will include Dynamic Host Configuration Protocol, version control and shared Motif libraries for local clients when it ships in May. Basic models at 1280x1024 resolution come with 6Mb RAM and perform at 220,000 Xstones and 5 Xmarks. The 19” monochrome 19Gp is \$3,200, the 17” colour CpS costs from \$4,300, the 19” colour 19Cp is \$4,800 and the 20” colour 20CpS costs \$5,300. X term pioneer Network Computing Devices Inc promises to overhaul HP with a new Mips R4000-based line that'll go to 250,000 Xstones and 5 Xmarks with from 24Mb RAM at around the same price next week. With hardware prices plummeting, NCD is also continuing its push on into the software market, getting that TriTeal Corp is to put its TriTeal Enterprise Desktop (TED) Common Desktop Environment client on to its terminals from the third quarter. NCD will resell client and host-based TED plus, the HP Visual User Environment implementation on which TED is based. TriTeal may also use NCD X software in TED. (For more X terminal announcements see page 7)

## POWERPC: I'M A NAME, NOT A NUMBER

There are so many different PowerPC projects on the drawing board over at IBM Corp and Motorola Inc that it is unclear even to PowerPC directors how many or which ones will ever see the light of day. Over the last week there have been more reports of chips ranging from the 610, through to 612, 613 and 615. We are told to discount them all as IBM and Motorola intend, in any case, and move from numbers to a naming scheme for PowerPC. Meanwhile, the notion that there are 400MHz units in existence are unfounded, we've been told. And, to restate what we have said in the past, the PowerPC companies have not yet worked out whether they will resolve Intel iAPX emulation in hardware or software.

### POWERPC 602 AND 603E UNWRAPPED - 603E BEATS 601 INTEGER PERFORMANCE

IBM Corp and Motorola Inc officially pulled the wraps off two new members of the PowerPC family last week. The PowerPC 603e processor is the new version of the 603 that has been called the 603+. The new chip has a 16k-Byte cache, double that of its predecessor, and the clock speed is raised to 100MHz, from 80MHz. The 100MHz 603 is estimated to have better integer performance than the 100MHz 601. The companies estimate the PowerPC 603e will produce 120 SPECint92 and 105 SPECfp92 compared to SPECint92 110, and SPECfp92 130 for the 100MHz 601. Today's 80MHz 603s manage slightly better than 75 SPECint92 and SPECfp92 85. However the companies seem to have decided against using the new, compact transistor geometries, introduced with the 100MHz 601. Consequently the bigger cache of the 603e has grown the chip, which measures 8.4mm x 11.67mm. PowerPC 602 is the first joint IBM/Motorola PowerPC to be aimed at the embedded market. The processor has dual 4k-byte instruction and data caches on its tiny 7.07mm x 7.07mm die. The companies say it has 1.2 W typical power dissipation, using 0.5-micron CMOS. On the performance side, the 66MHz 602 is supposed to be an estimated 40 SPECint92. SPECfp figures for the processor were conspicuous by their absence, despite the fact that it is meant to have a built in floating point unit. IBM and Motorola will aim the 602 at home entertainment and computer/education devices and at personal digital assistants. 3DO and Matsushita are publicly committed to using the chip. Both microprocessors are scheduled to go into production in the second half of the year.

### TIRER LAUNCHES ITS GIS IN THE EUROPEAN MARKET

Tirer International Marketing & Consultants Ltd, developers of geographical information systems software, started selling to US markets initially when it started up in 1985, but it is now looking to move into the UK, Germany and France. The Tel Aviv, Israel-based company is talking to MicroData Ltd to act as a UK distributor for its Engima Plus software. It believes Enigma Plus is better than the geographical mapping software available from its main competitors MapInfo Corp and Environment Systems Research Institute because it has a stronger topologic function. Defining the topology of a shape enables users to develop structural shapes quickly because the software can work out the points and lines needed to be connected in order to form that shape. Topology is necessary for the uses of mapping software because it enables users to define a small part of a map on screen and then examine it more closely. Enigma Plus also connects with standard databases through its Btrieve internal database, something Tirer says its competitors products do not. Enigma Plus uses SQL Link to access Oracle, Sybase, Informix, Ingres, dBase and DB2 databases whereas, according to the Tirer, all other geographical information software companies keep their geographical data their own proprietary database. Enigma Plus version 1.3, its current version, can import computer aided design Drawing Interchange Format, DXF and DWG files and then display them geographically, a useful function for design engineers that wish to spatially examine components they have designed in computer-aided design software. According to Tirer, most users take existing photogrammetric maps from the likes of ArchInfo, which they then import into mapping software, because it is a cheaper and faster option that creating a map from scratch. Users then take this information and use it in tandem with their own databases. Estate agents, for example, can take a photogrammetric map of a city and use it to define a specific area in which a client is looking for a house. The estate agent can then trawl through the alphanumeric data contained within its own database to ascertain for instance how many houses within the specified area have the required number of bedrooms. The software package can also handle digitised data so the client can then be shown pictures of the houses that match the applications in its own programme interface rather than using a high level language development tool to write source code. The source code automatically generated by its software also produces remarks codes so it can be broken down and changed without the need totally to rewrite code for a different application. It currently runs under Windows 3.1 but Tirer is working on Unix and Macintosh versions. It needs a minimum of full 80486 personal computer with 8Mb of RAM. The company is also currently developing a version of Enigma Plus for Personal Digital Assistants and notebook computers so that users can access its mapping software from remote locations. Version 1.3 is shipping now and is \$1,200.

### ENCORE LAUNCHES HIGH-END INFINITY DISK ARRAY FOR COMBINED ES/9000, UNIX SYSTEMS

Encore Computer Corp, which last year came out with the SP20 disk array following its OEM agreement with Amdahl Corp, has taken the concept even further up-market with the launch of the Infinity SP30 storage processor. It sounds suspiciously like the device that is the subject of the OEM agreement with Amdahl, on which last we heard, Amdahl had an exclusive for most major markets. Encore describes it as the first intelligent high-capacity, high performance storage controller, and it looks to an IBM Corp mainframe like a 3990 disk subsystem, but can be used concurrently in an open systems environment. The Infinity SP30 processor supports multiple RAID levels 1 and 5 in a single system so that users can configure the appropriate RAID level, or no RAID, for individual data sets. It is compatible with mainframe operating systems that support any combination of 3380 and 3390 device types without conversion, and currently goes up to 450Gb. It uses dual four-processor nodes with automatic failover, and arrays of 3.5" disks. It has redundant cache memory, and supports remote copy at T1 and T3 speeds or over Encore's 1Gbps Fiber Optic Reflective Memory. Prices go from \$672,000 to over \$2m and it will be marketed via distributors worldwide, and the devices are ready to ship immediately.

### STORAGE TECHNOLOGY ADDS DEDICATED TAPE LIBRARY FOR UNIX

Storage Technology Corp's StorageTek Distributed Systems Division Inc in Lisle, Illinois has added another library product, the 9704 Tape Library System: it is an automated library for 4mm digital audio tape cartridges in a compact, 8.5" wide form factor and is aimed at Unix and networked personal computer users, providing unattended and centralised data back-up, recovery and archival functions when the right software is installed. It combines dual Hewlett-Packard Co DDS-2 helical-scan tape drives with a lightweight removable carousel that holds 25 DDS-2 cartridges for a total capacity of 100Gb uncompressed or 200Gb compressed, with random access to the cartridges. It has an SCSI-2 interface and comes in rack or desktop units. Prices start at \$12,000 and it should be ready by the end of the month.

### CAMBEX ADDS LOW-END DISK ARRAYS FOR IBM's RS/6000 AND POWER PARALLEL SP2 UNIX

Waltham, Massachusetts-based Cambex Corp has announced two disk array products for IBM Corp RS/6000 and SP2 users. The Array/6000 Model 505 subsystems include two 'personal' disk array units with capacities of 5Gb and 10.5Gb in a single desk-side cabinet. Each unit includes a single desk-side enclosure, one RAID controller, one rank of five disk drives with capacities of either 1Gb or 2.1Gb each, three power supplies, a Wide Differential SCSI-2 adaptor, an input-output cable and an integrated AIX configuration utility. Both of the new subsystems can be doubled in both capacity and RAID protection attributes, says Cambex. All Array/6000 Series storage products can combine or intermix different levels of data protection within a single subsystem. The Array/6000 units include the Models 505-1005 and 505-2105. The Model 505-1005 makes use of 1Gb 3.5" drives, and the Model 505-2105 uses 2.1Gb 3.5" drives. Each has a single SCSI-2 high-speed disk adaptor capable of data transfer at rates of up to 20Mbps which can be shared by two host RS/6000 computer systems in an High Availability Cluster Multiprocessing/6000 environment, with the addition of a second RAID controller. Each is field-upgradable to Cambex's larger Array/510 and Array/910 systems. Initial deliveries begin this month. Pricing for a basic 505-1005 is \$22,950; for a basic 505-2105 array, \$26,950.

### D&B SHIPS SMARTSTREAM VERSION 3.0

Dun & Bradstreet Software has announced the release of SmartStream 3.0, its Unix-based applications and development environment. The new version includes improved graphical user interface support and full support for the product's modules, including Manufacturing, Financials and Human Resources Stream. At the front end, D&B has introduced Stream-Builder, a front end development tool, based on Powersoft's PowerBuilder product. According to the company, StreamBuilder is object-oriented and allows developers to reuse existing SmartStream data objects and common code. For example, customers can use the tool to customise SmartStream applications and integrate information with in-house data and non D&B applications using a gateway. In addition, the tool comes with SmartStream workflow application programming interface, so developers can build applications, whether they are written in Visual Basic, PowerBuilder or C, with embedded workflow capabilities. Microsoft Object, Linking and Embedding 2.0 specification is also supported. SmartStream 3.0, including all modules and StreamBuilder, is available now direct from D&B.



### ORBIX FOR UNIXWARE 2.0

Fleshing out its July 1994 agreement with Novell Inc (UX No 496), Dublin firm Iona Technologies Ltd has put its Orbix distributed object request broker up on UnixWare 2, apparently its twelfth platform. Iona sees the port as its first step towards the NetWare community. It offers UnixWare 2 users a way of building CORBA 1-compliant object applications whilst Novell wrestles to nail down a company-wide object strategy. Orbix is already supported by Novell's Tuxedo OLTP system for building transactional object applications. In other news Iona is still promising volume ships of Orbix for Windows 3.1 this quarter whilst Tuxedo will support Borland International Inc's new Delphi application tool for Windows.

### TAKE TWO OF TAKEFIVE'S SNIFF+ DEVELOPMENT SYSTEM

TakeFive Software GmbH, Salzburg, Austria, has added a new release of its Sniff+ C and C++ development environment. Sniff+ 2.0 comes with new building, project management and comprehension tools, a shared development suite and documentation builder. It can accommodate small application development and code-building involving millions of lines with a data repository that scales linearly with code size. TakeFive uses what it calls a "fuzzy parser" to extract information from complete, incomplete or noncompiled source rather than parsing code through a compiler in the traditional fashion. Taligent Inc has been using Sniff+ to build its application development environment for sometime (UX No 491), and is expected to bundle Sniff+ 2.0 with the promised AIX 4.1 beta of what's now termed CommonPoint (UX No 517). Indeed Taligent's investment was sufficient enough for TakeFive to set up shop in Cupertino, California, last year. TakeFive says users can mix and match development platforms, compiler, debugger and existing tools for use with Sniff+ 2.0, which also has interfaces to bunch of version control packages, including Atria Software Inc ClearCase. It supports the Purify testing suite and software through Pictures CASE. Sniff+ 2.0 is up on SGI, Novell, SCO, Sun, IBM, DEC and HP Unix. It is priced from \$3,000.

### UNISON WINS SEQUENT AND SNI FOR MAESTRO

Unison Software Inc, Sunnyvale, California, has garnered additional support for its Maestro job scheduling technology from Sequent Computer Systems Inc and Siemens Nixdorf Informationssysteme AG. Maestro goes up on its Dynix/Ptx Unix from the third quarter and on SNI's RM systems later this quarter. The workload management software is already up on HP, IBM and Sun Unix. Unison is also trumpeting the fact that Maestro is now certified for use with HP OpenView and OperationsCenter, and IBM NetView network management environments. Maestro's SNMP manager collects and keeps a list of information that can be communicated to OpenView or NetView GUIs. It tracks Maestro operations and can signal traps (a technique whereby the SNMP agent lets the manager know if an event has occurred). Maestro 4.02 costs from \$8,000 for single system.

### NEURON DATA GUI SYSTEM SUPPORTS CONFIGURATION DIAGRAMS

French application development house Neuron Data SA has added a mechanism for including configuration diagrams into applications built using its Open Interface Elements GUI development system, called Diagrammer. Drawings created using Diagrammer can contain programmable "hot spots" which may be used for invoking different applications or procedures, the company says. The kinds of diagrams the module will accommodate are not your still life illustrations, but process and workflow diagrams such as document management, data flowcharts, database-entity relationships and business process re-engineering diagrams. Topology diagrams such as network management, engineering networks, client/server configurations and hardware configurations; and hierarchical diagrams such as organisational charts, class and sub-class relationships are also supported. At \$1,000 on PCs, Diagrammer ships next quarter on a range of Unixes, NT and Windows.

### EMSC OFFERS UNAME-IT FOR NAMING SERVICE MANAGEMENT

Tustin, California-based Enterprise Systems Management Corp is offering Uname-It software on Sparc-based systems for enabling groups of systems administrators to collectively manage an organisation's shared name space. Uname-It stores name space information in a central database, access to which is controlled from a systems administration server. The idea is to provide support for multiple existing name services such as NIS, NIS+ or DNS, from a single naming model so that operations such as adding new software are not impeded by naming service incompatibilities. In client/server setups where information about names and addresses must be kept up-to-date, changes and additions are usually made manually. EMSC says Uname-It ensures that changes to name space are correct and consistent. The graphical front-end includes a configurable system allowing for example, a subset to be renumbered as a single task. A 400-node database server site licence and graphical and programming clients is \$24,000 - \$66,000 for 2,000 nodes. Other ports are due.

### BANYAN TO OFFER ORACLE SQL NET SUPPORT

Banyan Systems Inc is integrating Oracle SQL Net and Oracle7 with its Enterprise Networking Services for Unix. Banyan claims to be the first company to license source code for SQL Net version 2 protocol adapters which it will resell as ENS options. It will give Banyan users native protocol support for all Oracle releases which run on ENS supported platforms. Banyan will also develop an interface to Oracle 7 and Oracle Names from its StreetTalk directory service. The security component of ENS will be able to provide authentication in future releases of SQL Net via protocol, name and authentication adapters which will feature in the upcoming SQL Net 2.1, Banyan says.

### UNIPRESS/TRITON PC-UNDER-X ON SCO, SGI, SUN

New Jersey firms UniPress Software Inc and Triton Technologies Inc are shipping Sun, SGI and SCO versions of their CoSession PC2X PC-to-Unix connectivity software which effectively emulates DOS or Windows PC in an X window running under Unix. The server software runs on PCs, providing PC sessions to the client, which runs on a Unix workstation. CoSession is Triton's communication and file transfer software, PC2X is UniPress' PC-on-X technology. Already available for HP and IBM Unix, prices go from \$600 for one PC Host and one Unix client. Additional Unix clients are \$500 each, PC hosts are priced from \$125.

### SAG ADDS WAREHOUSE ANALYSIS TOOL

Software AG has added another data analysis system to its burgeoning Open Data Warehouse Initiative. SAG, based in Reston, Virginia and Darmstadt, Germany, will bundle MicroStrategy Inc's DSS Agent with its own Esperant SQL multi-protocol query and reporting tool. DSS Agent is Vienna, Virginia-based MicroStrategy's system for accessing and analysing warehouse data. DSS Agent can be configured as a DSS, EIS, or ad hoc analysis tool. It performs data surfing, filtering, drill-down, multi-dimensional analysis, exception-scanning, and development of autonomous intelligent agents. Meanwhile, SAG and SHL Systemhouse Inc have announced a symbiotic relationship whereby SHL, a systems integrator, will distribute SAG's Open Warehouse Initiative Products while SAG will recommend SHS to appropriate customers.

### DEC SHIPS ALPHA BOARDS TO MOSCOW

DEC is to ship 1,000 AXPpci33 Alpha motherboards to Moscow-based Intelectronika by the end of March. The \$2.5m deal is part of DEC's strategy to cultivate indirect distribution channels for 64-bit computing in Eastern Europe and Intelectronika's attempt to get into the market for RISC Workstations and servers running Unix and Windows NT. The original shipment will run on DEC's OSF/1 Unix platform, with the motherboards embedded into what Intelectronika is calling its X-inel line. Intelectronika says the Russian government and private sector have already ordered 100 machines, and that inquiries have arrived from Italy and the US. DEC says it expects to ship 10,000 of the engines to Intelectronika within the next few years.

## SCO SEEKS UNIX GROWTH THROUGH PC INTEGRATION

By John Abbott and William Fellows

Not so long ago there was a great deal of talk about Unix on the desktop. Bolstered by a Windows-like front-end (Motif), first AT&T Co with ~~Destiny and then Novell Inc with UnixWare, tried to push Unix as a package for desktop users. Their efforts were met with market~~ indifference. Santa Cruz Operation Inc appeared to be in two minds with Xenix, the only desktop Unix that had some impact on the market, which also had broad multi-user and network appeal. When it launched a higher-end Unix implementation in the late 1980s it confusingly chose the name Open Desktop, largely on the strength of a revamped GUI it bundled in. Alas, like other Unices before it, Open Desktop proved too unwieldy for all but the most determined of desktop users and most sales were in the server space. SCO's next generation of server technology is called Everest and whilst the company is seeing continued growth in sales of Unix as a server, in order to fuel that growth it is vital that the PC user - the most ubiquitous of clients - isn't left out.

### "Windows Friendly"

Although it supports the Spec1170 standard, SCO has eschewed belief in a common Unix desktop, the COSE Common Desktop Environment (CDE) which it helped create, repositioning itself around a "Windows Friendly" strategy with Unix (and Motif) on the server and Windows as the desktop environment accessing it. That's why it bought Cambridge, UK-based IXI Ltd, which made its initial impact developing X Windows desktop management software and went on to become the major supplier of Motif worldwide. IXI says it had already decided to concentrate on Windows Friendly product development before acquisition. Indeed its X.desktop Motif interface management product line was effectively made obsolete by the UniForum '93 CDE announcement. One X Windows house which describes CDE as a "turning point in the ISV community," says IXI effectively stopped being a Unix ISV and overnight became a corporate ISV. IXI's Ray Anderson admits sales of X.desktop almost halted with the CDE announcement. They picked up as soon as users realised that they wouldn't be able to get their hands on CDE any time soon though, he says. Nevertheless CDE meant the world wasn't going to go X.desktop. It was, IXI decided after a revaluation, going towards Windows X.desktop, and positioned as a more robust and feature-rich CDE alternative, remains an important part of IXI's business at 30% of revenues, although that's down from 60% or 70% a couple of years ago.

### Bull and NCR inspire Eye2Eye

Meantime, the upshot of IXI's two-year development effort is the Eye2Eye Unix-on-PC integration software - technology inspired Anderson says, by IXI users Compagnie des Machines Bull SA and NCR Corp - some of which is being harnessed in the Jekyll & Hyde initiative - *see front page*. When accessed from a PC through a local PC X server, Eye2Eye uses intelligent agents to give Unix applications and utilities the appearance and behaviour of Microsoft Windows. Eye2Eye resides on the Unix server and is downloaded to Unix and Windows desktop clients. Unix clients can utilise X.desktop or Win-tif front-ends, IXI technology which can give Motif environments the appearance and behaviour of Windows.

### Proprietary Unix APIs

CDE is just the wrong kind of technology in Anderson's Windows Friendly world. It's too little too late and he doesn't expect very many ISVs to write to what he describes as essentially a bunch of proprietary Unix APIs. CDE doesn't support Windows integration or even stuff that's becoming standard in other environments, such as HTML for World Wide Web use. It's a world view IXI couldn't articulate properly even a year ago when its only products were its Motif-based desktop collection. Win-tif is an add-on library that gives Motif the appearance of Windows on Unix desktops, an interim product to keep IXI products rolling before Eye2Eye arrived. Eye2Eye doesn't yet include support for CDE's SunSoft Inc-derived ToolTalk inter-application messaging system - though that's coming - or Windows calendaring and messaging APIs (MAPI), support for which is also underway, Anderson says. IXI is also working on technology that'll allow developers to go the other way - putting Unix-hosted development up on Windows.

### Fat, middle size and thin clients

Whilst IXI has been working on PC-Unix integration from the Unix side, SCO's other acquisition, UK company Visionware Ltd, Leeds, has been figuring out what extra Microsoft Windows needs to be hooked up to Unix servers. "We realised a few years ago that PC emulation products don't give you enough control at the PC end, whilst Visionware, from the other way around, was starting to realise it needed to put in more support from the Unix server."

Anderson reckons four million Windows PCs are getting hooked up to Unix servers annually. Half are "thick" (wide) clients, with a lot taking place on the PC; Oracle front-ends to a database server and NetScape accessing a Unix system on the Internet for instance. "Thin" clients, such as PC X servers, make up around 700,000 of the shipments. Both are growing fast. The third middle area makes up the other 1.3m shipments. This is where the PC acts as an emulator through products such as PC-Connect and Century Software. SCO has a slice of all three with IXI and Visionware but will concentrate on the middle and thin approaches. Although Anderson is leading the effort to integrate IXI and Visionware technologies - project Envision - the products don't clash so there's no great hurry, he maintains. First efforts were shown at Demo 95 recently. Meantime, Visionware has new products in the pipeline which it's been unable to launch due to the delay in Windows 95, although SCO's now figuring out whether to give up on the wait and go with the stuff on Window 3.1. SCO will obviously include both technologies in its Unix server products and, although Microsoft will argue Windows NT is the ideal alternative, Anderson believes developers will continue to prefer to write mission critical applications on Unix and deploy them on PCs.

### HURSLEY PROTOTYPES PEER LOGIC AGENT FOR MQ SERIES

Although it is in some regards a competing technology, IBM Corp's Hursley Labs in the UK is prototyping a message channel agent that talks to Peer Logic Inc's PIPES messaging systems for use with its MQ Series inter-application communication architecture. Both System Object Model and MQ Series use static table addressing that lack PIPES' dynamic naming configuration tools, whilst PIPES is missing MQ Series' queuing mechanism - *see front page*. Peer Logic says MQ Series users have demanded dynamic naming services on top of MQ Series messaging and that's why IBM is developing for PIPES.

### HP SURGES TOWARDS \$30,000m

Hewlett-Packard Co has reported first quarter net profits up 63.6% at \$602.0m on turnover that soared 28.5% at \$7,304m. Now on target for annual sales approaching \$30,000m, HP said orders in the first quarter were up 25% at \$7,700m, but warned that higher interest rates in the US could affect demand going forward. US orders were up 22% at \$3,100m and orders from outside the US were up 28% at \$4,600m - order growth was broad-based but especially strong in desktop and server personal computers. Order growth for its HP-UX multi-user systems were outstanding and its HP 9000 Series 700 workstations had "very good order growth." The company also announced a two-for-one split and a 33.3% hike in the dividend and the shares jumped for joy, adding \$9 at \$114.375 on the news.

### DATAMAN OFFERS FULL SPARC CHIP CHOICE

The UK arm of German Sparc-compatible supplier Dataman Computer Solutions Ltd (UX No 501) has kicked in with a series of Solair Sparc 20 workstations and servers. The Wetherby, Yorkshire outfit is offering 50MHz, 60MHz and 70MHz SuperSparc and 90MHz and 100MHz HyperSparc CPUs in either single or dual processor configurations. With one 50MHz SuperSparc, the Solair Sparc 20, is rated at 69.2 SPECint92, 78.5 SPECfp92. A two-way 100MHz HyperSparc unit goes to 4747 SPECrate\_int92 and 5944 SPECfp92. Prices range from £5,700 for the 50MHz model to £13,450 for the dual 100MHz. Dataman says it has a four-way 100MHz model underway.

### US APPEALS JUDGE SPORKIN'S MICROSOFT CASE RULING

US Attorney General Janet Reno announced last week that the Justice Department has lodged an appeal against the rejection by Judge Stanley Sporkin of the government's antitrust settlement with Microsoft Corp. Ms Reno called the ruling "incorrect," saying the government had thoroughly investigated Microsoft's conduct and that the settlement contained appropriate remedies. She said notice of appeal had been filed with the US Court of Appeals in Washington DC, and requested that the court consider the case quickly. Microsoft says it will operate as if the consent decree were in place - and has to do so anyway in Europe, because it signed an identical but separate agreement with the European Commission. If Judge Sporkin's decision is rejected in total, disaffected Microsoft competitors will have the option of taking the matter further by getting the European Commission to consider additional allegations. But some legal observers believe the appeals court may narrow the areas Judge Sporkin can address without going so far as to order him to ratify the settlement. Heavyweight competitors were delighted with the Judge's ruling: "I'd celebrate his view," said Scott McNealy, chief executive of Sun Microsystems Inc. "I'd like an operating environment to have as much openness as the English language does." "The issues Judge Sporkin has raised about Microsoft's market power and industry dominance are serious and real," Tom Lemberg, Lotus Development Corp general counsel told Reuters. "We consider it positive that these issues will be further ventilated as a result of Judge Sporkin's decision." "I think there's an opportunity here now for the industry," said Taligent Inc chief Joe Guglielmi: "It's the opportunity to take an even stronger measure to ensure an open market."

### SONY TEAMS WITH MICROSOFT ON AUTOMATED NEWS ROOMS

After all its acquisitions, Tewkesbury, Massachusetts-based Avid Technology Inc must be the market leader, but it faces heavyweight competition. Sony Corp and Oracle Corp have signed a letter of intent to work together to develop video, audio and text news database products with the aim of revolutionising the professional broadcast and production industry. They plan to combine Oracle's expertise in multimedia database management with Sony's strength in television broadcast and production to create a new digital electronic newsgathering video system. The first step will be to combine video and audio clips with wire service text on a single edit workstation, and will show a prototype of the first joint product at the National Association of Broadcasters show in Las Vegas in April. They aim to develop a client-server newsroom computing network as a key element of Sony's digital broadcast station system, incorporating acquisition, production, master control, archiving and play to air. As currently planned, Oracle will provide its Oracle New Media suite including Oracle Media Server and Media Objects, but there is no word on what machine will be used to run the software.

### I-TRON USED IN "SMART MONEY" TRIALS

The newly set up Card Technology division of GPT Payphone Systems, a subsidiary of GEC Plessey Telecommunications Ltd (itself owned 60% by GEC Plc, 40% by Siemens AG), is working on an upgraded version of its smart card, using Hitachi Ltd's H8 16-bit chip. The card will be used in the forthcoming Mondex Smart Card trials in Swindon, Wiltshire. It uses Japan's I-Tron operating system, the industrial version of Tron, The Real-time Operating Nucleus, once touted as Japan's all-purpose answer to Unix which failed to become widely adopted. The upgraded system will have a display panel with a menu and a key pad showing the options available that will link to service providers and computer systems via GPT's systems management interface. The company anticipates the new systems' uses will extend from transfer of funds using Smart Cards to the use of the cards as driving licences, passports and medical records. GPT is currently talking to UK banks with a view to linking its smart pay phones to automatic teller machines. Facsimile telephones - pay phones connected to cash machines that use Smart Cards also seem likely in the future. GPT is also testing its contactless cards in place of bus tickets with Tampere City Transport in Finland and London Transport in Harrow, Middlesex. The card works by generating a current when placed on a card reader which acts as an aerial to transmit information. However, for the time being GPT sees its main market for Smart Cards as pre-paid phone cards, with adoption of electronic purse applications three to five years away.

### UNISYS BUYS TOPSYSTEMS, FORMS USOFT

Unisys Corp has acquired TopSystems International NV, Dutch developer of client-server software with annual sales of some \$10m, and has renamed the company USoft - actually the name of a TopSystems acquisition. It says it has committed \$50m to USoft, but does not say whether that includes the purchase price. TopSystems says it wants to grow turnover to around \$150m within four years. TopSystems employs 200 people, including 150 from USoft. The company was established in 1987 by three former Oracle Corp employees.

### MISYS TO ACQUIRE BIGGER ACT FOR £212m CASH+SHARES

One of the longest-established software and services companies in the UK, ACT Group Plc, is about to give up its independence - and if things go as currently planned, it will end up as part of a smaller and much younger company, Misys Plc of Stratford-on-Avon. ACT, after copious disposals and acquisitions now primarily a financial software company, announced yesterday that it has agreed to sell out to Misys for 300 pence cash and 2.2 new shares for every 10 ACT shares. The deal valued ACT at about 120 pence a share, £212m all told, when it was announced, but Misys shares plunged 49 pence to 360 pence on the news, trimming the value to 109 pence a share, about £193m. ACT shares surged 30.5 pence to 107 pence, within a whisker of the revised valuation, implying that the market does not expect a counter-bid. ACT shareholders will nevertheless not be too happy, because the shares were trading at 180 pence little more than a year ago. The combination will create a company strongest in banking, financial and insurance software with annual sales currently running at some £350m, making it the second largest quoted British company in its sector after the Anglo-French Sema Group Plc.

### NOW PLATINUM TECHNOLOGY ACQUIRES VIATECH DEVELOPMENT

Platinum Technology Inc has spotted the way the wind is blowing in the mainframe software market and is rushing to pick up Unix expertise. Following its move on Autosystems Inc a few days back, the Oakbrook Terrace, Illinois company has now won agreement for the acquisition of ViaTech Development Inc of Bloomington, Minnesota, which it describes a leader in providing electronic software distribution tools in Unix-based client-server environments. Platinum characterises the move as another step toward its goal of providing comprehensive integrated management systems for what it calls the Open Enterprise Environment - networked computing environments including open systems and enterprise mainframe systems; terms of the pact were not given.

### SOFTBANK PAYS \$800m FOR COMDEX, OTHER INTERFACE COMPUTER SHOWS

Software distributor Softbank Corp of Tokyo is indeed to acquire the Comdex trade show and 16 other computer-related shows with purchase of the exhibition division of the Interface Group for \$800m. Events include Windows World, New Media Expo, UniForum and Enterprise Computing Solutions. Softbank sees the acquisition giving it further opportunities to introduce new computer-related products to Japanese customers, while helping it acquire new customers. Softbank bought Ziff-Davis Expositions in November.

### VOCALNET SOFTWARE DOES TWO-WAY TELEPHONY ON INTERNET

There have been plenty of mutterings about how easy it would be to make a two-way telephone call anywhere in the world for the price of a local call by using the Internet, and now the Wall Street Journal has blown the gaff. VocalTec Inc, a Tel Aviv company with offices in Northvale, New Jersey is offering a program called Internet Phone that enables a computer user to call anyone with the same software anywhere in the world, for the price of local Internet access. The software is initially being sold on-line for \$50 a copy, with the price planned to double at the end of March. It needs a 14.4Kbps modem, an 80486 personal computer running Windows, a sound board and a microphone - for something less than phone quality. Cirrus Logic Inc's Crystal Computer Products sound chip maker may license and resell the Internet Phone software.

## PRAXIS SEEKS TO REBUILD ITS FORTUNES WITH ANY-TO-ANY DATA WAREHOUSING

Praxis International Inc and its UK subsidiary CCA, formerly Computer Corp of America, a company slipping quietly into the mire with its Model 204 database, has made an assault on the world of data warehousing with the OmniArchitecture Series. This comprises the OmniReplicator, OmniWarehouse and OmniInfo. The advantage that a data warehouse provides is that it sits between the operational databases and the end-user to provide the user with an query-intensive database, constantly updated by the operational databases, but without compromising the performance of the operational database. Operational databases are ill-suited for end user access, great at transaction processing but lousy at queries and analysis. The addition of the data warehouse gives businesses with an installed base of mainframes a method of prolonging the lifespan of operational databases.

### Replication

Mainframes can concentrate on transaction processing and forget about responding to ad hoc queries. The purpose-built data warehouse also reduces network traffic as users carry out query intensive applications on a local level. If the company is trying to migrate, the data warehouse offers the potential for a staged migration, application by application, from the mainframe to the client/server model. The data warehouse also offers high availability and fault tolerance, since if the primary database fails, the user can still access information from the up-to-date datawarehouse. Praxis claims OmniReplicator is the first bi-directional data replicator and is due in the first quarter of 1995. It provides replication between and among DB2, Oracle, Sybase and Model 204 databases. The replicator also provides one-way replication between these databases and other Open Data Base Connectivity-compliant databases, including Informix, Ingres, Sybase, Rdb, Teradata and these lists will expand in the future. It can also rationalise, 'massage', summarise and enhance the data without additional programming - for example making all dates conform to the same formula, so they will all appear the same to the user. It moves a copy of the source database or a subset of a source database to a set of clients and then keeps the data current through automatic refreshing. Updates on the target database can be continuous or scheduled: each time a transaction updates the source database OmniReplicator updates the clients or every hour, day or week. The OmniReplicator relies on asynchronous rather than synchronous replication. In synchronous replication all the targets are updated before the source transaction is complete, utilising a two-phase commit. This is the right approach for certain types of transaction, transferring sums of money for example, where you need to know that the money exists before you make the transferral, and credit and debit the accounts at the same time. However response times can be slow as all the target databases have to be confirmed before the transaction can be completed, network traffic is hence high and relies heavily on the strength of the system - if one of the databases to be updated is down, the whole transaction has to wait until it comes back. With asynchronous replication, the source transaction is complete when the source database is updated, without the involvement of the target databases. These target databases are then updated at a later time. Network traffic is reduced also because the only information that is transferred are the updates, not the whole files. The OmniWarehouse is a post-relational data warehouse database, designed for intensive query and analysis applications, and will be available in the second quarter of 1995. It boasts advanced indexing; file segmentation and partitioning; stored procedures; special data warehouse functions; nested tables; support for interactive queries; and multi-dimensional architecture features. The first system for the OmniWarehouse will be the IBM Corp RS/6000, with other Unix systems following plus Windows NT and MVS versions. It will also be updated to include real-time, dynamic update capabilities. SQL 92 entry-level compliance and support for Open Data Base Connectivity-compliant personal computer tools.

### Stoplight

The other part of OmniArchitecture, OmniInfo, an Executive Information System will be launched in June of 1995, and will sit at the front end of the structure. Priced at under \$100 per user, the OmniInfo will provide generalised query and reporting, context-sensitive hot spots that point to further information, drill-down, stoplight charts providing exceptions and variances, trend analysis through images, pictures, maps and graphs, plus Open Data Base Connectivity for integration to other databases beyond OmniWarehouse. In its first release you will not be able to update the data warehouse through the OmniInfo, but this is promised in the future. Praxis prides itself on its database independence. Other companies offering a replication system are database vendors offering replication between their own databases and according to Praxis, William Inmon, executive vice-president of technologies at Prism Solutions Inc and the 'father of data warehousing', is impressed by this. He thinks that Praxis "will be the only vendor in the market to offer an integrated system that combines change-data capture through heterogeneous data replication and a robust data warehousing engine". However, with the rising interest in data warehousing other companies are sure to follow. *David Johnson*

## INTEL UNVEILS P6 SPECS, DOUBLES PENTIUM PERFORMANCE

Intel duly presented its specifications for the P6 processor at the International Solid State Circuits Conference last week, promising performance a little over twice that of a 100MHz Pentium. The P6, actually two bits of silicon to be sold together in a 387-pin grid array package, will first appear running at 133MHz with an estimated SPECint92 of over 200 - it was benchmarked using a prototype system built with one of the first working chips. It is built around what Intel calls Dynamic Execution, a combination of multiple branch prediction, data flow analysis and speculative execution. Multiple branch is a technique used to increase the amount of work available to a microprocessor, in effect reducing the waiting period when a CPU really does little or nothing. Dataflow analysis schedules the instructions to be executed whenever they're ready, independent of the original program order. Speculative execution is a method of guessing which instructions are likely to be needed next and executing them. Of the two chips, one is the CPU itself, while the second is a companion 256K level two cache. They are hooked together with a full-speed data bus, and hooked into the system on a 64-bit external data/36-bit address bus. As a whole, the P6 is expected to burn around 14 watts, with a 20 watt peak (compared with Pentium's 13 Watts, but still low compared with DEC's Alpha), so system OEMs are likely to plan for big heat sinks and cooling fans. Other technical details include using a 0.6 uM BiCMOS technology and a transistor count of 5.5 million for the CPU chip and 16 million for the cache. Intel still isn't quoting prices for the P6, but continues to hold firm on promises that it will begin delivering production units sometime in the second half, early enough for at least the first systems to dribble out from OEMs before the end of the year.

### SUN SAYS: P6 ARCHITECTURE IS ARCHAIC

Sun doesn't think much of Intel's new P6 chip which is hardly a surprise. Within minutes of the completion of Intel's unveiling of the P6 architecture at last week's International Solid State Circuits Conference Sun VP of engineering for Sparc technology Anant Agrawal pronounced the P6 architecture "archaic," although he admitted in a sort of backhanded way that performance specs do look fairly good. "It's obvious how archaic that architecture is, the length they had to go to get that performance," he said, ticking off the tricks Intel has used to create its "Dynamic Execution", a combination of multiple branch prediction, dataflow analysis and speculative execution. "They used every trick in the book to get performance which in RISC you could get more easily," he said. Agrawal also questioned Intel's omission of any floating point specs for the P6 in its ISSCC presentation. Traditionally Intel chips have not matched RISC architectures in floating point and the P6 SPECfp62 remained a secret last week although Intel did say the chip has a SPECfp of more than 200. Agrawal compared that to a benchmark of 250 for the forthcoming UltraSparc although admittedly the UltraSparc runs at 167MHz compared to 133MHz for the P6. Agrawal also denigrated Intel for not producing any proof that the P6 has native support for multimedia, although Intel has said it's targeting multimedia with the silicon and could have some future things up its sleeve.

### INTEL JOINT VENTURE "NEVER CAME UP" IN HP/NEC DISCUSSIONS

NEC's new OEM deal to sell HP's T500 high-end servers in Japan (UX No 525) created a flurry of concern that it would turn party to the prospective HP-Intel chip venture. HP told us the subject never came up and besides it was far too early. But obviously these machines NEC is OEM'ing would be likely candidates to move to the part when and if it comes to fruition so NEC will probably resell the thing to that extent, still short of being the third leg on the HP-Intel stool. Folks who read NEC's Japanese press clipping after it made the HP announcement described them as being "crucified" for shifting off the Mips platform they were using - a more limited move than the local press understood - and Mips got tarred as being underpowered. HP however can now go around applauding NEC for realising Mips has no future. NEC said it has sold HP, Sun and Silicon Graphics machines in Japan and it cut the HP deal because its stuff sold best.

## UNIX APIS FOR OS/2 NOT SO MUCH A PERSONALITY, MORE A THIN SKIN

"It is definitely not a 'personality', in the full Workplace sense" IBM Director of RISC software, Donna Van Fleet told our sister paper, *PowerPC News*, last week, talking about the reported 'Unix for Workplace'. Despite the disappearance of "Workplace" from IBM's vocabulary, the word was much in evidence at IBM's European AIX press briefing last week. In particular, questions about AIX, or any other sort of Unix on the IBM microkernel kept cropping up. In the last issue (UX No 525), we reported on a "New Unix" personality, being developed to sit on top of the IBM microkernel, alongside the OS/2 personality. Van Fleet says such a description is completely wrong. Rather than a complete Unix personality, she says that her team will place enough APIs on top of OS/2 for PowerPC to ensure that SPEC 1170 compliant applications will run. An environment to run Unix applications, yes; a full Unix implementation, no. "In No way is it a new Unix, anymore than me running Wabi on AIX is a new operating system" she says. In concept, if not in detail, the initiative is similar to the plans to add SPEC 1170 standard APIs to the AS/400 and MVS Open Edition. In fact, she says that the whole strategy can be traced back to Unix developers casting a covetous eye over the AS/400 user base and asked for some of their favourite APIs to be added. In open session at the briefings Van Fleet admitted the choice facing developers was one of stick to SPEC 1170, X-windows and Motif APIs to get the widest range of platforms, or make full use of AIX's special features. "What would I tell developers? - stick to 1170 and X and Motif" as far as possible, she said. In summary then, Van Fleet argues forcefully that there is no new Unix and therefore no split in IBM's Unix line. But we worry that no matter what you call it, a SPEC 1170 application environment on OS/2, on AS/400 and on MVS presents developers with alternative targets to develop to and therefore makes things messy. Meanwhile there is still some obvious disarray in IBM's own internal communications. Though Donna Van Fleet describes the work as a skin of Unix APIs on top of OS/2 for the PowerPC, and maintains that the work is being done by her AIX team, assistant general manager worldwide marketing at IBM's RS/6000 division, Jeff Mason's description was quite different. Last week he told *Unigram.X* that the "Workplace Unix", as he called it, would be hosted directly on the microkernel, wouldn't need OS/2 to run and was being developed entirely by Lee Reising's Personal Software Products division. It sounds almost as if there are two completely different products you don't think?...no, surely not.

## SO FAREWELL THEN "WORKPLACE" - IBM KILLS OFF THE ILL-FATED NAME

According to our sister publication *PowerPC News*, the 'Workplace' name, the label attached to IBM's premier software technologies - its microkernel, its speech recognition, its other human-centred technology - has been killed off. Instead, says IBM, people should refer to the "IBM microkernel" and "various advanced software technologies". The problem, it appears, is that the 'Workplace' name left everyone, customers, software vendors, even some within IBM itself confused. And no wonder. First there was 'Workplace Shell' - the name given to OS/2's graphical user interface. Unfortunately, this appeared before the overall Workplace strategy was devised and consequently Workplace Shell was not a Workplace Technology. Then there was Workplace OS, which was variously interpreted as either just a microkernel, or the full OS/2 for PowerPC operating system. So IBM decided late last year that the Workplace OS name was very confusing and suggested that everyone just called it 'Workplace' - and that didn't work either, so we started what had been called Workplace OS, the Workplace Microkernel. IBMers have been saying for ages that the Workplace name would have to go - Paul Giangarra, chief Workplace architect said as much last May. Others argue that the name was an accidental acquisition, that started off as a mere working title and got stuck. So finally, the company has given up the unequal struggle of trying to explain what it is on about each time it uses the word. The practical upshot will be a queue of people from IBM's Personal Software Products division waiting to get their business cards re-printed. More importantly, it heralds the end of anything that can accurately be described as a "Workplace Strategy". Instead, there is the IBM Microkernel and a collection of software technologies which the company is committed to see implemented across its range of operating systems.

## HDS XCELERATES VIEWSTATION SERIES REVAMPS LINE FROM TOP TO BOTTOM

At the same time as Hewlett-Packard, NCD and Triteal-see page one-enter the 'X frenzy' Human Designed Systems Inc has revamped its line from top-to-bottom. All models in the ViewStation Xcelerator series use the 1960 and are bundled with HDSware software including Motif, OpenLook, emulation and desktop utilities. At 100,000 Xstones, the 16MHz LX supports two PC card slots and costs from \$800 as a base unit, up to \$2,700 with a 19" colour screen. The 25MHz FX does 150,000 Xstones and comes with multimedia and floppy support at from \$1,400 to \$3,200. The Dual supports two monitors from one keyboard and mouse - windows can be moved from one monitor to another - and costs from \$2,300 to \$5,400. The high-end 33MHz Ultra does 250,000 Xstones and costs from \$1,800 to \$3,600. Finally, Tektronix Inc has fleshed-out its low-end with new XP200H models in its TekXpress XP200 line, targeted for business use as main-frame and Unix system access units, or with Citrix WinDD software as NT clients. At 1280x1024 resolution, with from 4Mb to 36Mb RAM and two serial ports, the 19" mono XP219MH rated at 1.3 Xmarks is from \$2,000, the 17" colour XP217CH rated at 1.6 Xmarks is \$2,600, the 19" colour XP219CH, also at 1.6 Xmarks is \$3,400 and the XP200CH base unit is \$2,000.

## FRENCH COMPANIES PLOT THEIR CONQUEST OF AMERICA

Overseas growth, particularly in the North American market, and domestic expansion are the code words of 1995 for two of France's hottest young software companies. The attraction is double for companies like Business Objects SA, which last year became the first European software developer to be listed on NASDAQ, soon to be followed Ilog SA, Ingenia SA and O2 Technology SA. First, there's the lure of capital that Europe sorely lacks and, second, the sales potential of the region, which they are attacking via niche markets where they hold rare advantages. Ilog SA, France's star in the world of C++ software component development, took advantage of the first motivation, announcing last month that it received \$5m in new financing from two leading US firms, Oak Investment Partners and Atlas Ventures, and Banque Paribas. Chief executive Pierre Haren says that Ilog, in fact, got more capital than it initially wanted. "We looked for \$4m, but \$2.5m was the minimum for each US investor, and we wanted to keep Paribas. So we had to go up to \$6m, of which we said \$1m would be done by having shareholders sell shares to investors".

### Give us money

The \$5m that goes back into the company brings Ilog's equity capital to over \$8.5m. The privately-held company made just over \$1m in 1994 on revenues of \$15m. The Massachusetts Institute of Technology-educated Haren quipped, "We're making money now, so that's why they wanted to give us money". Now we feel more at ease to use up the profits we make, which we will use to grow on East Coast. We have 14 people on the West Coast and one on the East. We have some technical people we've hired from Europe to go to the US, and by June we should have at least 14. The whole US operation should triple in size every year for the next three years," Haren explained. Ilog's tools are selling well in the US now, but Haren is not taking any chances. "There are a lot of lessons we can take in marketing, and we will hire people in the US for that. The best experience is in the US for making access to the product simpler, faster and for helping people learn whether they need the product or not," he said. As an aid to the marketing push Ilog is planning worldwide, the company just installed a web server with T-1 access in US and has a partnership with the Open Software Foundation to create a generic, advanced web browser to compete with Mosaic. The Foundation says it showed the browser, called Ariadne, to sponsors on February 15, and that it should be generally available in a few months. Ariadne has two interesting features, Haren said. One, a browser for 'group browsing,' where the user sees a display of the network that shows what other members of group have already accessed. Second, is that it can send code to the client instead of just data because it is written in "proper Lisp IlogTalk," he quipped. The functions are described on the server, which is at <http://www.ilog.fr>. Ilog has also seven partners in the US, including Carnegie Group, Unisys Corp, Sabre Decision Technology (the operations research subsidiary of American Airlines), and Sun Microsystems Inc for its next generation of software engineering tools based on Ilog Views. *Marsha Johnstone*

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The weekly information newsletter for the UNIX™ community worldwide

**IBM Corp** has a pre-production PowerPC 610 running at 400MHz according to Robert Cringely in *Infoworld*: he names 613 and 614 as well as the long-rumoured 615 as including the iAPX-86 program emulation feature.

*C'est fait*: **Sybase Inc** has completed its \$875m share exchange acquisition of Powersoft Corp; the value has fallen - with Sybase's share price - from \$915m when it was announced; in fiscal 1994, the combined company recorded annual revenues of \$826m, with over \$250m in cash.

In a really surprising development, **Sequent Computer Systems Inc**, a relatively tiny company, has submitted an offer to take at least 10% of the equity of **Compagnie des Machines Bull SA**, according to *Les Echos*, which quotes John Eldridge, Sequent's spokesman for investor relations, saying that Sequent is engaged in "very high-level negotiations with Bull - there are lots of synergies possible and its distribution network interests us".

Is **Hewlett-Packard Co** going to acquire **Sequent Computer Systems Inc**, *US PC Week* wonders? HP is in process of building a Pentium server business and is at the front of the queue for the first P6 parts off Intel Corp's line, and the Sequent machines would create a top end - and in the medium term, with Intel and HP now *ascloseasthis* on future chip development, with a common successor to Precision Architecture and iAPX-86 in the works, HP is firmly in the Intel camp - but could Unisys Corp allow Sequent to disappear into HP?

In one of those strange about-turns, the former **Control Data Corp** started out with a 20% stake in **Silicon Graphics Inc**, in major restructurings sold the stake, and when it spun out **Control Data Systems Inc** as a separate entity, SGI ended up with a stake in the new company: now Control Data Systems has bought back 1,185,224 of the shares on undisclosed terms; it says SGI will remain one of several suppliers of computer systems to Control Data Systems integration.

"IBM still doesn't get it" is a recurring plaint as the company tries harder and harder to emulate the actions of more successful companies in the industry, but sad to say, it still has a long way to go. Everyone that attended the National Computer Conference, then the premier US event, in Anaheim back in the days of Jobs and Woz remembers the way **Apple Computer Inc** hired Disneyland for one evening so that all attendees could get in free - it was wonderful, because you could get on all the best rides (apart from the ones with the notorious "Closed for Renovations" signs on them) without having to queue. Last week, **IBM Corp** seemed to have got the message, because it imaginatively staged a major AIX briefing at EuroDisney... but then absent-mindedly omitted to allow attendees anywhere near the theme park.

**Business Objects SA** has reported fourth quarter net profits up 486.4% at \$1.3m on turnover up 91.4% at \$10.4m; net profit for the year to December 31 was up 933.5% at \$2.4m on turnover that rose 114.0% to \$30.2m.

**Transarc Corp** says there are now about 50 deployed DCE projects worldwide, the biggest being at Tokyo Marine insurance company.

**Hyundai Electronics Industries Co** has taken full control at **Maxtor Corp**, installing C S Park as president and chief executive. Larry Smart resigned last week. Park has been corporate executive vice-president of Hyundai Electronics and head of its workstation maker, **Axil Computer Inc**, since 1993. As a result, In Baik Jeon, formerly senior VP corporate strategic development, has been appointed Axil president and CEO. Whilst in Seoul, Jeon was instrumental in the creation of Hyundai's workstations division, which was spun out as Axil. Park continues as chair of Axil's board.

Stretching it! A couple of weeks ago we said **Matra's** Sparlet derivatives will take 24 months to build (UX No 524) - we should have said it'll take two people 24 weeks. It's got one of the derivatives underway for a car electronic systems supplier.

**UniPress Software Inc** is now shipping LMU LAN Manager for Unix (formerly Pegasus) for Solaris 2.x, the functional equivalent of a NT Advanced Server for Sun (UX No 497). The New Jersey based PC-Unix connectivity software house also has versions SunOS, AIX and SVR4 on x86.

**Data General Corp** is readying a new version 1.5 of its AVimage imaging software and is getting-up a dedicated imaging division under William Zastro.

London-based **Imperial Software Technology Ltd** is shipping version 4 of its X Designer 4 Motif and Windows interface builder and porting system which can generate classes for deployment on Motif, Motif Microsoft Foundation Classes (MFC) and Windows MFC. Prices go from \$3,500 on SunOS 4 and Solaris 2.4; HP, IBM, SGI and SCO versions follow. X Designer is also being bundled on the Spring release of IXI Ltd's Premier Motif CD-ROM.

Out of the common desktop environment loop, **SCO** also backed out of COSE's systems management effort some time ago, claiming the initiative - which it had lead - had been sabotaged. Now it's going it alone with distributed management and administration stuff which will appear in Everest, its next-generation operating system release due by the summer (UX No 499). It will include SCO's Visual TCL implementation of the public domain terminal scripting language, also being used by **IXI Ltd** for new cross-platform development products - Windows development under Motif and vice versa.

Keynoters at the forthcoming UniForum bash in Dallas - one of the **Interface Group** events now owned by **Softbank Corp** - are Ed McCracken (Tues 14th), Robert Frankenberg (Weds 15th) and Bruce Tognazzini (Thurs 16th).

Seems Judge Lance Ito agrees with at least part of our concern that the courtroom is not the proper place for product pushing (UX No 523) and has had a Sony monitor and an oversized **IBM Corp** ThinkPad logo removed.

The **Object Management Group** is now up to slightly more than 500 members, the average paying \$7,000-\$8,000 for the privilege.

The Series 7000 implementation of **DEC's** 300MHz 21164 PCI bus EV5 Alpha technology is expected to show in April priced from \$125,000. TurboLaser technology, designed to go to 12- and then 24-way - and destined to push out both the 7000 and 10000 Series machines at the high-end - turned up at Supercomputing '94 at the end of last year as a quad with two processors on each of two boards (UX No 515).

Channel-watcher *Computer Reseller News* hears **IBM Corp** is offering greater discounts to VARs on its RS/6000s to bring its pricing scheme more in line with rival Unix vendors **DEC**, **HP** and **Sun**, which currently offer better discount terms on their Unix systems. VARs which order \$1m or more kit a year now get discounts of 31% - up from 29%. There are increases at the \$10m and \$15m tiers. \$500,000 VARs remain at a 25% discount level.

Fremont, California-based **Aries Research Inc** has added a 100MHz HyperSparc version of its Marixx SI Sparc server, performing, it says, 11389 SPECrate\_fp92 and 9132 SPECrate\_int92. Marixx uses the 50MHz Mbus, comes with from 16Mb to 1Gb RAM and Solaris 1.1 or 2.x.

**AT&T GIS** is now offering full two-phase commit functionality for its Top End OLTP system via a Recoverable Transaction Queuing system which allows transaction to be queued for guaranteed delivery - or recovery in the event of failure - at off-peak periods.

The combined **IXI Ltd** and **VisionWare Ltd** sales forces in the US and Europe (UX No 525) now report to general manager and senior VP of **SCO's** Americas field operations, Ed Adams, and to Bernard Hulme, managing director and senior VP of European and international markets. The move is a precursor to the anticipated merger of the IXI and VisionWare product lines (UX No 517).

Smart money's apparently on **DEC** to be first with Unix 95 certification and branding.

**Hewlett-Packard** co-founder Dave Packard has written a book, *The HP Way*, a combined memoir and guidebook to the company's famous management philosophies. It's coming out in May. Unfortunately, Packard's not the dude credited with getting HP into computers. That accolade belongs to John Young. Packard and Bill Hewlett pioneered employee empowerment and decentralised decision-making.

Observers note that there's nothing on the Sparc roadmap past UltraSparc, reportedly a frustration to some in the Sparc business unit itself. However, our observers construe it as as being indicative of how important UltraSparc is to **Sun Microsystems** and how it's piled all its eggs in one basket. They also say it's pragmatic of Sun. If UltraSparc blows it, there's really no future anyway.

**IBM Corp** officials sporting AIX 5 badges raised considerable excitement amongst hacks assembled for IBM Corp's AIX strategy briefing at EuroDisney last week, who thought at first they might have stumbled through a time warp. The badges referred of course not to AIX Version 5, but to five years of IBM Unix.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram · X

The weekly information newsletter for the UNIX™ community worldwide

London, March 13-17 1995

Number 529

## SUPERNOS STRATEGY "IS NO PIPE DREAM" SAYS NOVELL

Novell Inc says its speculative SuperNOS network operating system, the NetWare-UnixWare microkernel hybrid it's been dropping into conversations of late, is "not a dream." Indeed it claims to have pieces of the code "up and running" at "three places inside the company." However, it says it's not ready to give anyone a peek at anything even at its annual BrainShare '95 event later this month in Utah. SuperNOS is supposed to come out in its first iteration at the end of next year. Novell says it's currently unsure how many pieces of its overall puzzle – a strategy that includes an "Advanced Client," object technology and other OO programming etc etc. – will be available then. The whole thing will "come out over time," it says, also denying its lifting anything out of the Microsoft Corp playbook. Novell's sensitive to the issue of the market window and fretful that its timing may be significantly off, though it tries to stave off its fears by telling itself it's too early to know. Certainly the firm's September announcement of SuperNOS has done nothing to stay the market. Novell's focus will be on commodity Intel Corp platforms though somehow or another the technology will get moved to RISC, perhaps through partners or third parties, it says. The SuperNOS core apparently comes from the Unix side of the house and centres around the old Amadeus microkernel project, begun with French-based microkernel expert Chorus Systemes SA when AT&T Co still owned Unix. This hub, says Unix System Group director of product planning Marc Epstein, will have critical features like a single-system image, advanced clustering and fault tolerance. Its ability to make multiprocessors function as a single system is key since the SuperNOS model anticipates "carpet clusters" as in scores of four-ways clusters lashed together as opposed to ever bigger multiprocessors. Novell of course proposes to integrate this technology with NetWare to produce a single source tree. SuperNOS' directory services, for instance, comes straight out of NetWare 4.0. and its core Novell Directory Service (NDS). NDS provides SuperNOS with naming and security. Some of this key integration work is devilishly tricky and some is just a lot of work, Epstein says, claiming much of what needs to be done is pretty far along. (Some of the clustering and multiprocessing technology is supposed to be working now too.) The integration on to the microkernel, he says, is not a problem. It's just a lot of work. The hardest is developing a common systems and network management scheme. It will mean that both sides of the current Novell equation, both NetWare and UnixWare users, will have to substantially change how they do things. Novell will need to be sure nothing gets broken. SuperNOS will of course inherit NetWare print and file services. When Novell looks at a little item like BackOffice, it remarks that Novell already has a superior position with respect to PC network-to-IBM host connectivity and can go to its new WordPerfect operation for messaging. It intends to remain clear of mixing in the database arena on its own nickel, so to speak, and will depend on alliances with Oracle and Sybase to provide the equal of SQL Server. The whole experience of trying to describe the components of this scalable distributed fault-tolerant single-image operating system it is trying to build left Novell with the distinct impression it should go off and assemble a roadmap. Hopefully it will do just that.

## TEMPLATE TO BECOME NO1 INDEPENDENT GRAPHICS HOUSE

Template Graphics Software Inc this week is expected to announce that it is acquiring Bordeaux-based G5G, a fellow graphics tools house in a stock swap. The combined entity in which G5G becomes a Template subsidiary and continues to operate under its current management will produce the world's largest independent graphics tools concern. Combined operations are believed to be worth a little under \$10 million a year. Together they will employ 70 people. Little-known G5G produces Phigs+, Phigs+ precursor 2D ISO standard GKS and 2D ISO standard Computer Graphics Metafile (CGM) products. Since Template is also in the Phigs+ business, those lines will be consolidated. Combination currently seems to be the byword in the graphics industry. Three weeks ago, for instance, Microsoft bought UK-based RenderMorphics Ltd whose Reality Lab real-time 3D imaging software leads the low-end games market. The bulk of Template's business has historically been Unix but the San Diego company is about to launch OpenGL and Open Inventor, which it licenses from Silicon Graphics Inc along with some technology from 3Dlabs Inc, into the NT and Mac arenas and expects in a year's time that half its revenues will derive from those efforts. OpenGL, especially with Microsoft backing it, is overshadowing the old PEX lib, beloved of Sun Microsystems and HP, as a significant 3D API. Template is also said to be experiencing renew vigour in its Phigs+ line, which it sells as Figaro+, because hardware vendors have found they can't support in-house development.

## IBM'S HESTER REVEALS POWER2 FAST AND POWER2 SUPER CHIPS

Phil Hester, IBM's VP and general manager of the Systems Technology and Architecture Division, took time out at Cebit in Hannover last week to give *Unigram.X* a peek at his Power and PowerPC CMOS processor roadmap, which shows today's Power2 and Power2+ processors going through a couple of iterations. Power2 Fast looks like it should be coming sometime this year, with Power2 Super following on sometime in 1996. Notably, the Super looks like a single chip and cache affair, judging from the diagram. These are followed by the PowerPC 630 (or Power 3, as it used to be called), in a section entitled "1997/Future". Interestingly, the chart shows the PowerPC AS variant, earmarked for future AS/400s, developing in parallel to the PowerPC and Power range of processors. That means the PowerPC 630 looks like being a straight, standard PowerPC part, not just a special for the AS/400 as once thought. *Details, p3.*

## IBM POWER PERSONALS: 10 WEEKS AND COUNTING

IBM Corp is gearing up to announce its Power Personal Systems on May 23rd. It has June 13th on standby if PowerPC 604 and 603e volumes aren't cranked by then. Expect two Thinkpads - a high-end multimedia affair and lower-end workhorse, both 603e units - plus desktop 601, 601+ and 604 systems with AIX and Windows NT up from day one, OS/2 in September and Solaris in December.

## INFORMIX TAKES THE OBJECT PATH FOR NEW REPOSITORY

Relational database company Informix Software Inc is set to licence Versant Object Technology Corp's object database as the repository for its NewEra Windows and Motif-based application development environment in a deal expected to be announced at ObjectWorld in Boston next week. Neither firm would comment, but it's believed both are keen to get their heads down on a project they know will set the industry pondering the object/relational question once more. Informix must be hoping the Versant ODBMS will finally lay to rest its repository trauma, which has veered from the unwieldy Siemens Nixdorf Informationssysteme AG codepit it's quietly retiring, to an internal project which was to have been used for the majority of its product line (UX No 509). Versant's ODBMS provides persistent storage of objects created by different C++ compilers and Versant/M, based on object/relational technology from UniSQL Corp, allows users to build applications, create reports and generate queries from SQL/ODBC-based tools that can access data stored in Versant ODBMS or mixed relational/object environments. Informix's NewEra strategy calls for shared tools targeting multiple platforms. It's already indicated its desire to add object-type indexing schemas and class library tools to an extensible version of its core database server (UX No 509).

## OBJECT OBSERVER LAUNCHED

This week *Unigram.X* and its sister publication *Client Server News* are launching a collaborative effort called *Object Observer*. Currently, our new little friend is seen as an occasional issue that will simply come along free with your regular issues of *Unigram* or *CSN*. We suppose it's what you guys like to call a "placeholder." We actively encourage your comments and opinions on whether we should spin her out as a full-fledged member of our stable. So give us a ring (516 759-7025 in the US; +44 71 208-4212 in Europe), or a fax (516 759-7028 in the US; +44 71 439-1105) or e-mail us at [wif@panix.com](mailto:wif@panix.com)

### ICL PANS FOR MPP CUSTOMERS WITH PROSPECTOR LOW-END GOLDRUSH

ICL Plc is slashing the price of its massively parallel Goldrush system, introducing an entry-level model called Prospector at £300,000 in a bid to get sales moving. The aptly-named Prospector comes in ~~below the Goldrush Model 80 and is configured with three dual-CPU~~ 90MHz HyperSparc modules and from 64Gb to 200Gb disk, without the need for additional cabinets. It ships in May. ICL claims to have reached double figures for Goldrush sales; French bank Caisse Regionale De Credit Agricole is its latest win. The UK company had hoped to garner "tens" of customers for the £750,000-to-£10m Goldrush system in its first year and recoup the £42m R&D outlay within two (UX No 459). Software AG had its Adabas running up on Goldrush at Cebit last week - the next version will support updates across heterogeneous platforms, the German software house says.

### DEC SELLS OFF CONTRACT MANUFACTURING

The evidence that Digital Equipment Corp is a company being run for cash rather than in pursuit of a long-term strategy increases by the day. Hard on the heels of its sale of computer-integrated telephony to Dialogic Corp - which was preceded by sale of its database and its newsroom systems - DEC, which says it is increasing its focus on services, has now sold one of its services businesses, its international contract manufacturing operations. The buyer is king of the hill in contract manufacturing, Huntsville, Alabama-based SCI Systems Inc. With the sale goes DEC's Augusta, Maine manufacturing plant. The facility consists of a building covering over 300,000 square feet on nearly 200 acres of land, which employs some 700 full-time staff plus temporary workers in contract manufacturing for Digital Equipment Corp and outside customers. Financial terms of the agreement were not disclosed but SCI will take on the staff and enter into a multi-year agreement to supply DEC with the networking electronic assemblies that are currently produced at the Augusta plant.

### HDS BECOMES HDS NETWORK SYSTEMS INC

X terminal specialist Human Designed Systems Inc, King of Prussia, Pennsylvania is now a wholly-owned subsidiary of quoted Information Systems Acquisition Corp, which is promising plenty of confusion by changing its name to HDS Network Systems Inc. It was formed for the purpose of buying a computer company, and all its officers have resigned apart from chairman Arthur Spector who will retain that post. Meanwhile, IBM Corp's Government Systems, with its contract for the US Forest Service has gone to HDS for X Window terminals for the Forest Service's geographic information system requirements US-wide. Human Design Systems could end up supplying up to 52,000 80960CA RISC-based colour X Window terminals to the Forest Service and US Department of Agriculture, depending on government funds available.

### SUN PUTS 2000E IN AT JOHN MENZIES AS PART OF A £1m DEAL

Sun Microsystems Inc handed over the first of its new 60MHz Sparc-center 2000E, to John Menzies Plc as part of a deal to provide the wholesale company with £1m worth of Sparc workstations and servers; the total deal is worth £2.3m and the system being installed will run a new executive information system, at John Menzies, which will be based on Oracle: the Sparc-center 2000E will run the head office database and collect information from the Sparcstation 10s that will be located at the 66 John Menzies branch offices and wholesale outlets. The Sparc-center was the first to roll of the production line at the newly expanded manufacturing plant in Linlithgow, Scotland; Sun is now producing its entire range of servers at the plant, which expanded at the start of this month and now serves the company's customer base right across Europe.

### BAAN ADDS MOTIF, WINDOWS FRONT-ENDS

Baan Co, the Ede, Netherlands-based manufacturing and financial applications house that opened in Menlo Park, California, last year and proceeded to beat the likes of Computer Associates, D&B, Oracle and SAP to some big name clients, has added Motif and Windows interfaces to its Triton software suite. Version 3.1 starts at around \$500,000. It also has an ISV programme for vertical markets, signing Bain, Southfield, Michigan; Compact 3000 Ltd, Sedgley, UK; and Prolog Nederland NV to build applications using Triton.

### IBM TURNS TO COROLLARY FOR SMP

IBM Corp duly announced its new multiprocessor personal computer servers as the PC Server 720 and PC Server 320 - but they are far from being all its own work: the company turned to Irvine, California-based Corollary Inc for its Corollary C-bus II architecture for the **PC Server 720. The server is based on the 400Mbytes per second C-bus II technology and chip set, a fully symmetric multiprocessor bus architecture optimised for the Pentium.** The one or two processor-based PC Server 320 is pitched as a network management system for entry-level corporate users, and is \$4,800 to \$8,500. The PC Server 720 is designed to manage databases supporting up to 1,000 networked personal computers, and takes one to six processors. The 320 is to be widely available next month; the 720 will be available in volume in July, and starts at \$16,000 for a uniprocessor model, going to \$38,000 for a four-processor model. The six-processor model, not yet priced, is set for the fourth quarter. All ship with IBM's NetFinity network management software. IBM also cut prices up to 22% on the new PC 300 and 700 Series and Performance Series and up to 17% on some IBM Server 95 and PC Server 300 models.

### VMARK ADDS FULL SQL, OTHER FEATURES TO UNIVERSE RELEASE

Westborough, Massachusetts-based VMark Software Inc is up to release 8 of its UniVerse Pick-under-Unix database management system, and says that the new release 8 extends its "post-relational" data model with complete integration of ANSI-standard Structured Query Language, enhanced transaction management, and improved performance. UniVerse's SQL exploits traditional UniVerse features such as nested tables, and the new transaction management properties are claimed to add atomicity, consistency, isolation and durability, with controls to ensure the logical integrity of the database between transactions. UniVerse Extended Basic is enhanced to provide users of the PI/open Prime Information version of Pick, now owned by VMark, with a migration path from that proprietary system to an open environment, while supporting familiar PI/open features. In UniVerse, groups of fields can occur within a table as a nested table, eliminating the problems of empty fields and redundant data, and improving performance by reducing input/output processing. The new release is available now for over 70 different flavours of Unix and costs \$435 per user for four to 63 users, and \$365 per user for 64 or more users.

### NOW PLATINUM GOES FOR TRINZIC

The year may be little over two months old, but already Platinum Technology Inc has made four acquisitions, and yesterday it went for the big one. The Oakbrook Terrace, Illinois company is to acquire Trinzic Corp, the coast-to-coast middleware developer formed two years ago by the combination of Aion Inc and AI Corp. Platinum will pay one share for every three Trinzic, provided the Platinum share price remains in the range \$20 to \$28, and the deal is currently valued at about \$150m. The combination will have annual turnover of some \$140m, and will be in a position to offer a broad line of data warehousing tools by combining Platinum's data centre-based products with Trinzic's line of data access and development tools. Platinum casts data warehousing as a critical component of its Platinum Open Enterprise Management System architecture. With Trinzic, it will be able to offer six categories of warehousing products: operational data extract and refinement, replication, data change feedback, multidimensional warehouse access and analysis, data movement and gateway activity, and warehouse administration. The other Platinum Technology acquisitions announced so far this year are SQL Software Corp, Brownstone Solutions Inc, Viatch Development and Autosystems Corp.

### CADENCE TAKES ON UNISYS CHIP DESIGN

In an unusual piece of subcontracting, Unisys Corp has signed Cadence Design Systems Inc, San Jose to do all its chip design work under a \$75m five-year contract. Over 150 Unisys hardware and software designers will transfer to Cadence. The deal is seen as by far the largest multi-year contract ever undertaken by Cadence or any other electronic design automation company. Cadence will provide the ASIC design and engineering expertise necessary to complete current and future hardware design projects as specified in the contract.



## HP/INTEL PLANS CALL FOR 64-BIT STANDARDS DRIVE

There are scant details of how Hewlett-Packard Co plans to introduce technology developed under its alliance with Intel Corp which is supposed to result in a 64-bit RISC/CISC part that runs iAPX-86 and Precision Architecture RISC applications (UX No 528). Whilst HP and Intel have declared their placeholders for introducing some or all of these technologies, respectively PA-9000 and P7, the two are going to try and attract wider support for their effort via some kind of 64-bit specification standard they're drumming up for year end. At CompCom last week, HP was offering some technical titbits on how it will achieve binary compatibility with iAPX-86; *Electronic News* gleans HP has a set of micro-architecture features it's calling Intelligent Execution which are very similar to Intel's Dynamic Execution for P6, which embraces five RISC-like elements. Meantime, HP is promising HP-UX SMP boxes using the PA-7200 on the 27th of this month.

## EXPERTSOFT ENHANCES XSHELL OBJECT ENVIRONMENT

Expertsoft Corp last week said it is shipping the 3.5 release of XShell, its high-performance distributed object management environment which includes an IDL generator, Distributed ORB, Object Services and Object Management tools. It's already in use at customer sites at Andersen Consulting, Goldman Sachs and US West, Expertsoft said. The new rev includes two new optional products: XShell Replicated Namespace and XShell SNMP Agent. It also upgrades the IDL and Distributed ORB. The Replicated Namespace is meant to increase production performance and availability; the SNMP Agent allows XShell services and business objects to be managed by existing SNMP-based operations consoles. Meanwhile, the Distributed ORB has been deeply integrated with two widely used component libraries, Rogue Wave Tools.h++ and Microsoft Foundation Classes. The IDL has been upgraded to comply with the newly released CORBA IDL-to-C++ mapping specification that Expertsoft contributed to. Expertsoft believes its IDL compilers are the first to conform to the new language mapping spec, said to be the first specification for truly portable C++ implementations. Expertsoft says future releases will support Smalltalk and other languages. The XShell Replicated Namespace supports directory, events, persistence and object management services. Its associated management tools support replication, synchronisation, configuration and recovery of the XShell namespace and its associated services. Should a namespace service instance fail during production operation, the Replicated Namespace services will transfer application support to a replicated service instance. The product is priced at \$500 per managed XShell node. The XShell SNMP Agent is packaged as a developers toolkit for creating SNMP manageable XShell application objects and a set of services that support the SNMP protocol machine and agent functions. The developers toolkit is \$2,500 per seat; run-times are \$250 per managed node. Expertsoft believes it is poised for growth. New customers grew 500% last year and its base is beginning large-scale production deployment, it said. The company now has offices in Boston, Dallas and Denver as well as its San Diego headquarters.

## X CONSORTIUM SETS AUDIO PROTOCOLS FOR X11R7

The X Consortium is close to getting itself a commercial life, saying that it's looking at taking on specific development projects outside its primary role as keeper and developer of the X Windows specification. It says it's still negotiating, but hopes to have something to announce by the end of the month. Director of marketing Paul Lavallee admits the Consortium has been looking at the development of CDE (Common Desktop Environment) for some time. The not-for-profit successor to MIT's X Consortium has multimedia, object technology (Fresco) and Microsoft Windows integration technology lined-up for future X releases. As part of its multimedia effort it's working on audio and video protocols, the former should be available for X11R7, slated for the end of the year, along with more of the object stuff, including a portable and platform-independent interface system. Windows-to-X integration is more of a political issue, the Consortium says. It's talking to NT licensees about hooks into the OS. Seems X Consortium president Bob Scheifler, who was to have left in February, will be around indefinitely.

## SO IS THE AS/400's POWERPC CHIP THE 630? NO SAYS HESTER

*Chris Rose reports from Cebit in Hannover*

Phil Hester, IBM VP and general manager of the Systems Technology and Architecture Division took some time out at Cebit to explain the relationship between the future PowerPC '630' processor and the chips that the next generation AS/400s will use. It turns out that the AS/400 is using its own variant of the PowerPC chipset, and that this has nothing to do with the 630, which will, when it appears, be a straight, standard PowerPC part. Previously, you may remember, we had reported that the AS/400 team in Rochester had developed a multichip processor, based on the PowerPC architecture, but with proprietary extensions, such as specialised memory handling and decimal mathematics, designed specifically to help AS/400 compatibility. We further reported that this would appear in a single-chip version, dubbed the PowerPC 630. Nearly right, but Hester's CMOS processor roadmap dubs the Rochester work 'PowerPC AS' and shows it developing in parallel to the PowerPC and Power range of processor. The same chart shows today's Power2, and Power2+ processors going through a couple of iterations. Power2 Fast looks like it should be coming sometime this year with Power2 Super following on sometime in 1996. Notably, the Super looks like a single chip +cache affair, from the diagram. The PowerPC 630 (or Power3, as it used to be called) only follows thereafter, in a section vaguely titled "1997/Future". It is described as being for ultra high-end applications, and Hester says that at this point we *may* (he emphasises the may) see the AS/400 line converge and use the 630. For now, he says, the PowerPC AS chips are strictly for IBM internal consumption, and won't be offered outside. But will the people from Rochester see eye-to-eye with him on this last point?

## "WHAT 615?" HESTER LAYS OUT IBM'S EMULATION OPTIONS

After a while you *almost* get too embarrassed to ask IBM about the rumoured, Intel emulating, PowerPC 615. The answer is nearly always, "what 615" followed by a pronounced wink. Still, we thought we'd have another go anyway, and asked Phil Hester about the thing. "What 615?" he answered gravely, looking up from his plate of Hannoverian wurst (retailing at about the same price as a Pentium, but dissipating less heat). Still, he followed this up with a quick dissertation on three, maybe four, options facing IBM if it wants to emulate Intel instructions. The first, quite simply, is to do absolutely everything in software - build an instruction set translator and run it on the top of a standard RISC chip. That, on the face of it, is what IBM is doing today, with its OS/2 for PowerPC Instruction Set Translation Technology. However, Hester says that IBM's strategy was actually a bit more advanced than that - today's PowerPC processors already incorporate a few instructions to help the translation processor out. These help solve, in hardware, emulation problems that would otherwise have proved particularly tricky, using software alone. They help accelerate either Intel, or Motorola 68k emulation he says, adding quickly: "don't get me wrong, it's minimal". The third option is to go the whole hog and do a complete Intel emulation in hardware, on top of a PowerPC core, letting any machine run both kinds of binary - the classic 615 as described. "The answer isn't necessarily what you first thought it was...the right answer is probably somewhere between the second and the third options," he says, warning us against drawing too many conclusions, from his spiel. But what the hell, it sounds to us as if IBM's emphasis has moved away from full hardware Intel emulation on PowerPC, towards a chip with some extra stuff onboard to accelerate its software IST. This may account for the spate of conflicting stories floating about recently. If (note the 'if') this does represent IBM's current thinking, then it is a strategy that has much to recommend it. The chip can be smaller than if it had to emulate the whole Intel architecture. Moreover, imagine what it could do for OS/2 for PowerPC. The Boca Ratonies would be able to use the extra hooks in the silicon to accelerate Windows & DOS performance, while OS/2 program themselves ran. It's a nice idea and would give OS/2 for PowerPC a nice edge in performance terms. The downside? No automatic ability to run Windows '95 - and despite IBM's protestations, there 'will' be demand for Microsoft's baby, when it finally arrives.

*IBM uses object technology to smooth AS/400 transition - page4.*

## AS/400 DIVISION DELIVERS A SLIC OBJECT STORY

By Randall Munson, AS/400 Division, IBM

Since its inception in 1988, the AS/400 family of business computers has been recognized as an easy to use traditional commercial computer and is now acknowledged by leading industry analysts as a leading server. Not content to rest on its laurels, the AS/400 development team is ~~on a mission to make AS/400 a premier object-oriented (OO) server as well. IBM recognizes OO as the software technology of the future~~ which will significantly improve the way software is developed, modified, and distributed. As a result, it is investing heavily in the architecture and products that will provide the benefits of OO technology to its customers and business partners. In fact, IBM is practicing what it preaches and is already exploiting OO internally to provide a competitive advantage in the midrange market.

### Revolutionary change

The impetus for the use of OO technology stems from the fact that AS/400 hardware is currently undergoing revolutionary change. The system's unique CISC processors are being replaced with 64-bit Power-PC RISC processors in 1995 (See figure 1). Since AS/400's Technology Independent Machine Interface (TIMI) insulates the OS/400 operating system and user applications from any changes in hardware technology, RISC chips can be introduced into existing AS/400 systems without effecting either the operating system or user applications. However, a major rewrite of licensed internal code, the code which provides the function to support the TIMI, was essential to support the RISC processors. The team at Rochester, Minnesota, home of AS/400, recognized that it would make sense to do the massive rewrite using OO technology, resulting in better productivity and ensuring easier maintenance in the long term.

As a result, a team of over 250 developers has re-engineered AS/400's licensed internal code using OO technology. AS/400's licensed internal code has traditionally consisted of Vertical and Horizontal Licensed Internal Code (VLIC and HLIC). This is now being replaced by System Licensed Internal Code (SLIC), containing over one million lines of code and 6,000 classes developed in C++. Not only is the project extraordinarily large, but the developers have had to take into consideration that the code interacts heavily with existing code. In addition, SLIC is a critical component of the operating system, the code is run frequently, and it is therefore very performance sensitive.

Some of the findings of this project followed conventional OO wisdom, others are not as intuitive. Here are a few insights:

- Performance. Most of the C++ code in SLIC is low level, executed heavily, and therefore performance sensitive. Key components of SLIC

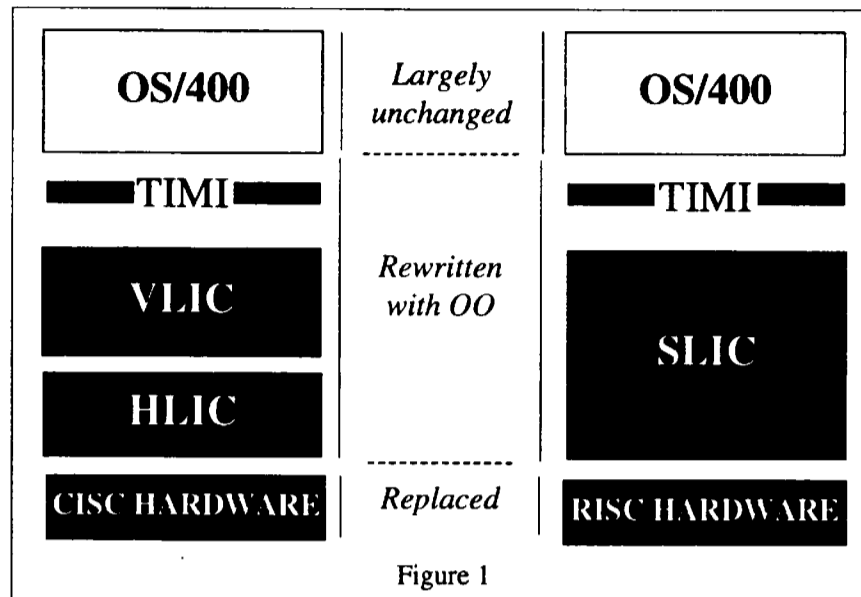


Figure 1

include I/O support, Storage Management, and Service Code all of which were formally components of VLIC, as well as those components that were formally part of HLIC (tasking, queuing, and locking support). Performance challenges occurred during development stage, as expected, but C++ provided the mechanisms required to tune the code. Naturally, the distinct advantage of using OO was the ability to change the implementation within an object while not affecting the interface, saving valuable time.

- Iteration. We proved that iteration works. Start coding, then iterate, iterate and iterate some more. By developing defined functions that combine a set of objects, the IBM development team was able to verify the functions, gauge the progress, and learn.

- Teamwork. The teams on the SLIC project consisted of those who understood AS/400 paired with those knowledgeable in C (or C++) and OO, with representatives from each major component meeting weekly to make broad policy and direction decisions. This structure helped the development team keep the big picture in perspective.

- Scope. Most 'experts' advise starting with a small OO project, show that it works and then try something bigger. The problem with this approach is that it doesn't negate the fear that OO will only be successful on small projects. With SLIC, IBM was committed to make the huge OO project work for AS/400 - and it succeeded.

In AS/400 Division, IBM has demonstrated the viability of deploying OO technology in performance critical real-world projects. We expected it to be more productive than traditional programming methods and have been pleasantly surprised as it exceeded our expectations.

## UNICENTER FOR OPENVIEW BRINGS INTEGRATED SYSTEMS/NETWORK MANAGEMENT CLOSER

The one truly hot property at Computer Associates International Inc seems to be its Unicenter Unix systems management software, and the product has won a further endorsement from Hewlett-Packard Co with the announcement of Unicenter for OpenView, which is to be marketed by both companies. The product combines parts of the HP OpenView network management system with Unicenter: CA has licensed HP's OperationsCenter and SNMP Platform process centres, and integrated them with Unicenter to create the new product, which has the CA-Ingres relational database at its heart. "Unicenter becomes more distributed," is HP's spin. It is designed for managing IBM mainframes; HP 9000 and 3000s, IBM RS/6000 and AS/400s, Sun, AT&T GIS and Data General workstations and servers; and NetWare, Windows and Windows NT PC clients. HP and CA say they will continue to provide and enhance their own offerings; it doesn't preclude CA from making similar arrangements with other network management providers for instance. It will ship in three or four weeks, priced from \$50,000.

### Pre-defined responses

HP sees the solution attracting downsizers that can take advantage of Unicenter's mainframe functions such as job scheduling, tape management and accounting/charge back alongside OperationsCenter's event monitoring and administration. Under Unicenter for OpenView, intelligent agents will receive and pre-process events from Unicenter and forward them to OperationsCenter's central console along with events that require the administrator's attention. All 450-odd Unicenter events have pre-defined automatic OperationsCenter responses. The integrated OperationsCenter console has views of all managed systems and Uni-

center applications and an interface to Unicenter problem management. Where there's overlap between the two - and there is a significant amount in certain areas - the customer can choose to switch off unwanted components, HP says. There's a choice between message browsers for instance.

### Combined SNMP Platform/Network Node Manager

Like HP's standard OpenView product, the management server implementation of OperationsCenter and SNMP platform for Unicenter runs only on HP-UX systems. It may be moved to other platforms that HP will target for OpenView, such as Windows NT, though that's not been decided, it says. OperationsCenter (a problem management module) is one of HP's three OpenView process centers that run atop its SNMP Platform, or the enhanced version called Network Node Manager which comes with additional services and application development tools. The other two are AdminCenter for change/configuration management (due to ship in two months) and PCS/PerfView, the performance and resource management module. HP says the agreement with CA doesn't preclude a tie-up on the other process centers, though that's not currently part of the plan. Meantime, there's so much confusion about the difference between SNMP Platform and Network Node Manager that HP's going to roll them into one product at its OpenView users conference in June. HP says its tie-up with CA will make it more difficult for the likes of Tivoli Systems Inc, peddling a rival systems management suite, to establish their products, however others such as Legent Corp are already hooked on OpenView, building HP code into their products.

### INTEL SIGHTS SERVER MARKET WITH P6

Some weeks back we noted that Intel Corp is hungry to get into the high-end server market and displace the RISC chips that get the big-iron design-wins. *Microprocessor Report* takes up the chant with its discussion of the P6. It notes that the chip's architecture with its revamped memory subsystem and its new 528Mbps bus is directed straight at the high-end server market. In fact, the new bus is capable of supporting four P6 chips with no glue logic, reducing the cost of developing and building MP systems. The newsletter remarks that while the server market's small unit volume makes it unattractive to Intel, it must pursue it if only to keep the RISC chips from having a base from which to attack the desktop. "By tuning the P6 for servers and retaining a fast FPU design," it says, "Intel leaves its RISC competitors nowhere to hide." The newsletter also traces out where it thinks Intel will go with the chip. It reckons the company will shrink to a 0.35 process in the first half of next year, offering it a cheaper chip whose clock speed is boosted maybe 50%, say to 200MHz and delivering 280 SPECint92, pressuring the RISCs. There could also be a 166MHz P6 to ward off x86 competitors like AMD's K5. The revised widget won't go mainstream until 1997 and by 1998 Intel should be at 0.25 microns which could yield a chip worth 300MHz. The paper reckons this version "must bring P6 fully into the PC mainstream and push Pentium into the ashcan of history." The *Microprocessor Report* thinks Intel will start the initial 133MHz P6 at around \$1,400 in quantities of 1,000. It reckons there will also be a 120MHz version for \$1,100. Intel is already working on a 512K cache for the part which will ship with a 256K cache. The larger cache will be made on the 0.35 process but could still be used on the initial parts, the paper thinks. There may be a cacheless P6 for cost considerations. Meanwhile, the paper is betting Intel uses the Pentium brand name for the P6 as well if for no other reason than to cash in on all that mind share captured by the Pentium flaw.

### HP 3000 GETS FIRST CRACK AT NEW PA-7200

The HP 3000 proprietary line is the first beneficiary of Hewlett-Packard Co's new PA-7200 RISC, which makes its product debut in five new mid-range HP 3000 server models, the 9X9KS series. The company claims that the new chip has enabled it virtually to double performance compared with the predecessor models at lower cost. The company cites the high-end 959KS/400 model, which at \$187,359 is 18% cheaper than a comparable 987KS/200 series model, and offers almost double the performance. The HP 3000 9X9KS Series servers include the 939KS Series, which run at 80MHz, and the 959KS Series, which run at 100MHz and support up to four-way symmetric multiprocessing. The HP 3000 9x9KS Series servers are priced from \$84,580 to \$295,070 and are on two to four weeks' delivery. The 3000s use a new Hawks SMP architecture - hence the Kittyhawk codename - which utilizes three buses handling the different connectivity and performance needs of data moving through the system; processor/memory, performance I/O and connectivity I/O.

### IBI TO LAUNCH OPTIMIZED SMP DATA WAREHOUSE PACKAGE AT UNIFORM

Information Builders Inc this week at Uniform will unveil what it will call a highly optimized Unix SMP-based data warehouse solution. It says the package, a combination of products and services, can evolve into comprehensive enterprise warehouses. Components include EDA/SQL, which provides SQL-based access to relational and non-relational data on heterogeneous networks; IBI 4GL Focus for Open Environments; EDA/SQL Copy Manager, which cleans data moved to the warehouse; SiteAnalyzer, a new Windows-based tool for interpreting data about a site's database query activity; and Focus tools. Data warehouse implementation will be done by IBI consultants together with the customer. A entry-level packaged solution suitable for 10 workstations is available. The package, together with professional services, software, programming and support, will cost around \$90,000. IBI, which has historically sold direct, will also be launching a VAR recruitment drive at Uniform, structured around its Focus 4GL and EDA/SQL.

### BLACK & WHITE INTEGRATES X GUI-BUILDER WITH FUJITSU REGATTA

Black & White Software Inc, Campbell, California, has integrated Leading Edge Software Ltd's UIM/X X Windows interface builder with Fujitsu Open Systems Solutions Inc's Regatta workflow management software, as Regatta-DEX, -X and -Win. Regatta-DEX is the X-based groupware development version. Regatta-X and -Win are runtimes for deploying applications developed with Regatta-DEX on Motif and Windows. Regatta-DEX and Regatta-X are on Solaris at \$7,000 and \$2,250 respectively, supporting Sybase, SunOS, HP-UX and Oracle support is slated for next quarter. Regatta-Win is \$1,000, also from next quarter.

### PAGEAHEAD OFFERS END-USER ODBC-TO-SQL ACCESS SOFTWARE

Claiming spiralling revenues from the developer and OEM products already under its belt, privately-held ODBC developer PageAhead Software Corp, Seattle, Washington, is introducing SimbaExpress, effectively an end-user version of technology found in its Simba Engine and Simba C/S database access software. The company says SimbaExpress is designed to deliver easy access to standard SQL data from PCs or Macs. With it, MIS managers or database administrators can access to multiple SQL databases concurrently using a single ODBC driver and one data communications driver. The package ships with Oracle and Sybase drivers - third party or custom-built drivers can be installed on the server for access to other SQL sources. Client software installation and maintenance is controlled from the server. As SimbaExpress doesn't force all of the SQL commands through a universal SQL engine, PageAhead claims its software exposes more of the features of each supported database than other solutions.

#### SimbaClient

SimbaClient is the desktop ODBC driver that communicates with SimbaManager, the server component. PageAhead claims the client occupies less than half of the memory required by most drivers and says one SimbaClient can manage multiple concurrent connections to any databases installed under SimbaManager. The SimbaExpress communications layer connects SimbaClients to SimbaManager over TCP, SLIP, and IPX/SPX, replacing the need to install several data communications layers such as SQL\*net, INGRES/net, or dlib. It also saves on network traffic. SimbaManager processes the SQL commands sent to it by SimbaClient, gathers the requested data, and passes the results back to SimbaClient. The company claims there is virtually no loss of database personality. SimbaManager will be up on HP-UX and AIX from June, with SCO, Solaris, and Windows NT versions planned for the second half. PageAhead's other development software allows users to build connections to proprietary data. Simba Engine attaches to different types of databases - including flat files - and enables Windows-based client applications to access the data. Simba C/S can be used to build drivers that allow PCs to access data held in remote files and supports any kind of data source, not just relational information. With it, you can package SQL queries to interrogate non-SQL data.

### SYNTAX DISTRIBUTES STANDARD UNIXES OVER LANs VIA TOTALNET

The week after next, Syntax Inc, a 12-year-old company located in Federal Way, Washington, will announced its TotalNet Advanced Server 2.1 software. The stuff is meant to make standard Unix systems into advanced servers, processing and distributing enterprise-wide information to desktop users. The desktop can reportedly access Unix resources without modifying anything and can transparently take advantage of Unix file systems, security and information integrity features. It works with widely available Unix applications and lets the desktop immediately access Oracle, Informix and Sybase databases as well as groupware products like the Windows-based Lotus Notes. Syntax says TAS will extend enterprise applications to departmental LANs without rewriting existing software although they use different communication protocols. Syntax claims other approaches such as porting PC network environments to Unix are spoiled by poor performance and give no access to Unix' functionality. TAS supports leading LAN environments such as NetWare, LAN Manager and Appletalk LANs which can concurrently share information, applications and resources. The TAS LMserver Plus component lets the Unix server operate as a LAN server without being dedicated to the task. NWserver Plus hooks NetWare clients up to the Unix server and MACserver does the same for Apple clients. Syntax promises TAS will ease the expense of LAN administration currently calculated to run to \$1,270 a user in a company with 5,000 users. TAS does the simple admin. More complex management is available through Unix management apps. The software is immediately available for Solaris. AIX, Sun OS, HP-UX, Tandem, SGI and UnixWare support is expected near term. Clients can be Windows for WorkGroups, OS/2 LAN Server, NT, Unix, NetWare, Pathworks, PowerLan and Macs.

The split of business at **Hewlett-Packard Co** is now 37% for the computer group - personal computers, workstations, servers and other systems, 42% for printers, scanners and other peripherals, 11% for test and measurement products, and 10% for other components and services, reckons Laura Conigliaro, an analyst at **Prudential Securities**.

**Hewlett-Packard Co** has formed a financial services business unit to design, build, provide consulting for and integrate computer products and services for the global financial services market.

**Data Tools Inc** of Menlo Park, California has released Easy BackTrack, a low-end version of its SQL-BackTrack, for backup and recovery of **Sybase** databases. Easy BackTrack, priced at \$1,300, is aimed at companies with small databases; it is upgradeable to SQL-BackTrack if need arises.

Santa Barbara, California-based **Softool Corp** says version 1.3 of its Harvest application change management system is shipping now with new application build technology, automatic linking of processes and SQL reporting capabilities. Prices start at \$4,800 per licence with a five licence minimum.

**Computer Associates** is integrating **Dazel Corp's** output management software with its CA-Unicenter systems administration environment. Meantime, **BMC Software** is putting its Patrol application management software up under CA-Unicenter. Patrol modules will also be developed for other CA products.

**Sun Microsystems Inc** has won New York City computer telephony integration (CTI) company **Linkon Corp** for its XTL Solaris extensions for CTI developers; Linkon will put XTL on its Link Engine SBUs cards for Sparcs.

**IBM Corp** is offering version 3.2 of its Trouble Ticket for AIX software which helps users track hardware and software changes on devices throughout their networks at from \$11,500. It's also offering support for HP-UX and Solaris agents under its MVS-based Operations Planning and Control workflow automation package.

**SunSoft Inc's** chief scientist Rob Gingell, who sits on the X/Open and OSF boards for it, has been named a Sun Fellow and VP. Gingell joins Jim Mitchell, Bob Sproull and Ivan Sutherland.

**Computer Innovations Inc**, Shrewsbury, New Jersey, is offering a software development management environment for UnixWare, Solaris and SCO Unix called StartPower, which records the status of a project as it is left and reconfigures the system exactly as it was left on return, including all windows, colours, fonts, files and command history lists.

**Network Computing Devices Inc** is integrating **Northern Development Group's** SwifView X-based document imaging software into its NCDware X terminal software. NDG's simple imaging extension provides local decompression of images on an X terminal and accelerates other tasks. The bundled offering and extension will be available in the third quarter.

Redwood Shores, California-based **Oracle Corp** has licenced **Visigenic's** Open Database Connectivity technology saying it will develop gateways to **Sybase**, **Informix** and **Ingres**.

**Globetrotter Software Inc**, of Cupertino, California, has added version 4.0 of its FLEXIm Flexible Licence Manager, which it says can now be used to restrict the use of software to specific addresses on the Internet, even through firewalls, and to offer "overdraft" licences where the number of users is exceeded. Prices are from \$4,000.

80% of Fortune 1000 and smaller companies plan to implement data warehousing and decision support systems by next year, according to a study by Massachusetts-based **Spiral Group**.

**Synon Corp** is using SOAP, the Synon Obsydian Alliance Program, to drive its latest object-based development environment to market (UX No 496). The first member is **Western Micro Technology** which will distribute Obsydian in the US.

**Vicor Inc's** Siren Software has introduced its Internet email bundle for Windows as Siren Mail for Windows at from \$100: server versions for **HP**, **Sun**, **IBM**, **DG**, 8800 and PowerPC Unix boxes are from \$3,000. Motif and character-based clients are also available.

**Enhanced Software Technologies Inc**, Tempe, Arizona, has a new release of its Bru backup and restore software it says is up to 30% faster than previous versions and includes a bunch of new options at from \$3,500.

**Hewlett-Packard Co's** PC-RISC supporters' club, the Precison RISC Organisation will have a new set of HP-UX 10.0 and Spec 1170 APIs and ABIs for PA system and software developers plus test suites at from \$1,500 next half called the PRO+ Conformance Program.

**ICL Plc's** AccessManager network security system is now available on HP-UX 9.05 systems. The UK company has also announced its X.500 Open Directory System. A server agent with 5,000 entries starts at \$6,000 for **HP-UX** and **ICL Unices** - **Pyramid** and **UnixWare** implementations are due mid-year.

Now **Silicon Graphics Inc** has signed for **Data General Corp's** CLARiiON RAID systems it'll offer with its Challenge servers.

Dublin object house **Iona Technologies Ltd** is shipping beta versions of its Orbix object request broker for **Wind River Systems Inc's** VxWorks real-time Unix. Iona says Orbix can squeeze into 200Kb memory on Motorola 680xx systems.

Now **Mercury Interactive Corp** has got its XRunner code testing software integrated with **IXI Ltd's** Premier Motif implementation.

**Versant Object Technology Corp** is to market **IBM VisualAge** and **Distributed Smalltalk** for use with its object database. It's also doing an implementation of the **ParcPlace Systems Inc VisualWorks** Smalltalk development environment it markets as Argos for **IBM Distributed Smalltalk**.

**Sybase Inc** has created a New Media Division, aimed at developing and distributing software for the Internet and commercial on-line services. Headed by Russell Werner, the division has been formed from **Gain Momentum** and its intermedia business units.

With the clock ticking on a nine-month window it reckons it has before the major database players invade its space, San Mateo, California-based **Persistence Software Inc's** spin doctors are preparing a new positioning strategy for the company's object software-to-relational database integration tools.

**Frontier Technologies Corp**, Mequon, Wisconsin, has added a new PC X server it calls SuperX for Windows to its SuperTCP TCP/IP application suite.

MITI company **Eventus Software** of San Bruno, California is shipping version 3.0 of its Oracle Database Monitoring system, WatchWorks. The company says WatchWorks 3.0 will automatically call a beeper number, send e-mail messages and faxes, or print information to a log file in response to specific events; it will also restart a failed database or run a batch program automatically. It's priced at \$1,200.

**Young Minds Inc**, the Redlands, California-based maker of CD-ROM storage and CD-recordable systems for Unix platforms, says it is developing new reseller and channel development programmes to market its CD-Studio for Unix, which supports six-speed CD recording, and the check imaging and storage applications for **Unisys** Unix platforms which it developed with **IA Corporation**.

**ObjectSpace Inc** is offering training and consulting for **Versant Object Technology Corp** software.

New Canaan, Connecticut-based **LBM Systems** has unveiled its Forms and Fonts, software said to upgrade the appearance of Unix print jobs with merging of logos, bar codes, multiple fonts and signatures. It's priced at \$2,500 per CPU and runs on most Unices.

**Transparent Application Servers** of St. Louis, Missouri is still waiting on the UnixWare v2.0 server on which it planned to preconfigure the parallel server compiler based on the SQL Windows Application Language it purchased from **Gupta**. The company is still hoping for a first quarter release (UX No 508), but can't guarantee it.

**Object Design Inc** has gathered supporters of its ObjectStore database together in the Object Design Alliance, including, it says, 100 VARs, integrators, ISVs and OEMs, including **AT&T Global Information Solutions**, **Cambridge Technology Partners**, **Expertsoft**, **IBM**, **Microsoft Corporation** and **Price Waterhouse**.

## COVIA ADDS ANOTHER SERVICE MESSAGE MIDDLEWARE

Covia Technologies Inc, Rosemont, Illinois, will ship version 3.1 of its Communications Integrator (CI) messaging middleware in June on 19 platforms. 3.1 will add a fifth asynchronous ~~message service to the four asynchronous and two synchronous~~ services it already comes with. The fifth means the receiving application now doesn't acknowledge message receipt to the CI until it has actually received the entire message. 3.1 also comes with Concurrent CI, allowing Unix platforms to run multiple CIs concurrently, an enhanced console interface and Component Integrators for integrating CI message-passing with MVS security facilities. Other CI toolkits due this year include Quickstack for integrating custom network protocols, visual programming toolkits allowing developers to use the Covia's C API, C++ libraries or Visual Basic VBX control, Quickstart for application design, an application development environment with standard utility routines, a configuration toolkit and other CI software management and install utilities. Other Component Integrators will be available in 1995 for integrating the major relational databases with CI networks, for Lotus Notes, 3270 terminals and allowing CI to be managed by third party solutions, initially HP OpenView. Covia also plans a set of secure file transfer services like FTP and FTAM.

## SOFTWARE PROFESSIONALS PITCHES "LIGHTWEIGHT" SYSTEM ADMIN

San Mateo, California-based Software Professionals Inc is bringing a new set of automated system administration tools to UniForum this week as Enlighten, which it describes as a more lightweight alternative to heavyweights such as CA-Unicenter. Enlighten is the product of core technology developed by SP integrated with the Trapper SNMP manager it acquired when it bought San Jose-based Network Partners Inc last December. Enlighten has a common interface that runs under X or OpenLook and administers Sun, IBM, HP and SCO Unix boxes. It's not as robust as something like Unicenter, lacking stuff like a job scheduler and trouble ticketing, but SP open systems manager Rob Donatch explains that in its experience of the 400-odd customers using its fault-tolerant Guardian administration applications on Tandem kit, many find large-scale administration environments (like Unicenter) too complicated and time-consuming to operate and are looking for more simplified approaches to the task. Enlighten sends trap information to SNMP network managers such as SunNet Manager, HP OpenView and IBM NetView and provides a common management point for administration tasks, some of which aren't supported under these other environments. SP says it'll unbundle for pieces of its software for licensing in third party products and for building vertical market packages. The Enlighten core includes Sys Admin and Events modules. Sys Admin has a bunch of management and monitoring applications under a common GUI including Watchdog, which monitors thresholds - disk, swap space, printer availability, remote host availability and file sizes. Events automatically collects and saves event information that's monitored by third party network managers, and controls and monitors devices. Future versions will provide for management of Oracle and Sybase databases. The event-driven software doesn't poll across a network but gathers information about all CPU, I/O, file system, operating system, RPC, network resource allocation and usage activity. Sys Admin, with seven applications is from \$360 for each managed system of 50 is \$175, again for each managed system of 50. Enlighten is up on SunOS, Solaris, AIX 3 and 4.1 (Sys admin only), HP-UX 9.x and SCO and is out at eight beta sites. SP, which went public this time last year, has 400-odd customers running its existing management software on Tandem Computers Inc Guardian-based kit. It's in the process of moving those applications over to Tandem's Unix-based Integrity series and re-badged SGI servers, and to the Open System Services layer Tandem's adding to the NonStop kernel implementation of Guardian. It's likely to follow Tandem to Windows NT too.

## CLIENT/SERVER MAG SLAMS DCE

Distributed Computing Environment ISVs we spoke concur with much of the tone of *Client/Server Today's* recent assessment of the Open Software Foundation, if not all of the specifics. In *C/S Today's* view there are three reasons why DCE ~~has turned out to be a non-starter. First it uses remote procedure~~ calls: "in a large-scale, distributed environment, you want true asynchronous communications, with absolute network protocol independence. RPCs don't have that innate flexibility, but messaging systems do." Second, "the performance of CDS, the name location service of DCE, turns to sludge when used in dynamically changing environments such as Corba-based distributed objects." Third, "knowing all this, OMG approved a new standard, UNO... This pepperoni nixed DCE's RPC anchovies as the enabling technology to get different vendors ORBs to interact. The OMG's decision upset OSF, which doesn't agree that UNO is the one way to go."

## GRADIENT PUTS DCE UP ON UNIXWARE 2.0

Gradient Technology Inc's SysV-DCE Distributed Computing Environment implementation is now available for UnixWare 2.0 and Novell Inc is recommending the software for users wanting to integrate their UnixWare systems with DCE networks as clients or servers. Applications developed for DCE networks can be implemented on UnixWare. The SysV-DCE software for UnixWare comes with a DCE Executive (client), and Cell Directory and Security Server services running on top. It comes as a developers kit (\$700), runtime kit (\$200), cell directory services (\$1,500) and security server (\$1,500) from the last week of March. Gradient, which has been working with Novell on the project since last August, is also developing a UnixWare DCE gateway that will allow DCE clients to access NetWare servers through gateway software running on UnixWare. Gradient says it's now shipped 300,000 copies of its PC-DCE runtimes for Windows.

## HYPERDESK DEBUTS FIRST GROUPWARE PRODUCT

HyperDesk Corp, the Westborough, Massachusetts-based object pioneer which gave up on its ORB business a year ago this week (UX No 478), has rolled out its first groupware product as GroupWorks, claiming the software allows Windows-based development teams to dynamically share documents, schedules and assignments whilst retaining individual preferences and tools. HyperDesk has extended Microsoft OLE to allow GroupWorks users to attach documents developed in different applications to the project and share them with other team members regardless of location. It allows users to view and annotate documents even if they don't have the application which created the document of their PC. Prices start at \$300 from next quarter.

## NETLINKS REVS ORBITIZE

Nashua, New Hampshire-based NetLinks Technology Inc will introduce version 1.1 of its ORBitize development tool for building object request broker applications at next week's ObjectWorld show in Boston. The GUI-based ORBitize can create Interface Definition Language definitions and works with IDL files (Corba 1.1 and 1.2) and Corba interface repositories. It supports IDL extensions of specific ORBs including IBM SOMobjects and Tivoli TME. On SunOS, Solaris, Windows, Windows NT and OS/2, ORBitize 1.1 is priced at from \$700 from April. Support for HP-UX, AIX, OS/2 Warp and Windows 95 will follow.

## TATUNG ADDS ENERGY STAR SPARC

Tatung Science & Technology Inc, Milpitas, California, will be showing off a new workstation at UniForum that complies with the US Environmental Protection Agency's Energy Star programme. The 85MHz microSparc II-based MicroCompstation 5/85 is rated at 64 SPECint92 and 54.6 SPECfp92 and offers 165 watts power supply. Tatung's aiming the unit at Sun Microsystems Inc's recently announced 70MHz, 50 watt, Energy Star-compliant Sparcstation 4. With SVGA/CG3 frame-buffer, 14" colour screen, 16Mb RAM, 520Mb disk and three SBus slots, the 5/85 is priced at from \$4,000.

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**Informix Software France SA** announced that retail distribution giant **Docks de France**, which boasts more than 1,000 stores in France and Spain, has chosen Informix OnLine for its inventory management system: the application has been installed in three pilot sites and will be extended to six more by the end of the year; it also announced two contracts in the banking sector in North Africa: one with the Moroccan Bank of Foreign Trade; and with the National Bank of Algeria.

**Oracle France SA** has won a contract to equip the 2,000-strong fleet of Paris's "taxis bleus" with a digital management system, which will include on-board computers for real-time mobile data exchange: at the operations centre, a Unix server will process data 24 hours a day, seven days a week, assuring location of vehicles via satellite and the distribution of calls.

The biggest defection **Uniforum** suffered this year is **Sun Microsystems Inc** which has got practically no exposure at the show unless you count the little corner of the CDE pavilion that it's staked out. Sun is taking its immediate business to **Networld+Interop** two weeks hence in Las Vegas where SunSoft will be making an announcement; longer term it's Unix Expo. As we went to press news emanating out of show looked pretty thin and attendance was expected to be hurt because it's in Dallas this year rather than San Francisco where at least it can draw on the throngs from the Valley.

**Somerset's** latest PowerPC roadmap promises a 330 SPECint92 and 410 SPECfp92 implementation of the 64-bit 620 by year-end, up from 225 and 300 respectively now. The high-end desktop, low-end server part, 604, will reach 225 SPECint92 and 250 SPECfp92 by year-end, up from 160 and 165 now. The 603(E) - enhanced 603 - is expected to go to 160 SPECint92 and 140 SPECfp92 by the end of the year. The joint IBM/Motorola embedded effort, the 602 will reach 50 SPECint92 by year-end, up from 40 SPECint92 now. The original 601, now at 105 SPECint92 and 125 SPECfp92, is slated to achieve 125 and 150 respectively by mid-year.

For diversion at **Uniforum** this week they're going to host a battle of the bands with the **Data General**-spawned Propeller Heads, who performed last year and tore a piece out of **Microsoft Corp's** flank, making an encore appearance. Some nerds from the **Santa Cruz Operation Inc** have formed Deth Specular and geeks from the **Unix Technology Group** will be performing as the Tightly Integrated. BMC Software programmers will be on stage as the BMC Brothers and press from **Information Week** coming along as Kludge.

They say when **DEC** emigre Willy Shih finally gets to his new job at **Silicon Graphics Inc** he'll be doing marketing for the company's high-end systems.

**Intel Corp** told *Electronic News* that the reason it doesn't have a floating point estimate for the P6 yet is because it hasn't gotten that far in testing the silicon. The P6 is not expected to be an FP screamer if only for cost considerations.

**Auspex Systems** chief technologist Bruce Nelson and **DEC's** Andrew Birrell were given the 1994 Software System Award by the Association for Computing Machinery for co-developing the Lupine remote procedure call back in their Xerox PARC days. Their RPC work is the basis for NFS and DCE.

**Sequent Computer Systems Inc** last week flatly denied a story first put out by *PC Week* (UX No 526), then embroidered on by *Computer Reseller News* that it was negotiating to get bought by **Hewlett-Packard Co**. It called a few people up and gritted its teeth over having to address rumours but said the volume of trades on the stock exchange demanded it do something. Its stock was up 10% on the false reports. HP said nothing.

**SunSoft Inc** admits it would be a whole lot easier if Interactive Unix users were to move to Solaris x86 2.4 sooner, rather than later, cutting down on the work needed to keep up the parallel releases (UX No 528). It says it wants to double or triple its 15% Unix-on-x86 market share over the next 18 months.

Bob Pearson, director of **Sun's** Advanced Desktop Systems Group called last week, keen to smooth over Sparc performance issues raised by folk over at *Microprocessor Report* and bury speculation about its long-term future: "talk of Sun abandoning Sparc is ridiculous," he says. SparcStations using 90MHz SuperSparcs and 110MHz microSparcs will ship in April. UltraSparc systems are promised "within a year."

Industry-watchers are wondering just where **IBM Corp** CFO Jerome York has drawn the line in the sand for OS/2. Depends on how soon after August Windows 95 really begins to bite, they figure, but how long can IBM pour shareholders' money down the drain?

**SunSoft Inc** will be rolling out some more pieces of its Distributed Objects Everywhere environment at **ObjectWorld** in Boston this week, including stuff it's going to ship to research and education environments.

**Tandem Computers Inc**, which was dropping large hints last week (UX No 528) has taken the plunge and formed a Windows NT Server Business Unit.

**Hyundai Electronic America Inc's** Metaflow Technologies has plugged all three of the chips in its Thunder Sparc RISC set into a Sparcstation and has got Sparcware programs up and running on it. It says its got a yield problem fixed and expects first silicon back from a revised tape-out in six week's time (UX No 522).

The long-anticipated Solaris-on-PowerPC beta programme will crank-up around August, **SunSoft** sources say.

**Peregrine Systems Inc**, Carlsbad, California, is offering an MVS version of its PNMS network management system for SNA, TCP/IP and NetWare networks. It's accessed by Unix, OS/2 or Mac clients and provides inventory and trouble ticketing network information for **HP OpenView** or **IBM NetView**. Prices go from \$42,500.

**Novell Inc** has got **X/Open Co Ltd** XPG4 Base Profile Brand for UnixWare 2.0.

**Data General Corp** has hired Bill Wilson from **IBM Corp** as its new VP marketing following the departure of Steve Gardner to an unnamed software outfit.

Current thinking says **IBM Corp's** Spec 1170 "shadow" for the IBM microkernel is being positioned as a cheap and API-compatible choice for AIX customers that might be considering moving to Windows NT.

San Diego company **RDI Computer Corp** has moved to a larger headquarters in Carlsbad, California.

**Compagnie des Machines Bull SA** believes it'll have the first public demo of four-way PowerPC 604 technology with the Escalas it's bringing to the show this week, plus the first showing of an eight-way 601 system. It's lining-up some new niche OEMs and enhancements to its UniKix OLTP system.

**Network Computing Devices Inc** is readying a new Windows-based Internet tool called Mariner it claims allows users to access all Internet information sources from one application. It's not a package of products, NCD claims, but a unified user interface to all Internet services and protocols, including email, news, FTP, relay chat, Gopher and Telnet. It has a toolkit for building applications that use Mariner APIs. With a full TCP/IP stack the software will be priced at \$100 from June through September, \$125 thereafter. 60-day trial copies are available and Mac and Windows 95 versions will follow in the third and fourth quarters. [www.ncd.com](http://www.ncd.com) for info.

**Next Computer Inc** is hiking the price of developer release 3.3 from \$3,000 to \$5,000 from April 1.

**Business Objects SA** has installed Patricia Nghiem as VP technical services at its Cupertino, California operation.

**Hewlett-Packard Co** will add a sub-\$1,000 multi-site configuration and code management tool to its Softbench programming environment next month; it's also set to offer the latest 2.9 release of **Visual Edge Software Ltd's** UIM/X Motif builder on **HP-UX** and **Sun** boxes at from \$5,000 in June.

The **Object Management Group** is up to 500 members with the addition of **US West Advanced Technologies: Anderson Consulting** is now on the OMG board.

In response to last week's **DEC** and **IGEL** network terminal introductions (UX No 528), **Hewlett-Packard Co** wants everyone to know that it's already got a low-cost desktop Windows client which includes the WRQ Reflection emulation software and will be adding an enhanced 33MHz 486 unit in April.

**HaL Computer Systems Inc's** Austin, Texas-based Software Systems division has added version 1.1 of its Motif-based DCE Cell Manager for administering DCE networks with support for Alpha OSF/1 and enhanced performance (UX No 479). Prices start at \$5,000.

**IBM Corp/Dassault Systemes' CATIA V4 R1.4** CAD/CAM software has been ported to the first non-IBM platform - **Hewlett-Packard Co's** HP 9000 workstations from the end of the month from \$4,000.

**Trusted Information Systems Inc** is going to build a TIS Trusted Mach operating system using the IBM Corp Mach microkernel it licensed last week. TIS already has an Alpha version of its own TMach implementation up on iAPX-86 - a combined TIS-IBM microkernel-based TMach for Intel and PowerPC is due next year.

We hear there's been some dancing in **IBM Corp** corridors with the departure of James Cannavino and Ellen Hancock. But the rumour mill never rests and is ripe with speculation about how long that other stalwart of the OS/2 regime, Lee Resiwig, will be around. Who knows? AIX might get a second chance now they say.

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The weekly information newsletter for the UNIX™ community worldwide

London, March 20-24 1995

Number 530

## TWO YEARS ON; COMMON DESKTOP ENVIRONMENT MAKES ITS BOW AT UNIFORM 95

Whilst the major Unix vendors were patting themselves on the back at the arrival of their Common Desktop Environment at UniForum in Dallas last week, none was actually prepared to say when exactly it would ship CDE 1.0, as the default interface on its operating system, leaving CDE pioneer Triteal Corp, Carlsbad, California, to make a clean sweep of the business in the interim, see below. The CDE code - a weighty three million lines that requires 32Mb RAM to run well - was being debugged up until the day before the show got underway, then frozen so the vendors could show a common implementation. Productised versions will retain the CDE core but incorporate vendors' own bells and whistles, including multimedia applications, on top. Despite the growing recognition that what Unix users in client/server environments want on the desktop is Windows, IBM RS/6000 boss Bill Filip believes CDE will enable vendors to win sales that would otherwise have gone to Microsoft Corp. As well as unveiling what's actually a very impressive front-end that should run well-behaved Motif and X Windows applications, the original CDE developers, Hewlett-Packard Co, IBM Corp, Novell Inc and SunSoft Inc, also placed the future of CDE in the hands of an Open Software Foundation Pre-Structured Technology process. OSF has, as expected (UX No ??) subcontracted the X Consortium Inc to develop future implementations based on the PST. Joining the original COSE members in the PST are DEC, Fujitsu Ltd and Hitachi Ltd. The letter of intent describing terms, funding and schedules for the project was signed by the sponsors and passed by OSF's board last week.

### Trial

OSF, with no history of commercial technology success to recommend it, is effectively being put on trial over its handling of this PST. The PST process as well as OSF's ability to manage and advance CDE will be closely monitored, according to SunSoft. As well as bug fixes and dot releases expected to bring CDE into synch with Motif 2.0 (it's based on 1.2) and current X code, eight items have been agreed for inclusion in what's being dubbed CDE Next, including fully integrated print services and the ability to open Windows or Mac desktops within a CDE window and run CDE desktops from PCs. Although all details won't be known until an OSF PST announcement expected shortly, other CDE Next technologies will likely include Internet access, desktop administration for dealing with peripherals and some object features. Additions to the PST team are expected - SGI in particular is hovering around. X/Open Co Ltd will brand CDE implementations from the end of the first half of the year according to the CDE specification which recently completed its fast-track process. The CDE look and feel is apparently not part of the spec.

### Default delivery schedules

DEC will ship CDE as its default front-end with Digital Unix 4.0 due in the second half. It won't offer CDE on Ultrix. Motif will be available if required instead of CDE. Hewlett-Packard Co will ship CDE 1.0 as its HP-UX default environment "in the next version". It'll continue to offer its Visual User Environment where required. IBM Corp's current CDE sample runtime on AIX 4.1 will be upgraded to become the default and only front-end for AIX with the next release of the operating system. Novell Inc declined to say when it will provide CDE as its default front-end to UnixWare, though TriTeal Corp's implementation will be available for its latest UnixWare 2.0 release as soon as it ships. Other interfaces will remain on the price list. SunSoft Inc will deliver an unbundled CDE for Solaris 2.4 in the summer and offer it as a default front-end (though Open Windows will remain an available option) with Solaris 2.5 sometime in the Autumn. It is also multithreading parts of CDE to make its three million line run quicker.

## DEC REVS DIGITAL UNIX FOR ALPHA OEMs AS MAYNARD

For the first time since Digital Equipment Corp got into the OSF/1 business, which it has now renamed Digital Unix (UX No 528), OEMs who develop their own Alpha systems, albeit out of DEC parts, are going to be able to sell the same OSF/1, er, Digital Unix as Maynard. (In this equation Ing C Olivetti & Co SpA may count as the exception that proves the rule.) In May, or thereabouts, little DEC OEMs like Aspen System Inc, Carrera Computers Inc, NekoTech Inc and newcomer DeskStation Technology Inc, a motley crew, granted, but the best DEC can muster, are expecting a Unix dot release out of DEC whose only role in life is support of their systems, firmware, device drives and PCI buses. These boys have been playing on the Windows NT side of the yard and are now going to try their wings with Unix. The current OSF/1, sorry, Digital Unix doesn't support their nuances, they say, and although they've been demonstrating it at places like Uniform last week, DEC, still has to fuss with it before everybody's all on the same CD. They think DEC's motivation is simply to sell as many Alphas as it can.

## MKS BREWS API TESTER FROM TenDRA, TARGETS ISVs FOR SPEC 1170, NON-UNIX PORTS

Canadian commands and utilities house Mor-tice Kern Systems Inc brought an early version of a new API testing and checking technology to UniForum last week, showing the thing off under wraps to selected ISVs and end users. When it comes to market in the summer, the software, codenamed Espresso, will break apart an ISV or user's code and compare its APIs against any given set of operating system APIs to determine what additional calls the application requires to get it ported on to the target environment. The first obvious targets for the stuff are ISVs that want to evaluate what Spec 1170 compliance they have in their applications so they can create implementations that can be moved to multiple Spec 1170-compliant operating systems, Unix or otherwise. MKS says the technology will also test applications against any other API sets, which are plugged into Espresso in a common database format, including Windows NT, Windows, Macintosh and OS/2. MKS doesn't have fully documented API sets for all of these - though it's eyeing the APIW effort (UX No 528) - but says applications can be tested for headers and other general operating system features to show where, and how much porting work will be involved.

### Commercial implementation

MKS' product will be the first commercial implementation of TenDRA technology developed by the UK Defence Research Agency and licensed to MKS on a non-exclusive basis. TenDRA was first chosen by the Open Software Foundation for its over-ambitious Architecture Neutral Distribution Format RFT in May 1992 (UX No 384), a project that was scaled back in subsequent revisions until it was shelved altogether. The technology then dropped into the European Commission-X/Open Co Ltd Deploy initiative backed by several European ISVs to create a comprehensive and robust set of API porting and testing tools. The implementation of Spec 1170 across a range of Unix and non-Unix environments has provided the financial lure for MKS to take TenDRA to market. Based on initial feedback from MKS, DRA has added hooks in the TenDRA it has supplied to MKS for generating various kinds of status reports describing API activity and allowing lists of APIs to be plugged in using a standard database mechanism. MKS, which wouldn't let us play around with what it had of Espresso up on a SparcBook, will put the software on Unix platforms initially.

### MAXM's MAX/ENTERPRISE TO GO ONTO AT&T's SYSTEM 3000

McLean, Virginia-headquartered MAXM Systems Corp has revealed a joint development and marketing agreement with AT&T Global Information Solutions to deliver the former's MAX/Enterprise global event management software to OneVision users. Under the terms of the deal, the two will contribute to developing MAX/Enterprise for AT&T's System 3000 hardware and Unix System SVR.4 operating system. Availability is scheduled for the fourth quarter this year.

### FORMER NOVELL CORSAIR EFFORT TO BECOME INTERNET OPERATING SYSTEM

Although Ray Noorda's personal backing was thought to be the only thing keeping alive the Corsair operating system based on the Linux Unix-like, and although the thing was abandoned when new chief executive Ron Frankenberg reviewed Novell Inc's priorities, the thing is alive and well at a spin-out company, Caldera Inc, *Infoworld* reports. The plan now is to market the graphical operating system as an Internet desktop operating system, Ransome Love, vice-president of marketing, told the paper. The Orem, Utah firm has licensed a tool kit for converting Windows applications to run under Unix from Willow Software Inc, formerly Multiport Inc, of Saratoga, California, he added.

### ORACLE "RALLIES PARTNERS FOR NEWS VIDEO ON DEMAND"

Oracle Corp has decided it must be more proactive in promoting its Oracle Media Server, and is working to rally a group of US phone companies and information providers to create a news on demand service, the *New York Times* reports. The idea is to provide a service that would enable personal computer users to customise their own video news bulletins, and according to the Times, Oracle is talking to AT&T Corp, MCI Communications Corp, Intel Corp, Reuters Holdings Plc and Turner Broadcasting System Inc's Cable News Network. Users would be able to search news clips according to subject matter and retrieve them in any order from the system, which would require an ISDN line. Oracle has also discussed the development of interactive television news databases with Capital Cities/ABC Inc and Washington Post Co, the paper said. No-one was willing to comment.

### HDS ENHANCES MULTIMEDIA FOR X TERMS

HDS Network Systems Inc, King of Prussia, Pennsylvania, took the wraps off Version 2.0 of its anticipated HDS netVideo multimedia application software for its X Window terminals, at UniForum in Dallas (UX No 523). The new version features live video at up to 30 frames per second, teleconferencing via the Internet, and video capture for direct import into word processing documents or World Wide Web home pages, and has an improved Motif-based user interface. It consists of four basic applications. HDSconference enables X terminal users to establish a conference and see each other in a window on the screen, with simplified log-on and videoconferencing on the Internet. HDSvideo supports receipt of an analogue video signal from a camera or VCR into the X terminal, and the new version enables still frames of live video to be included in word processing, graphic applications or World Wide Web home pages in colour. The HDStuner option enables X terminal users to connect to cable television or an antenna and view broadcast television in an X window on their screen. Channels are changed by a Motif client on the screen and the video is displayed in a resizable window that can display 1,280 by 1,024 resolution at 30 frames per second. HDS netTV enables one X terminal to broadcast video and audio over the Internet, Ethernet or Token Ring to other X terminals on a network via IP multicasting; the new release features a new user interface to enable one X terminal to digitise analogue video and broadcast it to other X terminals using the IP Multicasting protocol. And HDSmovie is a new application that enables users to view video files that are stored in Microsoft .AVI file format for cross-system multimedia compatibility. Video and audio files captured on a Windows personal computer can play on an HDS X terminal without modification. The new release is out now at the same price as the original version, and users of the company's X terminals without multimedia hardware can license the HDSmovie for \$200 per X terminal.

### COMPUSERVE TO PAY \$100m FOR SPRY

CompuServe Inc is joining the rush to buy Internet skills and services, and is to pay \$100m for Seattle-based Spry Inc, one of the companies licensed by the University of Illinois to exploit the Mosaic Web browser. It will pay \$100m in cash and shares, CompuServe parent H&R Block Inc announced. Spry will become the CompuServe Internet services division. Spry management shareholders will get convertible preferred H&R Block shares worth about \$60.3m and other shareholders will get about \$39.7m in cash. Spry is best known for its Internet in a Box suite of Internet access applications.

### IBM OFFERS CLIENT-SERVER NETWORKSTATION MANAGEMENT

IBM Corp added a new string to its services pitch last week with the introduction of NetWorkStation Management, a set of global services aimed at helping customers manage their multivendor client-server computing environments. The company promises flexible financing and a predictable monthly service fee for a set of systems management tools that will: enable users to update their technology on a regular basis to ensure that it meets the changing needs of their business; effectively roll out, manage and track their multivendor technology assets; access the Internet; get help desk support and remote management of local and wide-area networks; track hardware and software configuration status through rigorous management disciplines and tools; and plan and manage their distributed computing budget. It claims that the new service, which has been undergoing trials for a year, can save customers 10% to 15% of the cost of managing personal computers. Once IBM finishes counting them, it puts them on a regular maintenance and upgrade schedule. The service - no fixed price - is offered in 100 countries.

### SYBASE "READIES MOBILE DATA ACCESS"

In June, Sybase Inc will release a mobile communications system that will give users both wired and wireless access to corporate databases, as a result of the deal with Complex Architectures Inc, *US PC Week* reports. The as-yet-unnamed system will enable mobile users to query remote databases over a host of wireless services, going beyond most current wireless middleware programs by offering "sessionless transmissions". With sessionless transmissions, a wireless call into a database is automatically disconnected when the query is received by an agent. The agent searches the available databases for the requested information and, when it finds it, the data is encapsulated into a message and transmitted back to the mobile user; because the agent can access the database without being bogged down by the wireless connection, the search is done faster and connection costs are reduced.

### HARRIS' CONCURRENT IS REJECTED AGAIN

Harris Computer Systems Corp has stepped up its campaign to persuade Concurrent Computer Corp to go to it. The Fort Lauderdale, Florida company improved its offer to one Harris Computer share for every 16 Concurrent, but was rebuffed. Harris says it does not currently plan a hostile tender offer for the Oceanport, New Jersey company. Harris Computer also disputes Concurrent's public utterances, saying that it was not true that Concurrent had tried to acquire Harris, and that the implication that Harris Computer was attempting to acquire Concurrent's Maxion technology was false. Harris says it has no plans to adopt the Maxion architecture, but does plan to incorporate Concurrent's customer-specific software into its Night Hawk architecture, and adds that it believes "significant savings can be realised in the combined research and development."

### BULL, FRANCE TELECOM BRING IN NEC ON INTERACTIVE MULTIMEDIA NETWORK

Compagnie des Machines Bull SA and France Telecom have brought in NEC Corp on a project to develop a new multimedia on-line information service that sounds like a follow-on to Minitel, since it is being conceived as a Yellow Pages-type directory, but with video, speech and text content. The \$3m, two year contract will see France Telecom developing the fibre optic infrastructure, Bull handling systems integration, and NEC developing servers and software. The system is intended to be available in France from around 1997. NEC describes its contribution as hypermedia servers and says that it may also be called on for Asynchronous Transfer Mode switches.



## HAL'S R1 WORKSTATIONS AND R2 SERVERS DUE IN Q3, TWO YEARS LATE

Campbell, California-based Hal Computer Systems Inc, which had expected to deliver its first boxes back at the end of 1993, is now due to ship the things in the third quarter, two years late. *The Microprocessor Report* says the uniprocessors, based on the 64-bit Sparc-derivative Sparc64 chip the company designed for the purpose, are code named R1. These workstations will be aimed at technical and commercial applications. HaL is building high-reliability features into its chips and apparently a second batch of servers, called the R2 and due next year, will target the mission-critical enterprise space. If HaL had been able to produce its chip and boxes on its original schedule, it would have really been something. As it is now, it's pretty much an also-ran, facing an uphill battle and Sun Microsystems Inc as its biggest competitor. Back in 1993 HaL's misfortunes forced investor Fujitsu Ltd to take over the whole kit and kaboodle, ousting founder Andy Heller in the process. Although the 2.7 million-transistor HaL chip won't be sold on the merchant market, the *Microprocessor Report* speculates that the widget could be used in Fujitsu's own machines, as well as those of its two other holdings, Amdahl and ICL. The newsletter says HaL, which had to abandon the notion of developing its own operating system, is now running Solaris in test systems. The company's software team is developing 64-bit extensions to Solaris. In the *Microprocessor Report's* exhaustive piece on the Sparc64's features and foibles, it mentions a few notable points. For instance, the chip's high-reliability structures smack of techniques used in mainframes, not microprocessor-based systems. In fact, only IBM Corp's Power processors, which Heller helped to develop, offer a similar level of data checking, it says, which might give it an edge in competing for mainframe-replacement accounts. The newsletter also notes that the Sparc64 can't yet deliver the 256 SPECint92 performance that HaL estimates it can do. It should do well on programs with larger working sets than the SPEC92 benchmarks, including the upcoming SPEC95 suite and typical commercial applications. *The Microprocessor Report* reckons the six-chip Sparc64 will cost \$770 - about the same as UltraSparc when you throw in external cache - but HaL's customer interface chips will put HaL at a cost disadvantage because of lower volumes.

## DIGITAL UNIX; FULL SPEC 1170 BRANDING AND BUNDLED CDE LATER IN THE YEAR

DEC officially revealed its OSF/1 operating system name change last week. It originally wanted to call it "killer compliant 64-bit butt-kickin' mega-open Digital Unix," but opted for Digital Unix 3.2 instead, it says. The Unix 93-compliant system will win its Unix 95 (Spec 1170) spurs later in the year - Digital Unix 4.0 is also the release that will feature a bundled, default Common Desktop Environment implementation and more high availability features. IXI Ltd's X.desktop remains the default desktop for now. DEC says it's done a full technical evaluation of putting CDE up on OpenVMS - which also runs X.desktop - and has even moved some bits of it over, according to engineers we spoke to, but the company says it's waiting to hear demand from customers before it decides whether to go the whole hog. DEC's still offering the Habitat layer which gives the OSF/1 code BSD or Unix SVR4 personalities (and it still pays a royalty for it), but says it isn't selling a lot of Habitat now that most SVR4 APIs are in the core operating system via its Spec 1170 work in any case. Apparently it's only those few and far betweenies that want the operating system on the desktop who are asking for Habitat.

## UNIFORM GETS NO JOY OUT OF LONE-STAR STATE

UniForum in Dallas was something of a bummer last week. Having promised 25,000 attendees, by the end of the first day it was backpeddling and forecasting only 10,000. We heard it took an ad in the local paper offering free admission. Things were bad enough that Unix Expo was worried it might get tarred by the same brush. Uniform also took heat from its lead keynoter Silicon Graphics Inc chief Ed McCracken who publicly promised to walk and slam the door behind him none too gently if it even so much as thought about changing its name - which it's doing - and took to fraternising with the likes of Microsoft Corp. Uniform wants to broaden its charter to ensure its continued existence. In its show guide this year it talked of being about "more than just Unix, more than just Open Systems...". It thinks it can get Microsoft, a no-show this year along with Sun Microsystems Inc, Oracle and Sybase (UX No 529), to take a booth next year when it returns to San Francisco from a respite in Dallas.

## PEACOCK TAKES AIX, SHOWS 120MHZ 601 PROTOTYPE, WAITS FOR APPS

One of the few European PC manufacturers with a PowerPC presence at CeBit the week before last was Peacock AG of Wunnenberg Haaren. The company had two machines on its stand - both based on the PowerPC601. One machine was a 120MHz 601 prototype, the other a 66MHz production box, dubbed the Powerserver 9164. Peacock has cut a deal to take boards from IBM and the Powerserver can come pre-loaded with AIX. But according to the company's assistant director of systems, Christof Basener, it is Windows NT applications that are needed to sell the product. "You need the native running applications, and that is what we are waiting for - this is why no one but Apple could sell PowerPC-based machines ... now we have some applications, mainly in areas like DTP and CAD, but when we say we need more apps, in Germany, this means Microsoft Office." Basener jovially suggested that we "change the subject" when asked how many, or for how long, the Powerserver has been shipping. Indeed one of his stand team told us the next day at the show that the price of the server had yet to be fixed, and would be announced in the next month or two. However, Basener himself suggested prices in the DM20,000 range. Both agreed, however, that the PowerPC machines would initially cost more than equivalent Pentium servers.

## POOR Q4 SPOILS UB'S SPIN-OUT PLANS

In the purely unsubstantiated rumour department, we hear that former Unix chief Roel Pieper has hit on hard times over at UB Networks, which he was brought into to turn around. Both Roel and Tandem Computers Inc, which owns it, wants to spin it out but can't now because of a lousy fourth quarter. The IPO boys reportedly won't touch it for another two quarters. Meanwhile, Roel, who'd really have to stay with UB for a year after it goes public to get his money out, is reportedly getting rushed by AT&T GIS to replace President Jerre Stead, who went to Legent to make his fortune, and Novell CEO Bob Frankenberg has days, so the story goes, where he'd like Roel to come back and take over Unix again. Maybe Frankenberg has days where he'd like to dump UnixWare completely - or so some speculators think.

## NOW MIPS REVEALS ITS CHIP ROADMAP

Mips Technologies, the chip arm of Silicon Graphics Corp, is now showing around a roadmap of its future microprocessor releases, divided into high-end, desktop and microcontroller portions. The R4400 high-end moves to the R10000 later this year, and will be followed in 1998 by the H1. The desktop 4600/4700 Orion family will evolve to the D1 in 1996, and D2 in 1998. The low-end 4200 moves up to the C1 later this year, but beyond that, the requirements of the consumer market are more hazy, and Mips is still considering just what will be required. It expects volumes to jump massively as Sony and Nintendo products begin to kick in soon. More details next week.

## ORACLE SIMPLIFIES CDE 2.0, SPLITS IN TWO

Oracle, in a move to address complaints that its Cooperative Development Environment 2.0 was too complicated and expensive, has split the tool apart and created two separate products. The two new tools Designer/2000 and Developer/2000 are, according to Oracle, supposed to bring high-end programming features to Windows developers - a market that the firm is eager to seed with tools. Developer/2000 is claimed to build on Oracle's existing forms, graphics and report technology. This new version will enable users to apply drag and drop application partitioning, automate software distribution, and include full support for Microsoft's OLE to create applications for anything from workgroups to several thousand users. This part of CDE, as was, is essentially front end application development. Designer/2000, meanwhile, is pitched as the firm's low priced application design system. It includes system analysis, software design, code generation and business process reengineering. These two new revamped products go on sale from April 1st. Developer/2000 comes with support for Windows, Motif and Mac environments and character-based editions will follow later in the year. Designer/2000 will ship for Windows this month.

## ELEVEN UP ON UNIX 93 BRAND, NONE FOR SPEC 1170 YET

As of last week, X/Open Co Ltd had secured eleven licensees for its Unix brand, though all of them are for the Unix 93 specification and not the Unix 95 (Spec 1170) level. They are Amdahl, AT&T GIS, Bull, DEC, HP, IBM, Novell, SCO, SNI and Sun. Vendors we asked said they were waiting for the final test suite technology from X/Open before they can move to Unix 95. Not true says X/Open, which released its final testing specifications at the end of last month. For most vendors, full Spec 1170 compliance requires a full operating system rev and, therefore, integration into their respective product release cycles. Vendors with Spec 1170 Unix licences from X/Open Co Ltd will be able to use the organisation's brand for Common Desktop Environment products at no extra charge, although the CDE spec is separate from Spec 1170 and royalties agreements will be required on all other branded implementations. X/Open will review future CDE enhancements out of the Open Software Foundation CDE PST for inclusion in the brand. Although recommendations from X/Open's desktop requirement group have already been incorporated into the initial PST draft - the two organisations have previously agreed to harmonise their requirements and feedback processes - X/Open sends a warning to vendors that "the real needs of users need to be taken into account". Even when CDE progresses beyond ToolTalk inter-application and service messaging, CDE 1.0 branded implementations will be upwardly compatible, according to X/Open.

### X/OPEN DESKTOP GROUP HAS TO BIDE ITS TIME

Although its Spec 1170 Unix work has consumed the major portion of X/Open Co Ltd's resources lately, it has other projects on the go which are equally significant, including the desktop requirements workgroup which is seeking to specify common mechanisms for data exchange and windowing across Unix, Windows, Mac and other environments. X/Open says it knows what it wants to specify, and that there are few technical impediments vendors would need to overcome. However, considering the fraught nature of interoperability issues, there's a lack of political will, and in some cases open indifference. X/Open admits it can bide its time until market conditions create the appropriate atmosphere for its requirements to be used. It's nevertheless trying to take some of the political heat out of issue by presenting the solution at the server level, not at the sensitive front-end. As well as specifying stuff like common data definitions of compound documents so that data can be cut and pasted between documents, graphics and drawing in any application and common mail server operations, the desktop group - of which Microsoft Corp has at some times (though not currently) been a member - envisages for example an application asking a class library on the server how it should put up a window on another screen. X/Open says its difficulty lies in extending specification branding to multiple relationships where common agreement is required to solve potentially conflicting operations and services.

### COMMON DOCUMENT PROJECT MOVES INTO GEAR

Other X/Open work includes a common document project to which HP, IBM, Novell, OSF and Sun have already subscribed, that'll deliver standard, branded documentation and product implementations either standalone or integrated into other company documentation. The project's using Standardised General Markup Language initially, with other formats likely. Its first implementation is the SGML documentation for Spec 1170 which is available on CD-ROM with Electronic Book Technology Inc's Dynatext display tool for all major Unixes, Windows, and Mac along with the GoSolo book describing Spec 1170 for \$70 from Prentice Hall. X/Open has already talked to the Davenport group, which is working on common document formats and may take Davenport specification snapshots for use in its project.

### ESKER UPGRADES EMULATION PACKAGE

French PC-to-Unix house Esker SA, Lyon, has upgraded its Tun Plus TCP/IP and emulation package for accessing network Unix applications from PCs. Tun Plus 7.3. As well as DLL compatibility, it comes with NFS support for VxD 32-bit disk and file access mode (for Windows95 support), Uuencode and Mime protocol support, dial-up PPP and SLIP support, drag and drop FTP for Windows. Prices are from \$345 per PC. Esker's also won Spec 1170 house Mortice kern Systems Inc, Waterloo, Ontario, for parts of its Tun TCP software.

## UNIX "IS FREEDOM," THUNDERS SGI BOSS

Whilst most vendors at UniForum last week were openly publicising plans to embrace Windows NT, Silicon Graphics Inc chairman and CEO Ed McCracken lashed out at the current fashion for writing Unix off as an interesting diversion until Microsoft gets it NT act together. "Unix," argued McCracken, "provides us with the freedom to innovate and compete. NT sales, despite its hype, are only a fraction of the predictions." SGI, Sun and HP Unix sales are all growing strongly, precisely because the Unix business model is resilient and supports innovation, he said. Unix "sometimes equals chaos", he admitted, "But it's better than cattle-car commodity products". Moreover SGI, McCracken thundered "Does not support NT and is not doing any NT development on SGI boxes." Open systems makes a difference he said, "It's depressing going to events like Esther Dyson's PC Forum and listening to the industry wondering what Microsoft could do for, or to them."

### AUSPEX PICKS BULL'S POWERPC

Santa Clara, California-based server builder Auspex Systems Inc, which currently uses the Sparc RISC in its servers, but has been planning to move to the PowerPC even after IBM Corp's OEM agreement to implement Auspex technology on RS/6000s was terminated, has now brought its plans to fruition, and has chosen as its PowerPC partner Compagnie des Machines Bull SA. The two are to develop and market a new high-performance data server based on Bull's Escala symmetric multiprocessing PowerPC AIX servers and the Auspex Functional Multiprocessing architecture. The new Escala-based server will be sold by Auspex as part of its NetServer family, and will run IBM's AIX version of Unix. Bull will provide both the current Sparc-based and new generation PowerPC-based NetServer products to users in its major European markets. No dates were given for when the new Escala systems will be ready.

### BULL/MOTOROLA PCI BUS DUE IN JUNE, MISSISSIPPI DUE LATER IN YEAR

OEM versions of the PCI bus technology that Compagnie des Machines Bull SA and Motorola Inc are developing for use in their current and future PowerPC systems will be ready in June, with general availability set for October. Bull will be ready to announce PCI versions of their currently MCA-only SMP Escalas in the first quarter of next year. Bull has no agreement with its major OEM, IBM Corp on PCI. As expected, Bull was showing four-way PowerPC 604 and eight-way 601 configurations of its PowerScale Escala SMP boxes running AIX 4.1.2 at UniForum last week. It achieved Unix 93 branding for its AIX implementation from X/Open Co Ltd during the show. Bull, which hopes eventually to offer Solaris, Windows NT and NetWare alongside AIX across its PowerPC systems says it'll have an engineering release of Solaris up on a uniprocessor Escala in June. While Escalas will likely evolve beyond eight-ways over time, later this year Bull will introduce the first cut of its Mississippi clustering technology which will support up to eight Escalas over FDDI. In 1996, Bull will swap out FDDI in favour of its 2Gb per second ISL interconnect. Bull is seeking development partners for ISL, which is now going into pilot sites. Meantime, Apertus Technologies Inc's Express Unix-to-SNA communications software will be up on Escala from next month.

### KODAK SIGNS UP ANOTHER \$250M SPARCS

Sun Microsystems Inc has won a further commitment from Eastman Kodak Co, which is to purchase up to \$250m of Sun kit over five years in an extension of their existing arrangement. The two will also co-develop technologies for distributing images over the net. Kodak already uses Sparcstations for getting images over into its Photo CD system which stores photographs and images on CD for digital editing and use in documents. Sun makes Internet access boxes and Kodak is trying to lever its technologies for distribution across the net. Sun has licensed Kodak colour management technology for Solaris which preserves an images colour from input into a network through to outputs.

### CRAYSOFT ENHANCES NQE

Cray Research Inc's CraySoft unit has a new version of its NQE Network Queuing Environment, the batch processing and automatic load balancing software originally developed for its supercomputer line. NQE 2.0 includes a new job dependency facility and a Mosaic interface allowing PCs and Macs to access NQE services. It has APIs for customising job status and load balancing, enhanced security and more data objects. A Unix version is priced from \$2,900 for a 10-user network licence.

### AT&T TO RE-BRAND HIGH-END 3000s, READIES 3700 PARALLEL TECHNOLOGY

Fearing that its high-end systems just don't have a sexy enough ring to them, and eager to escape from the mess it has made of its 3700/Teradata parallel strategy at the very high-end, AT&T GIS is ~~going to give its System 3450, 3500 and 3600 lines a brand name~~ and marketing facelift in June. The rest of the line, the 3100, 3200, 3300 and 3400s are already known as Globalyst. As well as new Pentium (P6-ready) boxes throughout lines, AT&T will also finally unveil its long-promised BYnet parallel interconnect technology for systems that can string hundreds or thousands of processor units together. The interconnect, which AT&T promised would be fully operational by June with boxes to follow (UX No 511), is the basis of what was to have been the 3700 that was also supposed to accommodate users of its Teradata DBC/1012 back-end database engine. The company also plans to extend upward the clustering software that currently enables up to four 3500 nodes - each with from one to 16 CPUs - to be to be combined. AT&T puts the 1,400 3500s it says it shipped last year up against HP's T500 and Sun's SS2000 sales record. It says it also got 175 high-end 3600s away last year with some 400 now installed in total, not including the DBC systems. Still cautious about its SuperNos involvement, AT&T GIS is nevertheless moving ahead with its UnixWare interoperability plans, expecting to have all UnixWare APIs up on its MP-RAS Unix by the summer. It doesn't have a bundled implementation of the Common Desktop Environment in its plan this year. Meanwhile, the firm is giving its Top End OLTP environment a shot in the arm by offering users a bundle of development tools and services designed to get applications up and running quickly. The Top End add-on, dubbed Tempo C/S, includes Powersoft, Four Seasons and Tangent International tools, plus 10 days consulting and prototyping.

### TRITEAL MOPS-UP AS VENDORS DOLLY OVER CDE RELEASES

Whilst the Common Desktop Environment developers struggle to dolly-up new versions of their operating systems incorporating CDE's three million lines of code - *see front page* - Carlsbad, California-based TriTeal Corp is sweeping up existing, legacy and other business from the Unix vendor community with TED, its TriTeal Enterprise Desktop implementation of early CDE snapshots. It has, or will deliver implementations for, HP-UX 9.\* (next quarter), AIX 3.2.5 (now), UnixWare 2.0 (in July), SunOS 4.1.3 and Solaris 2 (now, with OpenLook migration tools), Irix 5.3, AT&T MP-RAS (next quarter) and Sinix 5.3 (third quarter). TED is priced at \$425. TriTeal is discussing a further Sinix bundling deal with Siemens Nixdorf Informationssysteme AG, and expects to net other bundling agreements. It's also won support from a range of X terminal vendors. HP will resell TED as a local client on its X terminals from the third quarter. Network Computing Devices Inc is OEMing the TED client and reselling both TED and TriTeal's VUE implementation. NCD expects to license NCDware technologies for inclusion in future TED implementations and will ship X terminals with TED in the fourth quarter, betas sooner. Tektronix will OEM the TED client on its X terminals from the third quarter and resell TriTeal's host-based version. IBM will make TED available on its Xstations.

### NOW BLACK & WHITE TEAMS UIM GUI BUILDER WITH ORBIX

Black and White Software Inc, based in Campbell, California which only last week was integrating Visual Edge Ltd's Uim/X GUI-builder with Fujitsu Ltd's Regatta workflow management software, has done the same for Dublin firm Iona Technologies Ltd's Orbix ORB, spawning Uim/Orbix. It has three core components, the server builder, application builder and Object Request Broker. The server builder supports development of applications which can be placed in object or data repositories. Interface Definition Language (IDL) can be developed within Uim/Orbix or imported from outside. The application builder provides for the development of client applications which interoperate with CORBA compliant servers. A visual server browser allows developers to see which servers are available, and what operations and attributes support the interface. The ORB mediates between the client and server programs. It's up on Solaris with SunOS, HP-UX and AIX versions to follow.

### TED DESKTOP TO INCLUDE BUNDLED PC X SERVER AND WINDD

The TriTeal Enterprise Desktop - *see front page, and story, this page* - includes the Carlsbad, California company's graphical workspace manager that'll also feature in other vendors' Common Desktop Environment implementations, ~~binding extensions, support for multi-~~ multiple versions of the CDE front panel and local client support for X terminals and PC X servers. In many respects TriTeal has jumped nearly as far ahead with TED as the founding developers will reach with CDE Next. The company is already bringing third party applications and services to TED and claims to have ISVs queuing up to get their software bundled with it. Their rationale, argues TriTeal, is that whatever gets bundled with TED will end up as a standard Unix desktop component, and it's quite happy to take a percentage in return for providing then with exposure. TriTeal has lined-up Andataco's Xpress-Fax networked fax software (already bundled with the Sun TED implementation), a NetScape web browser, video conferencing (though it hasn't decided which of several competing solutions it'll license) and shared X whiteboards. Second generation TED products are due in the third quarter when TriTeal's implementation of the CDE 1.0 code also ships. They will include a bundled PC X server that'll put a full-screen, integrated CDE plane up on Windows PCs. Initially that will include drag and drop file functionality such as allowing Windows files to be dropped on to the CDE print icon. Further integration is promised via work it's doing on X host code. TriTeal will also offer TED with the Tektronix WinDD mechanism derived from multi-user Windows NT company Citrix Systems Inc software that'll allow X users to open Windows sessions in a CDE window. The deal for a secure TED was signed last week. TriTeal licensed Common Desktop Environment (with re-licence rights) from the CDE developers free of charge. In return it has to license back its enhancements, plus other co-engineering, development marketing and distribution services back to the developers free of charge through their Open Software Foundation PST. HP, IBM and Novell have each licensed TriTeal's source implementations back for their own CDE 1.0 sample versions. Only SunSoft of the developers has created its own CDE implementation, also licensing that on to DEC.

### STEVE CHEN: FROM SUPERCOMPUTERS TO SMP UNIXWARE BOXES

Supercomputing International, the Steve Chen venture that had the rug pulled out from under it by IBM Corp when it failed to produce the big supercomputers it promised, is now off creating a standard eight-way Intel Corp machine, apparently specified to take P6s, that he's currently planning to send out bearing UnixWare. We can only conclude that Steve must glory in treading the razor's edge or maybe he hasn't noticed that there's few applicatins for UnixWare in this category. Certainly it's last on the list at all the database houses.

### AT&T SETS RITCHIE DEMOING PLAN 9

Unix saint Dennis Ritchie was pulled out of his AT&T Bell Labs ivory tower, forced on to a plane and set to doing booth duty last week so the UniForum crowd could vet his new-fangled Plan 9 scheme. Ritchie describes the thing, which gets its name from an old B movie, as Unix as it would be built today, informed by distributed client/server architecture. (Needless to say, it is not Unix code.) AT&T commercial types - who, some joke, might be well past retirement before this thing ever gets launched - are trying to figure out what to do with it and were testing the waters as to what non-commercial R&D sites might pay for a CD. Ritchie of course wants to give it away. Paul Fillinich, who's shepherding it, thinks it ought to cost something. Estimates range from \$50 to \$500.

### TANDEM ADDS PARALLEL SOFTWARE

Tandem Computers Inc has a distributed lock manager, Oracle parallel server and disaster recovery due up on its Integrity NR re-badged Silicon Graphics Inc Challenge servers. Tandem's HATS high-availability clustering middleware, already up on NR, won't appear on its home-grown FT Mips-based Unix boxes for a year or 18 months, some time after the SMP versions are finally released towards the end of the year. Tandem will extend HATS with a single-system image that'll cluster eight or 16 nodes, up from four now. Spec 1170 branding for Tandem Unix is a year or more away, the company says.

## QUADRAL MAY RESCUE THE BANKRUPT STERN COMPUTING

And Sabeg's Compagnie des Signaux SA, the frustrated suitor for 40% of Compagnie des Machines Bull SA, is one of several interests negotiating to take over Lyon-based Advanced Computer Research Institute S.A.R.L. (ACRI), which was founded by former Bull chief executive Jacques Stern to create a European massively parallel super-computer using Digital Equipment Corp's Alpha RISC. ACRI, and its holding company, Stern Computing SA, went into liquidation on February 25. A spokeswoman for Compagnie des Signaux said negotiations were under way and that an announcement could be expected this Tuesday. A report in *Les Echos* last Wednesday said Compagnie des Signaux would be the industrial operator of a new company that would use ACRI's parallel technology in several areas - information superhighway, application development for the telecommunications industry, systems integration and on-board computers for military equipment. The new company would be capitalised at some \$7m with Compagnie des Signaux putting up 57% and the 49% state-owned Defense Conseil International SA putting up the other 43%; it would recall about a third of ACRI's 150 employees. Both the potential new owners have similar interests in the defence market. Compagnie des Signaux is an industrial and military electronics firm with annual sales of some \$400m, and is held 42% by Quadral SA. Quadral was frustrated recently in its attempt to buy 40% of Bull with AT&T Corp. *Les Echos* indicated that a group of ACRI managers had opened negotiations to have DEC take over their activity, but said that a Defence Ministry source indicated that the US company was interested only in "taking over the research already financed by France and Europe, not in taking on any personnel. It won't happen."

## IBM PORTABLE SET TO SHIP WITH 100MHz 603E PROCESSOR

IBM Corp's planned 603-based Power Personal personal lap-top was at CeBIT, or rather, the developer's Portable System was. The system shipping to developers costs them around \$6,000 and comes with a 66MHz 603. However, loitering about the stand, we discovered that the finished article should cost rather less: around the same as IBM's other ThinkPads, in fact. It will also be fitted with a 100MHz 603E processor. Like the iAPX-86-based ThinkPads, it's certainly a good looking box, twin speakers sit on either side of the space-bar, and a tiny camera sits atop the flip-up screen, designed for video-conferencing work. IBM says that the developer's model offers "up to five hours" of battery life, depending on usage. How that changes with a 100MHz 603E on board remains to be seen, but presumably the processor speed will be software-switchable. Presumably too, the final, end-user machines will have less RAM and disk capacity - the developer's lap-tops come with 810Mb disks and 24Mb or 32Mb of RAM, for the Windows NT or AIX versions respectively. RAM is expandable to 80Mb, and there is a 680Mb CD-ROM built into the front, as well as PCMCIA expansion slots. The only thing that you have to plug in internally is the floppy disk drive. No update on when the end-user machines will ship was forthcoming, but if they really are going to use 603Es, it can't be that soon. Alarming, for OS/2 aficionados, neither the laptop nor the developers' machines are yet shipping with the operating system - AIX or Windows NT are the only alternatives you get, as yet.

## BOLT, BERANEK REVITALISES BUTTERFLIES WITH POWERPC BOARDS

Although the Cambridge-based Bolt, Beranek & Newman Inc scrapped development of the next generation Butterfly machine and closed down its BBN Advanced Computers unit way back in 1991, it has kept faith with users of the massively parallel 88000 RISC-based machines, and has come up with an upgrade board to turn TC2000 machines into TC2001s and add enhanced real-time working. The board uses two PowerPC 604 processors, and upgrading is a board swap-out. The Butterfly TC2001 enables the user to work in the Unix development environment in one cluster of the machine, while running real-time applications concurrently in another cluster within the same machine. The new Butterfly has twice the switch capacity of its predecessor, and a 64-processor machine has over 7Gb of shared memory and aggregate input-output and memory bandwidth of 2.2Gb per second. The new system will be in beta test in June and will be available for general shipment in September, the firm said.

## TAOS OPERATING SYSTEM UP ON POWERPC

Super-skinny operating system king Tao Systems Ltd of London was at CeBIT a few weeks ago showing release 1.28 of the Taos distributed operating system running on the PowerPC, and saying that version 1.29, due in a few months, will support OpenFirmware-compliant PReP systems, with a version for the Macintosh set to follow early this year. For those who are unfamiliar with Taos, it sounds like an impossible dream: an operating system that runs across heterogeneous networks of processors, does so blindingly fast, and takes up about as much memory as 8-bit CP/M. Moreover applications do not need to be recompiled to run on a new processor. It gets stranger.

### Virtual processors

The secret to the operating system's processor-independence is the fact that Taos applications, and indeed the operating system itself, are compiled into code for a 'Virtual Processor'. This Virtual Processor code is shuttled to the processor on which it is to run, and is translated on the fly into that processor's native binary code. It sounds as if it should be a deathly slow process, but practice shows that in fact Taos is very fast indeed - currently the operating system is picking up interest from games, set-top box and telecommunications companies. In addition, the Taos designers boast that the only code ever loaded into memory is code that will be executed, and the whole thing is executed as a fine-grained series of objects. It makes the question 'how big is the operating system' virtually meaningless, since the answer is always 'exactly as big as it needs to be'. The operating system core, however takes up about 10Kb. Implementing Taos for a new processor entails writing a new translator to convert Virtual Processor code to the native binary. Currently six implementations are completed and available: Transputer; native Pentium; PowerPC 601 and 603; Advanced RISC Machines Ltd ARM; Mips Technologies Inc R3000 and Hitachi Ltd's SH7000 processor - the intellectual property remains with Tao, but this implementation was paid for by Hitachi, whose proprietary RISC turns up in Sega Enterprises Ltd's games machines. Three more: MIPS R4000, Alpha AXP and Motorola 68000, are under way. It took five man-weeks to get the initial 601 translator up and running, says Francis Charig, who heads Tao Systems. The subsequent 603 variant took only a couple of days. Currently, version 1.28 does not boot PowerPC Reference Platform machines, so the PowerPC has to sit on an expansion board in something such as an iAPX-86-based personal computer. However, as previously mentioned, the operating system is scheduled to become PReP-compliant in the next release. The Macintosh version is, not surprisingly, more problematic, since the team has to negotiate the maze of Apple Computer Inc's proprietary subsystems. As we've reported in the past, quite a few freeware Unix initiatives have foundered on this particular rock. However the team is still confident that Taos will be running on Macs by the end of the year. For end-users, Mac Taos may well be bundled with particular applications, and would probably be invisible to users (in much the same way that Doom on the iAPX-86 personal computer comes with its own operating system). Developers will get a more conventional operating system environment.

### Smoke and mirrors

When we first saw Taos back in 1993, we were faced with a stark choice - was it a work of genius, or was it all smoke and mirrors? A couple of years later, exhibiting by invitation on the Motorola Inc stand, Francis Charig still can't name the large Japanese computer, European telecommunications companies or US set-top box manufacturers that he says are so keen to use the operating system, since they demand confidentiality. Still, with around 40 full-timers developing the system, and a turnover of \$20m last year (up from approximately \$10 the year before) we're confident that this is still one of the most exciting (and more importantly, practical) operating system advances around. As for Charig and his team, well the main worry that they expressed when we talked to them this time was that Taos might not scale very well beyond 1.93m - that's million - processors! *Chris Rose.*

## SCOPUS EXTENDS CUSTOMER SUPPORT SYSTEM ACROSS MULTIPLE ORGANISATIONS

Scopus Technology Inc is extending its customer support software for use across multiple sites and between different organisations in two stages, beginning with Scopus Extended Enterprise One (EE1), due this week. Claiming the new release leap-frogs competitors like Vantive Corp and Clarify Corp, which provide "inside the enterprise", the Emeryville, California-based company says EE1, and EE2, which follows in the fourth quarter, will provide a means for organisations to link partners, outsourcing vendors, resellers and field staff into a single customer support and information network. It hopes that what it's offering will help bring about the end of those infuriating technical support calls where the frustrated customer can often be passed around different parts of an organisation, racking up frightening long distance call charges, in search of a solution and then end up with several different answers to the same question. Moreover, Scopus sees EE1 and EE2 as the way to offer integrated customer support on products that are increasingly multi-sourced. It cites the example of a PDA that could be built with Sony hardware, run General Magic software and use AT&T communications. A customer shouldn't have to start calling each vendor to get a problem solved, it argues.

### Remote database replication

Scopus' existing SupportTeam, SalesTeam and technology employs an Oracle or Sybase relational database and a search engine that locates likely solutions to a customer's problems, directing calls to the most appropriate support technician, along with all of that customer's information. EE1 adds remote access and remote database replication to SalesTeam and SupportTeam. Scopus RemoteTeam enables a remote site to act as a local client by accessing the central customer support database over e-mail. RemoteTeam sites can fill in the same customer query forms as local sites and send them as attached e-mail documents to the server, where they are converted, like others generated locally, into SQL statements that update customer information records and interrogate the database. A new WorldTeam module uses Scopus' own replication technology to update all other participating databases with new customer and product information over WANs.

### Sub-sites

With EE2 later in the year, Scopus will enable multiple sites to act as full customer support nodes. A new Enterprise Server core will provide event and time-based synchronous replication over e-mail (rather than WANs) to multiple, remote sites, and update all disconnected nomadic databases automatically when they come back on line. A cut-down version called SiteManager - effectively Scopus Lite - comes with an integrated SQL database and a plug-and-play installation process for getting additional sub-sites administered by the central central server up and running as the support network expands beyond a single organisation. EE2 will also include a new version of RemoteTeam that'll support access from disconnected or nomadic database clients and other clients with no local storage facilities.

### Microsoft

EE1 is out at the end of the month; RemoteTeam costs \$9,000 for a 50-user server module plus \$300 for each supported client. WorldTeam is priced from \$20,000 per server. The company is opening a European HQ outside Paris to which its existing UK unit will report in its bid to shift its revenue base, currently split 85% US and 15% elsewhere, to 60% US and 40% worldwide. The company is promising an announcement on Microsoft Corp Windows NT and an SQL Server95 strategy in 30 days. The company has bagged Norwood, Massachusetts-based software support company Corporate Software Inc and US reseller MicroAge, Tempe, Arizona, as initial EE1 wins. It claims 150 customers and 15,000 users worldwide for its existing lines. Scopus has 110 staff and claims a 250% annual growth rate with 14 profitable quarters behind it. IDC sees the customer support systems market growing from \$185m to \$500m by 1998.

## FOUR SEASONS' SUPERNOVA 5.0 PROVIDES MULTIPLE TARGETS FROM SINGLE CODE SET

Edison, New Jersey-based Four Seasons Software Inc has launched version 5.0 of its Supernova Enterprise 4GL, an application development tool the company claims uniquely enables developers to run application code on different systems without modification or recompilation of code for target platforms. Supernova can reassign code to different systems either by user intervention or from within the application. Application partitioning features enable the user to decide where to install the application (client-only, server-only, or partitioned) along with forward and reverse distribution. Remote loading and purging of partitions and optimised compressed and encrypted communication for logic and data are featured. Because Supernova code runs unmodified on all supported platforms the application developer or system manager doesn't need to decide which target systems various partitions of an application will be processed, the company claims. Prices go from \$1,000 to \$6,000 per developer in May. Supernova is up on most Unixes, Windows 3.1, NT and OpenVMS with an OS/2 version in the wings.

## MAGNA REVS COBOL OLTP SYSTEM, OEM DEALS, PLANS TOP-END IMPLEMENTATION

New York City-based Magna Software Corp is planning to rev its Magna X Cobol OLTP application development environment to release 2.1, the version it was showing off at UniForum last week. It'll have the Transarc Corp Encina version generally available next month. The company's readying a slew of other additions to Magna X and has a broad bunch of new industry relationships lined up. Currently Magna provides Cobol-based OLTP application development across CICS, Tuxedo and Encina using its Cobol/English-language like Extended Programming Language, XPL. It's roping-in other platforms and has agreements all but wrapped with Unisys Corp to extend Magna X on to Unisys' A and 2200 series mainframe TP environments. Unisys is already moving Magna X on to its U series Unix boxes. Magna's got other proprietary systems in sight too, including IBM IMS and DEC VAXes. Tandem Computers Inc wants its to put Magna X up on its MPP Himalayas under Non-Stop and on its Unix-based Integrity FT and NR lines. Magna plans to land the third major Unix OLTP environment, AT&T GIS' Top End, in the summer, through an agreement with OLTP porting house Independence Technologies Inc, Fremont, California, with which Magna already has a deal for Tuxedo. Meantime, this week or next, Boston, Massachusetts-based Open Environment Inc will announce it's chosen Magna to provide the server application generation component of its Encompass DCE and TCP/IP-based application development environment. Open Environment may well change the Magna X name under the OEM agreement. Magna is set to add PowerBuilder and Oracle Cooperative Development Environment versions of its "Wizard" client environment to the Visual Basic system it already offers. Magna's promised Solaris port is on the way. Magna claims its first major European success at an Austrian social security department in Vienna.

## SUNSOFT ADDS MORE SPRING TO SOLARIS - MICROSECOND INTER-PROCESS COMMS

SunSoft Inc will add another piece of technology from its hush, hush, Spring project to the next release of Solaris as Spring Doors, a low-level Inter Process Communication system that reduces the time that services (and objects) take to communicate with each other across the operating system, from milliseconds to microseconds. Spring Doors is imperative for handling the amount of traffic that will be generated by Distributed Object Environment, OpenStep and other object-based services being implemented on Solaris, says SunSoft, VP of technology development, Steve McKay. Spring Doors works at a lower-level, but will also boost the speed of SunSoft's existing ToolTalk inter-application messaging services, he says the layer that developers typically write to. Spring Doors is part of a rolling programme to integrate Spring components into Solaris. What we won't be seeing anytime soon McKay says, is a microkernel implementation of Solaris. Indeed SunSoft rejects altogether the kind of microkernel-driven multiple personality environments envisioned by IBM Corp and others. Moreover, McKay says SunSoft is already adding the kind of modular functionality to Solaris which is attributed to microkernel implementations, such as the ability to create portable device driver components. These, and many other services will be spun out of the Solaris 2.5 kernel as component services, McKay says. Meantime, the company says it isn't sure when it'll get Solaris up to full compliance with X/Open Co Ltd's Unix 95 (Spec 1170) specification. It claims to be 96% or 97% of the way there, but isn't committing to delivering full functionality even in Solaris 2.5, which is due in the autumn, saying it may have to wait for a subsequent release. It has no name change planned.

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**Tivoli Systems Inc**, Austin, Texas may be small - \$1.4m net on \$26.8m sales last year - but it is highly-rated and hugely ambitious, and with its shares, floated at \$14 soaring to \$31 at one point, and still riding high, coupled with the cash raised in the flotation, leaves it perfectly poised for an acquisition spree: "We're not going on a binge," chief executive Frank Moss told the Dow Jones Investor Network, "but over the next year or so I see us making a couple of select acquisitions" of either personal computer management desktop products or companies with technologies complementary to Tivoli's business, the chief declared.

**Silicon Graphics Inc** chairman Edward McCracken said at UniForum that he expects his company's growing presence in the entertainment industry to be responsible for 20% of overall 1995 sales.

**Cray Research Inc** last week launched the Cray J932 supercomputer, which doubles the maximum performance of its Cray J90 line of low-cost Unix systems. Cray rates the J932, which can live in an ordinary office environment, at 6.4 GFLOPS, and says it will ship next quarter at from under \$1m to \$2.6m; it has 11 orders already.

Didn't you just know the guy would become an instant hero in large parts of the industry: according to *PC Week*, one of the hot items at Esther Dyson's PC Forum in Phoenix last week was a T-shirt emblazoned with Judge Stanley Sporkin's image.

**Oracle Systems Corp** has been seeking "tighter alliances" with **Apple Computer Inc**, Oracle chief executive Larry Ellison told *Reuters*, but declined comment on whether a takeover bid for Apple was planned.

**IBM Corp** chairman Lou Gerstner got a \$2.6m bonus on top of his \$2m salary last year, stock options worth a paper profit of \$4.7m and \$7.8m in cash to cover the stock options he lost when he left Nabisco to join IBM.

**IDC** has picked up Philip Johnson, who used to be an intelligence gatherer for **Sun Microsystems Inc**, to replace Unix watcher David Smith who defected recently to the **Gartner Group**. Johnson has been named director, advanced operating environments.

How do you say naughty, naughty in German? When **Siemens Nixdorf Informationssysteme AG** rushed out its "We got Unix branding from X/Open" announcement, the first of such things (UX No 528), it implied it was talking about Unix 95. In truth, nobody's got that yet.

Bob Lewin, after a short sojourn with **PowerOpen**, the safe haven sought after bouncing from X/Open, is going to Karl Klessig's **Enterprise Solutions**, which puts front-ends on X.400 and X.500. Apparently he'll be head of marketing.

**Siemens Nixdorf** is looking to fortify its PC position, where it's done well of late, and is on the acquisition trail with visions of a **Packard Bell** or **Gateway 2000** on its mind. **AST Research** slipped through its fingers: 40% of the troubled cloner went to **Samsung Electronics**. Meanwhile, being trapped at UniForum we didn't have a chance to check out the rumor phoned in by Wall Street last week that **HP** was interested in Packard Bell.

At UniForum last week Unix educator **UniWorx Inc** was showing a prototype of Unix Systems Trivia, a board game for "wizards, wannabees and propheads". Much like the original Trivia, it's divided into six topic areas: People, Places and History of Unix, Unix Commands, Unix Shell Commands, Internet/Networking, Systems Administration and a Wild Card category. It can be played by beginners, intermediates and advanced. It's due out June 1 and will sell in the mid \$30s. It's not just a lark. UniWorx figures it'll make training easier.

**Storage Dimensions Inc**, Milpitas, California, is moving into Unix in leaps and bounds, introducing a rackmount disk and tape storage subsystem called Megaflex for Unix, NT and OS/2 it says will accommodate up to 7Tb storage. All components are hot swappable and Megaflex grows in 9Gb storage blocks, starting at a \$9,330 system. Storage Dimension has its Superflex RAID and tape storage system up on Sparc servers, promising HP-UX versions in the third quarter.

Next season's sponsor of Tottenham Hotspur Football Club in North London - chaired by **Amstrad Plc** Chairman Alan Sugar - will be **Hewlett-Packard Co**, paying £4m over four years.

Sparc-compatible builder **Tatung Science & Technology Inc** is in final negotiations with **Sun's** Sparc Technology Business for UltraSparc boards it hopes to have in its possession by the third quarter at the latest. Its aim is to have UltraSparc workstations out before year-end. It still can't get STB to licence the chipset it needs to build its own version of Sun's high-end ZX graphics subsystem, neither will Sun licence its chip sets for the low-end 24-bit 3D colour graphics system. Tatung's PowerPC boxes are due in the second half.

**Apple Computer Inc** is offering version 2.0 of its Macintosh Application environment for running Mac applications and services in an X Window under Solaris and HP-UX. MAE 2.0 supports AppleTalk, MacTCP and sound-based applications.

**IBM Corp** is putting SCO Open server on its new PC Server 320 and 720s, along with OS/2, OS/2 LAN Server, NetWare and Windows NT.

**Hewlett-Packard Co's** HP-UX 10.0 new business (developer) release was supposed to have gone out last month (UX No 524), but there's scant evidence of it being deployed anywhere. Most of the company's booth at UniForum last week was running 9.\*.

PC-to-Unix connectivity house **Locus Computing Corp** is packaging up a bundle of its PC-Interface technologies as Locus Cross-Platform Integration Toolkit for Unix, providing DOS/Windows/Mac and Unix integration using Unix as the file system. It supports AIX, SCO, UnixWare and Motorola 9000 Unices and comes with one Mac and one DOS/Windows client. The toolkit is \$255 now.

**IBM Corp** says DB2 for AIX, Informix, Oracle, Progress, Red Brick Systems and Sybase databases are now all available for AIX 4.1.

Powerbuilder is now **Sybase Inc's** core application development tool, replacing Build Momentum. The object-based Enterprise Momentum is discontinued - responsibility for modeling and app generation from models is passed to Powersoft.

Austin, Texas-based **Scientific and Engineering Software, Inc** is shipping Open Interface for SES/workbench, enabling users to create performance and systems analysis models, and dynamically interface the models with other simulation tools, performance monitors, and live system applications. SES/workbench is up on Sun, HP and IBM workstations from May, at \$37,000.

**Novell Inc** CEO Bob Frankenberg, who should be keeping pretty close tabs on such things, says 1.2m copies of Unix were delivered last year.

Dusting off the 'future of open systems' crystal ball last week were Samuel Fuller, VP corporate research at **DEC** and Denny Georg, director of **HP's**, computer systems lab. Processing power will continue to double every couple of years and object technology is still little more than hype, were the key messages. Oh, and massively parallel technology - where neither firm plays - get the big thumbs down.

We hear **IBM** has actually formed a separate development group recruited from AIX, OS/2 and Workplace teams to put the Spec 1170 APIs "Unix shadow" up on OS/2 Workplace. But no-one seems to know which division owns the group.

Bedford, Massachusetts-based **Progress Software** is readying a new component for its application development environment that allows application logic to move between the client to the server. Codenamed Roadrunner, the new software, due in the third quarter, will also include an object repository and plug and play tools.

The first conference devoted to the commercial use of very large databases (VLDB) is being held at the Sheraton New Orleans between April 23 and 26. David McGovern of **Alternative Technologies**, Richard Yevich of **RYC Inc** and Dr Philip Neches of **AT&T** keynote. Call +1 415-905-2310 for details.

Interesting choice of haulage firm **Hewlett-Packard Co** has made for moving its booth and kit from show to show: the big black truck we saw outside UniForum last week was operated by Legacy Transport Services Inc.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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29 MAR. 1995

Number 531

London, March 27-31 1995

## HP PRESSES NEW PA-7200 K-CLASS SMP SERVERS INTO COMMERCIAL/TECHNICAL USE

Hewlett-Packard Co this week begins to lever next generation processor and operating system technologies into its Unix business, beginning with a new K-Class server in its HP 9000 Series 800 line that accommodates up to four 100MHz Precision Architecture RISC 7200s, runs HP-UX 10.0, performs 2,616 TPC-C and is board upgradable to the forthcoming 64-bit PA-8000 at the high-end. Skipping J, the K-Class server comes in above existing dual-processor G, H and I boxes, which go to 1,403 TPC-C, and as a four-way reaches well above many configurations of the high-end one-to-12 way T500 line, which goes to 4,067 TPC-C, although it offers less expandability. Positioned first as a commercial OLTP Unix engine and AS/400 replacement, HP is also pushing the system, which does 4,300 NFS operations per second, as a full-blown technical SMP compute server for engineering and defence industry markets, sitting between its other 'technical' the uniprocessor 735/125CL and 128-way SPP1000 parallel system. HP puts the K quad up against DEC's four-way AlphaServer 2100 4/275 at 1,708 TPC-C (\$555 tpm-C), IBM's four-way RS/6000 J30 at 1,275 (\$935 tpm-C), the AS/400 320-2052 at 1,150 (\$3,086 tpm-C), Sun's eight-way SS1000E at 1,204 (\$867 tpm-C) and AT&T's 3455 at 1,479 (\$746 tpm-C). The K class uses the same Hawks SMP architecture found in HP's new 3000 SMP Kittyhawk (UX No 529) - though there are no 80MHz K servers - which has a 960Mbps processor/memory interconnect, (one or two) 128Mbps I/O channels and a 20Mbps SCSI-2 interface.

### SMP desktops later this year

The uniprocessor K100 is estimated at 270 tps - there are no TPC-C results for one, two or three processor configurations - with one 128Mbps I/O bus. It has from 32Mb to 512Mb RAM, five slots (one HP High Speed System Connect) and up to 2.3Tb disk. With two-user HP-UX 10.0, 32Mb RAM and 1Gb disk it costs from \$21,270. The one-to-four way K200, estimated at 850 tps, comes with a single 128Mbps I/O bus, 64Mb to 1Gb RAM, five slots (one HP-HSC) and up to 2.3Tb disk. \$33,650 buys a uniprocessor K200 with 64Mb RAM and 2Gb disk. The K400 has four motherboard slots and comes with dual 128Mbps I/O buses, from 128Mb to 2Gb RAM, 13 I/O slots (five HP-HSC) and 5.2Tb disk. With a single CPU, 128Mb RAM and 2Gb disk it costs \$60,350. The four-way goes from \$370,000. HP currently implements a single 100MHz 7200 (a part designed for low-cost SMP) on each motherboard. The boards can carry two CPUs and HP is looking at that configuration, but not for the current K class. A uniprocessor K100 is board upgradable to the K200, which will also accommodate 7200 iterations. The K200 is board upgradable to the K400, the only model with dual 128Mbps I/O buses, and also the route up to the 64-bit PA-8000 due this time next year. Additional CPUs are \$10,000 each. HP measures uniprocessors at 136 SPECint92 and 217 SPECfp92 - four ways at 12,171 SPECrate\_int92 and 17,709 SPECrate\_fp92. The servers are on two week's delivery from March 27th with HP-UX 10.0 new business release. The general business release for users moving up from HP-UX 9.\*, isn't out till summer. HP claims the top 20% of its Unix ISVs will have applications up on 10.0 by May. 10.0 comes with clustering support for up to four nodes - HP has further clustering for the Series 735 servers due next month which will roll over on to the K servers. It's readying 7200-based SMP desktops for later in the year. HP's Unix server business grew 45% last year and is around the same size as its workstation operation - HP's total Unix business was around \$4,426m last year according to IDC.

## UNISYS TO RECONCILE SMP LINES, OEMs MORE INTEL SERVERS

Having reorganised its Unix, Windows NT and CTOS businesses into server and PC divisions, Unisys Corp appears to have straightened out its SMP story too (UX No 518), planning to offer OEMed Intel Corp servers as its first common Unix/NT line from next month, followed by home-grown all-PCI bus technology beginning in the third quarter. Next month Unisys will announce one-to-four way P6-ready Intel Extended Express servers with 100MHz Pentiums as the UN5400 Unix line. The Windows NT group will offer the servers, running NT, to its Pathway series. The units come with four EISA, two PCI, two shared slots and 512Kb cache that will go to 1Mb later. The UN5400s come in below Unisys' current P6-ready mid-range U6000 Series 500 Pentium SMP boxes, which offer more expandability and up to 2Mb cache. The U6000/50 comes with one-to-five Intel CPUs on separate boards, the Model 80 has two-to-eight processors on dual-CPU cards. Unisys' 533Mbps Synchronous Coherent Multiprocessor bus supports mixed 60MHz, 80MHz, 90MHz, 100MHz Pentiums and future P6 arrangements in the same box. The servers currently use a 200Mbps split transaction I/O bus, based on the PCI chipset, however the company will migrate to pure PCI with the next rev of system designs. Initially Unisys will take the Model 80 to a 10-way with first deliveries in June, the same time as its first stab at clustering. Unisys will offer NT on the 50 and 80 but sees an extension of the PCI architecture due in the third quarter that'll take the series from one processor to twelve and beyond as the first SMP vehicle for Unix and NT groups. Despite its own SMP and clustering solutions pushing up into the reaches of its re-badged Sequent Symmetry 5000s Unisys says it remains committed to Sequent at the high-end but admits a reduced dependency on Sequent is a prudent course given the current climate of takeover speculation by rivals.

## UNISYS "DECOMMITTS" FROM UNIXWARE 3.0

At UniForum a couple of weeks ago, Unisys Corp, the first and, as we recall, the only hardware vendor to lend its support to UnixWare back what now seems ages ago, flashed an overhead by us pictorialising how it would standardise on something called "UnixWare 3.0" in 1997 on all its Unix platforms. Last week, however, when we put the screws to it about the seriousness of its intent, it "decommitted" - its word - faster than you can say Bob Frankenberg. Unisys feels hornswoggled by Novell's glib promises - "bragging" Unisys called it - of how a legion of ISVs and resellers would fight each other for position behind the red UnixWare pennant. All of which obviously never materialised any more than volume UnixWare sales - its figured UnixWare currently has an installed base of 70,000. Having resolved some performance issues that were bothering it, Unisys is feeling a lot more cheerful these days about its own rendition of SVR4 and this week is upgrading to version 1.3. Unless somebody can present a stronger case it's likely to stay with what it has.

## SUNSOFT OFFERS TEST DRIVE TO OBJECT FUTURE

SunSoft Inc has, as expected (UX Nos 496, 530), lifted more of the veil on its object-oriented Spring technology, which it describes as a "concept car" for experimenting with future operating system technology. Spring components feed into SunSoft's Distributed Objects Everywhere (DOE) environment and Solaris. The new Spring Research Distribution (RSD) release is being made available for Sparc systems at universities and research departments worldwide and consists of an object-oriented microkernel, distributed objects, distributed directory services, security, SMP support, multithreading and a development environment that utilises and creates reusable object components. Spring is Sun Microsystems Labs' baby and engineers there already use the technology as their day-to-day desktop and development environment. Sun's Moscow Center for Sparc Technology has been using Spring for development and testing for a year. SunSoft will add Spring's networked object environment; Interface Definition Language for defining network objects; directory services to locate and manage objects over a network; security and access control for objects; and fast IPC interprocess communication to DOE. Spring comes on CD-ROM with all binaries, IDL files, key source examples and teaching material, plus a Spring-specific version of the Workshop for C++ development environment, priced at \$75 for universities and \$750 for commercial organisations. There's more Spring to come in, well, the Spring, says Sun, meaning April.

### MAINSOFT LEVERS WINDOWS SOURCE IN MAINWIN VERSION 1.2

Mainssoft Corp says version 1.2 of its MainWin Windows-on-Unix API due next month, will be the first major release of its software to benefit from complete access to the Windows source code. The MainWin Cross Development Kit ports applications developed with Visual C++ and the Microsoft Foundation Class (MFC) libraries to Unix. It boasts increased functionality for the Microsoft Help Engine and 32-bit Microsoft Foundation Classes (MFC 3.0). The Sunnyvale, California company has a licence agreement with Microsoft enabling it to use Windows source code in its Mainwin Cross development kit (UX No 479). Only Insignia Solutions, Locus Computing and Bristol Technology Inc have the same access. Mainssoft says the new release allows developers to extend code onto Unix by copying PC help files to Unix. The Help Engine plays the file and the MainWin library supports the help API's used by the source code to link the application with the corresponding section in the help file. MFC 3.0, also part of the Mainssoft licence, is a C++ class library and part of Microsoft Visual C++ 2.0. MFC 3.0 excluding ODBC, Winsock and OLE classes has been ported to Unix and Mainssoft claims that apart from modifications needed because of differences between Microsoft and Unix compilers, its code runs up to 80,000 lines of C++ code unmodified. MainSoft has got London-based Personal Workstation Software, a former XVT shop, to distribute MainWin in the UK. MainWin is up on Solaris, SunOS, HP-UX, Irix, Digital Unix and AIX.

### WIND RIVER OFFERS NEW 680x0 PORTS

Alameda, California-based Wind River Systems has upgraded VxWorks, its real-time embedded operating system with ports to the 68060, 68LC040, and 68EC040 plus support for Posix 1003.1b real-time extensions and TCP/IP enhancements. VxWorks 5.2 is up on 68k, CPU32, i960, x86, 29k, Sparc, Mips and its own VxSim simulation environment. Full VxWorks support for PowerPC 601, 603, 604 CPU's and the 403GA embedded controller is promised for April (UX No 525), PA-RISC in the second quarter and SH7600 in the third quarter. WindView 1.0.1, its diagnostic and analysis tools, will be available for 68k, CPU32, i960, x86, 29k, Sparc, Mips, PowerPC and VxSim in the second quarter.

### BMC HAS NEW DATA MANAGEMENT SUITE

BMC Software Inc the sometime Blues Brothers apologist whose band wowed revellers at UniForum a couple of weeks back, has introduced the first two products in its data management family. MetaDesk provides automated retrieval of database structures, real-time database performance monitoring, management of control fine tuning and automated creation of SQL queries and browsing capabilities for viewing user data. MetaManage masks differences among databases when executing management tasks and offers alter and migration functions, prevents conflicting changes to database tables, supports object, group and user security actions and automated generation of scripts for executing database utilities. The two products are part of the Houston, Texas-based company's Cooperative Enterprise Management Strategy (CEMS) designed to offer data management solutions across environments with other management vendors. MetaDesk starts at \$400, MetaManage at \$1,500 and is up on Sun, HP-UX, IBM, OS/2 and Windows NT.

### UNIPRESS ADDS SANDBOXING TO CODE MAN

Unipress Software Inc's latest Source Code Manager release supports DEC Alpha/OSF1 and includes 'sandboxing' which allows the programmer to access all files in the system, or in the common 'sandbox', whilst restricting access to those files he or she is modifying. This reduces the amount of disk storage required and allows for the automatic build of new releases in the sandbox, UniPress says. Source Code Manager includes a Modification Request system and multi-site support and is also available for Solaris, HP-UX, AIX and Intel Unixes. Prices start at \$800.

### TANGIBLE MANUFACTURING LAUNCHED

Downers Grove, Illinois-based Tangible Vision Inc has released version 2.0 of its Imprimis real-time Enterprise Resource Planning/Manufacturing Execution System (ERP/MES). Key features include system administration, sales and marketing, customer order tracking and return authorisation processing and inventory; and warehouse functionality, including vendor/certification performance. It's slated for the end of the year on Sun, DEC and HP Unixes.

### POSC WANTS MORE OILMEN TO USE SPECS

Designed as a pressure group by oil companies to whip the open systems community into shape, the Petrotechnical Open Software Corporation (POSC) is now looking to get its specifications more widely adopted within its own ranks. It plans to get a group of industry experts from member companies, industry suppliers and standards organisations to come up with a set of recommendations to improve specifications for broader use in the exploration and production (E&P) business. It reckons it will have something to work with by mid May. Meanwhile, POSC has released what it describes as an 'extended and enhanced' version of its data and computer standards for E&P in the oil and gas industry, part two of its four phase view of open systems. It says that the collaboration between it and Alberta, Canada-based Public Petroleum Data Model Association (PPDM), in which the two plan to merge data models, is ongoing, although activity had been deferred because PPDM needed to attend to the immediate needs of its membership. POSC claims 108 members, with a growth last year of 25%. Membership consists of oil companies 20%; suppliers of products, services and data 70%; and government and academic organisations 10%.

### INTEGRIX TARGETS CTI, VIDEO MARKETS WITH SPARC, POWERPC PRODUCTS

As well as at the general workstation market, Integrix Inc, Newbury Park, California, is aiming its current crop of Sparc-compatible technologies and PowerPC developments at the computer-telephony integration, video server and set-top markets. Its SEC1000 SBus expander and HA1000 high-availability server with integrated SEC cards for accommodating multiple telephone lines is now out at several regional Bells. It's got a full range of one and two processor SparcStation 20 SuperSparc workstations and servers as well as one-to-four way 100MHz HyperSparc systems for compute-intensive users. The 90MHz SuperSparc and 125MHz HyperSparcs are due. It's also readying an Internet unit that'll house ISDN too. A 75MHz and 85MHz Sparcstation 5-compatible line - which will move up to 110MHz microSparcs - comes with five SBus slots. Like Tatung Science & Technology Co (UX No 530), Integrix has just come from getting UltraSparc terms and conditions from Sparc Technology Business. It estimates fourth quarter for its first UltraSparc products. It doesn't even have board-level stuff yet. Integrix is also pressing for access to Sun's high-end ZX and low-end 24-bit graphics technology, so-far denied to the compatible community. It says it would build a SparcStation 4-compatible if STB would license the stuff and says it doesn't understand why it won't. Meantime, despite pressure from STB, Integrix is using embedded PowerPCs for a set-top box aimed at video on demand markets in the Far East for which it's also writing software. The thing should be ready by year-end.

#### Ice age

Integrix says STB is more open these days under Chet Silvestri than it ever was, but feels it's still bound too tightly to SMCC's desires. It hopes the arrival of Ed Zander at SMCC will bring more of the open business practices Integrix said it experienced at SunSoft whilst Zander was in charge there. Like other vendors Integrix hopes Sun's UltraSparc can bring the compatible market out of the "ice age" it's been in lately. Sun's SuperSparc headaches meant it had to cut SparcStation prices sharply to maintain price/performance, cutting into the compatible builders' market space, Integrix explains. It gets 40% margins on peripherals like screens and cards, but its general-purpose SparcStation-compatibles have been loss-leaders for sometime, it admits, just like Sun's own SparcStation 4 line is now. Integrix, a self-described conservative, low-profile outfit reckons its got as much Sparc business as Tatung, though both are some way behind market leader Axil Workstations Inc. It estimates the compatible market at less than 10% of the overall Sparc market. The firm has 30 development and marketing staff in California, a Taiwanese office and a Chinese operation in Beijing.

### SYBASE READIES MVS CLIENT SERVER APIs

Further to its plan to have the complete Sybase System 10 client/server development environment up on IBM Corp's Spec 1170-compliant MVS OpenEdition by year-end (UX No 528), Sybase is in the meantime shipping its Open Client API and Embedded SQL/C and SQL/Cobol pre-compilers for regular MVS as part of its Enterprise Connect interoperability software. The API allows MVS applications to act as clients in client/server set-ups. There's already an Open Client API for CICS and Open Server APIs for CICS and IMS/TM. Open Client and Open Server for MVS/Open Edition are due in the first half of next year.



## SUNSOFT TARGETS NETWARE MARKET, PACKAGED SERVER SOFTWARE FOR x86

Intent on dressing-up Solaris for every conceivable industry role, SunSoft Inc is taking up where its SMCC cousins stopped with Netra, and going full tilt after the NetWare and Windows NT PC workgroup space. It's still shy of what, elsewhere, might be dubbed a 'Windows friendly' strategy, but the application and network administration server and now unbundled Netra Internet services it's repackaging as Solaris x86 Server Suite is intended to drop right in the middle of PC networks running on Intel Corp SMP boxes. x86 Server Suite is being offered in three flavours - application server, PC Network Administration Server and Internet Gateway Server. With the success of its Sparc-based Netras in mind, these horizontal solutions effectively bring the same packaged application and systems management and Internet technologies to the Intel marketplace.

### Servers

The Application Server is positioned primarily as a database platform for serving Windows clients over TCP/IP and NFS or NetWare, with the Solaris PC Protocol and PC Server services providing IPX/SPX and file and print services, all running over Solaris x86 Workgroup Server. The PC Network Administration Server includes Workgroup Server, Solaris PC-Admin services (on the server and client) and optional PC-NFS. The Internet Gateway Server bundle includes Workgroup Server Lite and Internet gateway services taken from the Sparc Netras. SunSoft points to Internet Society figures which show 18,000 Internet servers installed last year - 56% Solaris/Sparc, 44% non-Sun Unix and some VMS - bringing the total installed base up to 44,000. SunSoft estimates a further 88,000 Internet servers will ship this year bringing the installed base up to 132,000. It says 56% of them will be Solaris/Sparc solutions, 11% Intel boxes and 33% non-Sun. None of the packages includes the PC X server from AGE Logic Inc SunSoft offers for opening Unix applications through an X Window on PCs. Prices, which include Solaris x86, are \$2,000 for the Application Server, \$4,250 for the PC Network Administration Server and \$1,600 for the Internet Gateway Server.

## MOTOROLA PROPOSES DEAL WITH BULL PLUS SMALL EQUITY INVESTMENT. NEC IN FOR 17%, IPC UNDER 10%, IBM EYES 5%

The interminable saga of which companies will take stakes in Compagnie des Machines Bull SA finally seemed to have been resolved last week with *Reuters* believing that Motorola Inc will buy a 17% stake, NEC Corp will up its stake to 17% from the present 3.7%, and IBM Corp is said to be prepared to raise its stake to 5% from the present 1.8%. IPC Corp Ltd of Singapore will take a stake of under 10% later in the year. Sources told *Reuters* that agreements with the two main partners will be signed within three weeks. However Motorola later called the reports "erroneous" and told *Reuters* the figure was "too high". It says it has submitted a proposal to the French government under which it would expand its existing collaboration with Bull on PowerPC computer research and development, but with conditions. If its offer is accepted and those conditions are satisfied, it would seek to establish a PowerPC research and development joint venture activity, "which would also acquire a small equity position in Bull". Funds would be directed to these PowerPC activities, which would aid in the development of a full range of computers from high-end servers to laptop computers. Motorola would market them as OEM products and Bull would add them to its product line. Meantime, France Telecom has a direct 14% stake in Bull now with options that would bring the stake back at 17%. "IPC wants to sign a technology agreement with Bull because it is interested in the CP8 Smart Cards and microcomputer sector. But in the current stages, this company is considering taking a stake of less than 10%," a source said. The French government is obligated to cut its stake to below 50% under the conditions imposed by the European Commission when last year's latest capital injection was approved, and by selling a significant stake to an employee group, should just about manage it.

## SUNSOFT OFFERS CORBA 2 IOP CODE FREE OF CHARGE, ORB WILL GO TO BETA IN MAY

SunSoft Inc has a 10,000 line C++ source code implementation of the Inter-ORB Protocol (IOP) for connecting different object request broker implementations and is offering the thing free of charge from the Object Management Group's web site. IOP is part of OMG's Corba 2.0 Universal Network Object specification, developed by Sun and others, which Expersoft has already been playing with. Sun has compiled the code using Sparcworks for Sparc, Proworks for x86, Borland C++, GNU C++ and Visual C++ and is confident it'll run on a most operating systems. It isn't providing executables. The C++ code is in four parts: a common data representation engine; a type code interpreter to manipulate data types; the Internet IOP Engine with a partial ORB implementation; and Internet IOP-specific modules that send, receive and dispatch Internet IOP messages. SunSoft says the partial ORB implementation isn't intended to hook users on to its ORB, rather they are the pieces required to utilise IOP for development where an ORB may not exist. Users will still require a bridge mechanism to get out from an ORB to IOP and across to other ORBs for UNO compatibility. Sun's own, currently nameless ORB, goes to beta in May as a Corba 1.2 affair. It won't include the UNO bridge SunSoft's still working on, nor will it contain the ORB-to-Microsoft Corp OLE bridge it's getting from its investment in Iona Technologies Ltd. The ORB goes on general release in the Autumn at the same time as a full OpenStep implementation goes to beta. SunSoft says it hasn't decided whether the Corba 2-mandated UNO bridge will feature in the first general delivery of the ORB, but is more confident about the ORB-to-OLE bridge it says customers want now.

## LORAL TO PAY \$862M IN CASH FOR UNISYS DEFENSE SYSTEMS

Loral Corp is emerging as the most determined of the new generation of defence electronics specialists tailored for an era of much attenuated defence budgets in the developed economies, and it is Loral that has won the bidding for Unisys Corp's defence business with a cash offer of \$862m, a price that falls to about \$798m after contractual adjustments are taken into account, according to Loral. The acquisition will be anti-dilutive to Loral, immediately contributing to its earnings, the company says. It will finance the deal through its existing credit facilities. Unisys Defense Systems comprises four business units: Systems Development, building defence electronic systems, undersea systems, weather systems, radar systems, and transportation and physical security systems; Electronic Systems, making defence information systems, air traffic control systems, airborne systems, postal systems and environmental systems; Communication Systems, doing intelligence collection systems and satellite communications; and the Canadian Operations, a producer of electronic systems for naval and airborne programs. The operations employ some 8,500 people and accounted for \$1,400m of the company's total revenues of \$7,400m for 1994. The sale does not include the Federal Systems and Health Information Management business units. Proceeds will be used for investments in core businesses, working capital and possibly for the repurchase of its securities, Unisys said.

## NOW SEAGATE SNAPS UP UNIX NETWORK MANAGER NETLABS

Continuing its stated strategy of buying data management software companies, Seagate Technology Inc, Scotts Valley, California has a definitive agreement to acquire NetLabs Inc, Los Altos developer of network management software for Unix networks for an undisclosed cash sum; Seagate expects to take a one-time write-off of in-process research and development of some \$7m to \$8m this quarter as a result. NetLabs' senior management and employees will remain with Seagate after the acquisition; its flagship application is NerveCenter, a rules-based alarm service that correlates, filters and upgrades alerts to present network administrators with intelligently pre-processed information, and it also has applications that track a network's hardware and software assets, and provide graphical troubleshooting tools and system reports. Its technology has been licensed by Sun Microsystems Inc for use in its Solstice Enterprise, and comes with HP OpenView under an OEM agreement with Hewlett-Packard Co.

## OPENDOC WORLD - GALLERY OR TOOLSHOP

"Objects are a crafted art form, not a science," according to Steve Mills, IBM general manager of software solutions, opening ObjectWorld in Boston last week. The evangelising continued as Mills developed the theme of component-ware or "new age application development" where developers pick and mix technologies and users and plug and play applications. Objects may well be the software future for IBM and other companies as Mills says, but despite the rah rah there's precious little indication of whether that future might be next year or next millennium. Despite the hype they're still gallery and boutique technologies. Even Mills admits it's sometimes difficult to paint a picture of this object world for his 5,000 software engineers. But then aren't many still re-writing IBM's legacy for current technologies, let alone the future?

### Code container

In his presentation, Mills outlined how IBM will push its object curtain forward this year with OpenDoc development kits, other application development tools - including VisualAge for C++ - and educational and training services. OpenDoc will be the backplane framework for integrating and manipulating applications and services across IBM environments. Distancing the compound document architecture from Microsoft Corp's Object Linking & Embedding, Mills said OpenDoc "is not designed as an application linker. It is a different technology [from OLE] and delivers a different set of services. We do not see it displacing OLE." Indeed, OLE functionality is supported under OpenDoc. Mills describes OLE as an extension of DDE (Dynamic Data Exchange) with fixed parameters, no container structure and no object-orientation. OpenDoc in comparison has a code container structure, wrapping application components up to create re-usable objects, plus a scripting language. OLE lacks component registering and load and store facilities for reuse and maintenance. OpenDoc developer kits ship next month for OS/2, Mac and Windows clients. A summer release, called Developer Kit 2, will provide full OpenDoc integration with OS/2 Workplace. An AIX version follows later in the year - HP-UX and Solaris ports are envisaged. For use with OpenDoc IBM will ship its Workgroup add-on suite of e-mail, fax, calendar, directory and imaging applets in the summer. Workgroup will become integrated OpenDoc components over time. OpenDoc is viewed as a 1995 developer, 1996 end-user technology. The new version of IBM's VisualAge for C++ graphical programming tool comes with a Direct-to-SOM compiler for creating System Object Model components from C++; a data access builder which maps DB/2 relational data to objects; and a visualisation application construction tool with object templates that generate application code. VisualAge C++ is available for MVS and Solaris, and there's a beta version for OS/400. Object Chart, a new application design and analysis environment which uses the Rumbaugh object methodology and templates to generate object code, will follow later.

- Bento, the Apple Computer Inc object container and scripting language from which OpenDoc was created will likely form the basis of the component architecture OMG's business object special interest group is looking into. There's no technology proposal out yet.

## OPEN ENVIRONMENT TOUTS ENTERA GRAB-BAG FOR THREE-TIER DCE DEVELOPMENT

Boston, Massachusetts-based Open Environment Corp is jumping out of its Distributed Computing Environment-based toolbox and carrying the thing off to join the merry band of ISVs offering three-tier, enterprise-wide client/server application development. The company is changing its product name from Encompass to Entera, then bringing on board a raft of middleware and messaging services, including Magna Software Corp's Magna X Cobol OLTP development system (UX No 530), Apertus Technologies' messaging, ParPlace Systems Inc's Smalltalk development environment and Blyth Software Inc's application environment. Open Environment will package its second generation Entera development system as a strategy for stepping client/server environments up into the world of distributed objects, running over DCE. It admits there are still just a handful of companies doing real DCE work, and claims its solution is similar, but less proprietary, than rival offerings from the likes of Open Horizon Inc. The company says an unannounced partner, and not SunSoft Inc which also has an Encompass product, pushed it to change its product name to Entera, which is Spanish for 'entire.'

## OBJECTWORLD ROUNDUP

Dublin firm **Iona Technologies Ltd** will next month deliver on its promise of generating Corba-compliant objects automatically from OLE with an enhanced version of its Orbix object request broker called Orbix-OLE (UX No 498). GUI front-end clients using VisualBasic, PowerBuilder or Visual C++ will be able to invoke Corba objects residing on the server. Iona's IDL compiler enhancements generate hybrid OLE Automation Server/C++ Stubs which look like regular OLE Automation Server stubs to Windows. Iona has added new resellers in Paris, France - **Valtech SA** and **Ingenia SA - Software Solutions** of Texas, in Houston, and **NobleNet Inc**, Boston, Massachusetts.

As expected (*Observer No 1*), **Servio Corp**, Beaverton, Oregon, debuted a version of its GemStone 4.0 object server and database that supports Santa Ana, California-based **Digitalk Inc's** Visual Smalltalk Enterprise 3.0 development environment. Visual Smalltalk 3.0 supports three-tier application partitioning across clients and servers. The GemStone release is \$6,000 per developer - \$1,200 per user - upgrades are free.

Another **Digitalk Inc** object technology user, **Micro Focus plc**, says it'll support OpenDoc within its Object Cobol environment, allowing developers to create OpenDoc and IBM Corp System Object Model Cobol software. Micro Focus Cobol already supports Microsoft Corp OLE2, direct SOM support is expected in May.

**Logica plc's** US unit in Lexington, Massachusetts has ported DEC's ObjectBroker ORB to **Tandem Computers Inc's** NonStop Kernel and Integrity Unix platforms; all three companies will be marketing the implementation worldwide. Logica, which completed the port of DEC's **Microsoft Corp** Common Object Model-based ORB in 90 days has already won a US west coast bank for the port, which Tandem says will allow users to integrate their Tandem NonStop, Unix and PC applications under a single user interface. Logica Inc accounted for \$52m of its parent's \$350m revenues last year.

**Interactive Development Environments (IDE)**, introduced a new version of its Software Through Pictures development environment for business process re engineering called Stp for BPR. It's designed to support large development teams and uses a common, multiuser repository of system models. The repository also supports libraries of reusable business rules, application objects and database components, the company says. In addition, the tool features Object-Entity Interchange, allowing developers to share business models and components across an enterprise. IDE has integrated StP for BPR with its existing products, including support for Booch's OMT method and the firm's test case tool. Available now, the software is priced at \$30,000.

NeXTStep application developer **Athena Design Inc**, Boston, Massachusetts has ported its NeXT-based real time spreadsheet to SunSoft Solaris. The Mesa spreadsheet includes direct access to Sybase databases for import and export of information. Support for Oracle and other SQL-based relational databases are available as an additional options, the company says. Mesa includes sequential data capabilities; formula inheritance, which allows a formula to be shared by many cells while being maintained in a single place; and Mscript, a custom scripting language. Mesa for Solaris is \$200.

As expected (UX No 529) **Informix Software Inc** has turned to **Versant Object Technology Corp** to supply its object database for the Informix-NewEra application development environment. Informix engineers experimented with a range of object technologies and found Versant best in multiple platform support, distributed functionality, cache management performance, server-based query support and scalability. NewEra with the Versant repository will ship in the fourth quarter. Versant gets its object-to-relational functionality from **UniSQL Corp**, Austin.

Santa Cruz, California-based **MetaWare Inc** says it will launch its own OpenDoc parts toolkit with IBM's official release of SOM-enabled OpenDoc in the summer. The company currently markets Direct-to-Som application development kits for OS/2 and says OpenDoc technology embedded in its tools will enable developers to build SOM-compatible binaries using C++ source code, without having to write to IDL. According to MetaWare, SOM objects created using its Direct-to-SOM tool will automatically work with other SOM objects and OpenDoc parts. MetaWare expects product to ship some time in the summer.

## DEC WILL BETA CORBA-TO-COM BRIDGE IN NEW OBJECTBROKER RELEASE

As promised a year ago (UX No 470), DEC is readying a new implementation of its ObjectBroker it'll beta for the summer that'll allow developers to target Object Management Group Corba environments ~~or the Common Object Model world characterised Microsoft Object~~ Linking and Embedding. APIs will reveal underlying communications protocols, enabling ObjectBroker and OLE to make common calls - essentially Distributed Computing Environment RPCs with added functionality - a bridge mechanism will allow objects in one environment to be accessed and encapsulated from the other, and vice versa. The bridge is the basis of a Corba-to-COM interoperability mechanism proposed by DEC/Microsoft/Candle and now also supported by Computer Associates Inc and maybe fellow DCE-traveller Hewlett-Packard Co too (UX No 503). The issue is expected to be addressed by an OMG request for proposal at its meet in Cambridge, UK, this week. DEC envisages developers targeting desktop database client applications using COM - Corba ORBs for transactional applications. DEC remains firmly committed to its DCE-based ORB implementation in ObjectBroker and says it has no plans to offer the Object Management Group's IOP Inter-ORB Protocol for Corba 2 ORB-to-ORB interoperability, because no-one has asked for it yet.

## DEC HIGH-END ALPHAs IN SIGHT

On Tuesday April 11, DEC is supposed to finally wheel out its long-awaited high-end Turbo Laser, reportedly the restyled AlphaServer 8400 5/300, fitted with a PCI bus and EV5 300MHz 21164 chips, the mightiest chips going. The thing should be capable of holding 12 processors. An entry-level two-way should go for around \$300,000 though that figure wasn't firm when we heard it. There's also a Turbo Laser Lite, formerly the AlphaServer 8200 5/300, that expands from a one- to six-way and might start around \$100,000 for a uniprocessor. It's believed DEC might use the roll-out to justify its 64-bit technology, and Oracle's 64-bit database, demo'd at Decus in Anaheim, might be its proof point. The 8200 5/300, which can have six CPUs or 6Gb memory should reportedly be worth 2,000 TPS, 3.6 GFLOPS. A 1.2Gb/sec I/O will also be available in a rackmount. The 8400 5/300 will be able to handle 14Gb of memory and do over 3,000 TPS. It is believed to have sold some Turbo Lasers already and reportedly thinks it could move 300 machines in the fourth quarter. It's aiming at 3,000 in fiscal 1996, which starts in July. Believe it or not DEC is also going to be trotting out some VAX and MicroVAX replacements, said to offer a 20% improvement over predecessors, along with upgrades to its low-end 4-way AlphaServers, one of which will be built around the high-end 21164 chip. There will also be a new Alpha workstation.

## ORACLE STORMS TO MORE RECORDS AS THE SOARAWAY YEN HELPS IN ASIA

Oracle Corp, Redwood Shores, California continues to report surging sales and profits; third quarter net profits soared 50.2% at \$104.8m on turnover that jumped 49.6% at \$722.2m. Net for the nine months rose 53.5% at \$259.8m on turnover 46.2% ahead at \$1,949m. Net earnings per share rose 50% to \$0.24 in the quarter, 55% to \$0.59 in the nine months. Breaking the figures down, Oracle says latest quarter licence sales rose by 44% from a year ago, led by a 59% increase in server sales and a 65% rise in applications revenues. Service revenues rose 61% from a year earlier. Oracle Americas business rose by 48%, while Oracle Europe, Middle East and Africa posted 44% growth and Oracle Asia Pacific, including Japan, had 77% revenue gains from a year ago, where sales were helped by currency fluctuations between the dollar and the Japanese yen. For the current - fiscal fourth - quarter the company expects to achieve year-over-year growth of more than 65% in licensing revenues for its application software business, which soared 65% to \$83m in the third quarter - still a drop in the \$722m ocean of business for the company overall in the quarter. The head-count at the company was up a whopping 43% at 16,083, compared with 11,265 a year ago, but the rate of growth is now expected to start moderating. Pre-tax margins stood at 21.7% of overall sales in the third quarter, compared with 21.6% a year earlier. The company also noted that its recent use of the Internet as a new sales channel, perceived as a way of countering Microsoft Corp's formidable muscle in the retail sector, has been well received.

## PEREGRINE GRABS DB/2 BRIDGE COMPANY

Carlsbad, California-based LAN management and mainframe data access company Peregrine has put its hand in its pocket and bought Boston, Massachusetts-based Bridge Technology Inc on undisclosed terms. Bridge has database copy replication and monitoring ~~software for OS/2, AIX and HP-UX and a high performance tool for~~ extracting DB2 mainframe data and squirting .DAT, .INX and .LF files directly into DB2/2, DB2/6000 and DB2/HP-UX without the need for logging or intermediate processing and disk storage. Peregrine will put the tools into its FastLoad suite which is available for mainframes or standalone servers. Peregrine has a development office in Austin, Texas - Jack Olson is VP database development products. Further database management tools are planned.

## WORKSTATIONS: SUN STILL IN THE DRIVING SEAT, LURING ISVs TO UNIX, BUT LAGS RIVALS IN RAW PERFORMANCE

There are no values to back its study up, but market researcher Dataquest Inc says the workstation market grew some 25% in 1994, with 779,385 units shipped against 621,919 in 1993. Sun Microsystems Inc remains way ahead of the rest of the pack with a 36.2% share, or 281,877 workstations shipped. Although Sun's unit volume grew from 236,800, a 38.1% share in 1993, it lost some ground to Hewlett-Packard Co and IBM Corp which increased their unit ships by 30% and 47% respectively. HP shipped 154,222 desktop Unix boxes last year, a 19.8% share, up from 118,625 and 19.1% in 1993. IBM shipped 100,917 systems, a 12.9% market share in 1994, up from 68,531, an 11% share in 1993. DEC shipped 83,360 workstations, a 10.7% share in 1994, up from 67,402 or 10.8% last year. Silicon Graphics Inc delivered 46,370 units for a 5.9% share last year, up from 35,591 and 5.7% in 1993. Other vendors' ships totalled 112,639, or 14.5%, up from 94,970, 15.3% in 1993. The top five vendors command 86% of the market. Personal computer shipments grew 23% over the same period to around 50m units in 1994. Dataquest sees Sun's volume continuing to drive ISVs to Unix, but high-end PCs continuing to encroach at the low-end. Other analysts quoted in the *Wall Street Journal* said DEC, HP and IBM have been able to stave off the PC hordes more effectively than Sun because of their superior margin of performance over Pentium, whilst Sun low-end systems now have only a small advantage over PCs from the likes of Compaq Computer Corp.

## SET TO TOUT DEVELOPMENT INFORMATION SYSTEM

Lexington, Massachusetts-based Software Emancipation Technology Inc will be giving its ParaSet C and C++ group application development environment a complete makeover in around six week's time, with a new name, marketing and positioning strategies. The notion is to peddle its code parsing software as a complete development information system, and seek to distance itself from what it sees as two-a-penny development solutions that are shooting up left right and centre. It expects to target corporate publications such as *Business Week* and *Fortune* magazine for coverage rather than standard IT books. SET, founded by Russian emigre Vladimir Geisberg, recently hired Applix Inc VP Tom Axbey as VP marketing, Interleaf Corp executive Kevin Mosher as VP sales, and former Fastech Integration Inc manager James Antes as corporate controller. SET's technology parses code from all parts of a development project and stores the results in a database that can be accessed by other processes, including configuration management, quality assurance/testing, support, development and documentation tools. SET sees its database at the centre of software development tasks, parsing incoming code and making new revs available to other parts of the team. SET already supports FrameMaker, Atria, Soft Association and SunSoft tools and services, it's evaluating Pure Software for QA. With two rounds of VC funding totalling \$8m under its belt, the four-year-old company will head down the IPO route once it stops trailing red ink. It counts Informix amongst the 46 customers of its Parametric Model technologies, which it says creates persistent associations between software development elements, and has 45 staff. Lincoln Software distributes ParaSet in France; SET has other outlets in Germany and Japan.

### **AVALON DELIVERS LATEST ORACLE-BASED MANUFACTURING SOFTWARE SUITE**

Tucson, Arizona-based Avalon Software has kicked in with version 9 of its Avalon suite of manufacturing, distribution and financials software. Avalon is based on Oracle7 and uses Oracle Forms 4.0 Forms to deliver applications to Windows and Motif clients (UX No 517). The company says it's moved 80% of the application logic to the database, including the business rules, stored triggers and procedures, claiming improved performance by reducing network traffic and getting more of the processing done on the server. It consists of twelve modules including inventory, order entry, accounts receivable and purchasing. The architecture enables third party client applications, such as spreadsheets or data collection devices, to be integrated with Avalon 9. It claims two recent signings, including Sony Music Entertainment Inc which has taken nine of the applications. Avalon has also introduced Supply Analyst, targeted at purchasing planners, the first shipment in its Avalon Analyst line. Developed using Visual Basic, Supply Analyst is intended to reduce work involved in tracking and expediting purchase orders. Avalon plans future decision support applications developed with customers, expecting a 12-to-18 month development cycle. Avalon did \$21.2m last year, and estimates \$40m for 1995. Up on most Unices, Avalon 9 prices go from \$100,000, Supply Analyst from \$5,000.

### **AGE LOGIC TO ACQUIRE PACER SOFTWARE IN EXCHANGE OF SHARES**

San Diego-based AGE Logic Inc, specialising in desktop computer-to-Unix linking products - its X server software products are available for Windows, Windows NT, Macintosh, Power Macintosh, PowerPC, OS/2 and MS-DOS-based personal computers - is to acquire Pacer Software Inc, offering Mac-to-Unix networking software; the enlarged company will retain Pacer's Westborough, Massachusetts facility. AGE offers X Window server software and network utilities and Pacer offers terminal emulation and file server products. AGE first entered the Macintosh-to-Unix market with a technology cross-licensing and development agreement with Apple to upgrade Apple's MacX family. The deal will be a share swap but no financial details were revealed.

### **FRENCH GOVERNMENT DENIES THAT BULL STAKES OFFER HAS BEEN A COMPLETE FLOP**

All of the offers from prospective Compagnie des Machines Bull SA shareholders were in Wednesday night last week, and the government had to assert that it had received "several offers" from "various industrial groups of the first order" for stakes in the company after newspapers speculated that in the end only NEC Corp had put in a firm bid. *Les Echos* reported on Friday that IPC Corp Ltd and Sequent Computer Systems Inc had dropped out of the talks and sources close to the discussions said the state would not succeed in reducing its stake to below 50% in one go, but would launch a second tender offer for those industrial and financial investors willing to take a stake of up to 10%. The Privatisation Commission must make its choice within the next 60 days. The offer or offers submitted on Wednesday specify if the candidate is applying alone or in concert with other companies, the size of the stake envisioned and the industrial strategy. The administration of the next President of the French Republic could have a say in the choice, as the President will be elected on May 7 and the commission's choice is scheduled for May 15. But it is highly unlikely that the Socialist party will return, and neither a Jacques Chirac nor an Edouard Balladur administration would change the privatisation commission's decision. Whichever company the government chooses, it would like to get rid of at least 51% of Bull and is said to have considered several stages to achieve that goal. One scenario, says *Les Echos*, would be to appoint the shareholders officially, but wait until Bull reports its first half results before making them ante up.

### **ENCORE ASKS ITS PARENT FOR MORE CASH**

Fort Lauderdale, Florida-based Encore Computer Corp is having to go back yet again to Nippon Mining Co, which now calls itself Japan Energy Corp, for a new recapitalisation. The plan will include adding shareholder equity to improve the balance sheet and increase the company's revolving credit. Encore needs the additional money to finance its marketing of the new Infinity SP30 Intelligent Storage Processor for IBM Corp mainframes and Unix systems. Nippon Mining or Japan Energy got stuck with Encore when it bought Gould Inc, and failed in its efforts to offload the computer business at an acceptable price; it has since had to find more cash several times to avoid writing the company off altogether.

### **SOUTH KOREA PICKS AT&T GLOBAL INFO SYSTEMS AS STRATEGIC PARTNER**

AT&T Corp's AT&T Global Information Solutions has won a ringing endorsement of its Intel-with-everything computer strategy from the South Korean government. Some three years ago, Seoul embarked on a strategy to establish a national computer architecture to be used throughout the public sector, and the first name that popped up in contention was that of Unisys Corp with its A-series, but Tandem Computers Inc and AT&T Global were also in contention. Last summer, Unisys was eliminated from the bidding, and yesterday, the trade ministry told *Reuters* that AT&T Global had beaten Tandem to the contract, to be announced at a formal signing ceremony today. The mission is to create a massively parallel server with throughput of 1T-bytes per second by the end of 1997. Of the locals, Hyundai Electronics Co has dropped out but Samsung Electronics Co Ltd and Korea Computer Co are also involved in the project, budgeted at just under \$50m, of which the government is to put up half in the form of soft loans. The planned machine will be derived from AT&T Global's high-end 3600 multiprocessor, which is built of multiple Intel Corp Pentium microprocessors, and includes technology developed by the Teradata Corp acquisition. Under the deal, AT&T Global will provide South Korea with all technology necessary for the manufacture of the 3600, and the South Korean companies will have exclusive rights to sell and offer maintenance services on the machine on the domestic market, and rights to export it to about 30 other countries. The domestic market for such systems is put at \$300m a year.

### **SIEMENS-NIXDORF "WANTS US PC MAKER"**

Having bolstered the high end of its Unix line with the acquisition of Pyramid Technology Corp, Siemens Nixdorf Informationssysteme AG is looking to fortify its personal computer position, where it's done well of late, and is on the acquisition trail with visions of a US player such as Packard Bell Electronics Inc or Gateway 2000 Inc on its mind. AST Research Inc slipped through its fingers: 40% of the troubled company went to Samsung Electronics Co. Perhaps talk that Hewlett-Packard Co was interested in Packard Bell was simply crossed wires.

### **VISIONWARE LAUNCHES SQL-RETRIEVER, WINDOWS TO UNIX DATABASE BRIDGE**

Santa Cruz Operation Inc's Visionware Inc, Menlo Park, California has introduced the latest version of its Open Database Connectivity-compliant, Windows-to-Unix database bridge. SQL-Retriever 3.2, which already supports Informix, Oracle, Ingres and Interbase databases, now also supports Sybase. The company says code optimisation and caching improvements have resulted in 40% better performance than previous versions.

### **WEXTECH AND MAINSOFT MOVE WINDOWS HELP TO UNIX**

WexTech Systems of New York has teamed with MainSoft Inc, Sunnyvale, California, the company with the Windows-on-Unix application programming interface technology. The move will lead to the licensing of the Windows and Microsoft Corp Help Engine to create a Unix version of its Doc-To-Help extensions for the Windows help engine, WexTech Hyperperformance Viewer. The program, which enables users to display any standard Windows Help files on Unix, will cost between \$75 and \$100 per user.

### **\$7m RESCUE PLAN FOR ACRI**

A court in Nanterre accepted the recovery plan for Jacques Stern's Acri Advanced Computer Research Institute SARL submitted by Compagnie des Signaux SA and Defense Conseil International SA, for which the companies are planning an official announcement today, a spokeswoman said (UX No 530). Under the plan, Compagnie des Signaux will invest some \$4m while Defense Conseil, held 49.9% by the state, will invest about \$3m. Fewer than half of Acri's 120 employees - just 50 - will be retained in the new company. Defense Conseil says it is interested in ACRI's operating system rather than its hardware, but the reorganised company hopes to capitalise on the know-how of Acri's engineers to develop civil and military applications and to do some \$20m this year. Yazid Sabeg, Compagnie des Signaux's chief executive told *Les Echos* - and should be helped in reaching that goal with research contracts with France's Ministry of Defence that are said to be under negotiation.

## TALIGENT GETS COMMONPOINT UP TO SCRATCH - PLANS ONE MORE REV BEFORE RELEASE...

Taligent Inc got the final beta reference release of its CommonPoint application environment away to its investors, Apple, HP and IBM and its selected band of ISVs last week. Other developers will get to test drive the object environment over the next few weeks, the company says. It plans a final reference release in the summer. The beta comes with all APIs that feature in CommonPoint 1.0, due sometime in the second half, including 100-odd object-oriented frameworks for building applications. Application frameworks handle compound document and data translation, system service framework deal with data access and collaboration.

### Delivered beta code in January

Taligent delivered first CommonPoint beta code to investors in January, and to developers under its PEEK - partners early experience kit - programme last month. Initial PEEK code and documentation on the Taligent environment went out last June. The beta includes a real-time collaboration model allowing documents and applications to be shared and modified by multiple users across different networks. Task-centred user interface extensions provide a compound document model, and drag and drop support for multiple data types, global tool support and a 'saveless' document storage system. Data access services provide connection to Oracle, Sybase, DB2 or ODBC databases from within a CommonPoint application. CommonPoint is up on the investors' OS/2, AIX, HP-UX operating systems - and will feature on a future MacOS - Taligent will put the environment up on Windows NT and Windows 95. Applications written on one system can be deployed across all other supported platforms without rewriting. Taligent claims 100 organisations in its beta programme with the investors will adding their own ISV tracks. As well as documentation and on-line support, beta developers get a range of CommonPoint-specific, host-based and third party tools, including Taligent's CpConstructor, see below, IBM's CSet++ C++ compiler, TakeFive Software Inc's Sniff+ development environment and Object Software Technology's Look!

### ...DEBUTS FIRST DEVELOPMENT TOOL, FOR GUIs

Taligent also introduced the first in a series of planned a CommonPoint development tools last week. CpConstructor is a GUI development tool for creating application interfaces out of pre-defined and custom-built objects. The company says it allows developers to work with 'live' objects that brings application design and execution into synch. The tool includes attribute inspectors, previewers and action monitors and a persistent object archive, allowing the interface to be tested mid-way through the design cycle. The archive separates interface elements from the core application code and also provides access to CommonPoint's Unicode implementation for international markets. Developers can create, store and run different foreign language user interface front-ends for any application, meaning IVSs need only distribute a single executable. Taligent's second tool, currently known as TalDE, the Taligent development Environment, is a C++ environment and supports compile and link capabilities; automated builds; customisable class and framework building; hyperlink navigation and group development. It's expected in the third quarter.

### NOW STANDARD PLATFORMS MOVES INTO WORKFLOW

UK company Standard Platforms Plc, Blackburn, Lancashire, which has been struggling since 1988 to get its Docufile document image processing business off the ground, has expanded into a new area: workflow. Its new FlowFile product was developed by the Windsor Life insurance company in Visual Basic, and presents the user with a "virtual desktop" graphical user interface representing a simulated office scene, and the ability to build workflow applications "in real English". That means business managers, not IT staff, can set up the flow of work. It works with ODBC Level 2-compliant databases such as Informix and Sybase SQL Server on Windows-based systems. Unix servers (SCO, HP/UX and IBM AIX) and X-Windows client versions will follow in three to four months when the product is converted to Visual C++. In return for full rights to the product, Standard Platforms is installing a document image system for Windsor Life. It will be up against established players such as StaffWare, FileNet and ICL. Standard Platforms, one of the UK's smaller PLCs with 20 employees and a turnover of £1.5m, went back to the market last year for an additional £1.5m of funds, which it says it wants for acquisition and new product development. Despite its recent losses, it claims an impressive list of blue chip companies, and says between 150,000 and 200,000 pages are scanned per day in the UK on Unix-based document image systems supplied by Standard Platforms. FlowFile costs below £3,000 for a 2 user evaluation system, and larger systems will bring cost per seat down to £490.

### CACI, COMPUTER ASSOCIATES USE ALEX TO CONVERT INGRES FORMS TO WINDOWS

The majority of Ingres users still work with character-based front-ends, so Ingres-owner Computer Associates has struck a deal with one of its partners, CACI Information Systems, for some new technology to help them make the move from Ingres Application by Forms (ABF) over to Windows. The new tool, UpFront, is to be launched at the *DB/Expo* show in San Francisco at the beginning of May, and requires no changes to the underlying applications. Emphatically not a screen scraper, UpFront sits on a PC and interprets the ABF code as used on VT terminals and brings it into the Windows world. Standard screens are automatically generated, which can then be edited for preferences. The underlying technology was acquired by CACI from Alex Technologies, which went into receivership last year after a number of years of pushing its languages, at one stage used by Lotus Development Corp for the Unix version of Lotus 1-2-3 (UX No 358). Minimum platform is a 386/25MHz PC with 4Mb memory. Some users - namely those doing high-volume data entry - should stick with ABF, say CA and CACI, and others looking for the longer-term benefits of object programming should re-develop their applications using Open Road (previously Windows 4GL), although the development cycles are obviously a lot longer. CACI International, the \$180m IT products and services company based in Arlington, Virginia, has majored on the Ingres-based Prophecy financial management package in Europe, and back in February acquired UK Prophecy distributor Maindec Open Software Ltd, part of the Maindec Group. The conversion of 1,400 ABF screens in Prophecy took six weeks to convert using UpFront, at a rate of between five and tens screens per hour. CACI is doing the same with three more packages, and says it will offer an in-house conversion service to customers and developers. CA will sell the product through its direct sales force. UK prices have been set at £200 per seat for 200 copies, down to £100 for 500 copies.

### OLAP COUNCIL ADDS TWO NEW MEMBERS, LOOKS FOR MORE

The OLAP Council, formed earlier this year by four on-line analytical processing software tool suppliers (UX No 522), has added two new European members: Holistic Systems Ltd and Planning Sciences International. The original members - Arbor Software Corp, Comshare Inc, IRI Software Inc and Pilot Software Corp, faced criticism from the likes of the Gartner Group and the SAS Institute that the group was simply a self-serving and closed marketing group, but claims that further members are welcome to join. It will even welcome end-users if they are interested. The planned OLAP application programming interface specification, due out by the Summer, is expected to be coded into an OLE object by an independent contractor, and should be ready by the end of the year. It will be useful for any Windows-based client product that needs to access data coming from an OLAP server. Although OLE is the best place to start, the Council is looking at alternatives for clients other than Windows. Dues for the OLAP Council are \$30,000 annually, \$10,000 for associate membership. OLAP - a niche within data warehousing aimed at the high-speed and flexible analysis of large volumes of data, are facing increased competition from mainstream database companies such as Sybase and Oracle (*see below*), despite objections that these products are optimised for update rather than user access in general.

### ...AS ORACLE PREPARES ITS MOVE INTO OLAP, DATA WAREHOUSING

Meanwhile, Oracle Corp is set to enter the OLAP market with a multi-dimensional extension to Oracle 7.x, hears *InfoWorld*. Oracle Multidimension will allow for more complex data models than the typical two-dimensional row and column format of relational databases, allowing for more flexible data analysis. Oracle is expected to surround the server with data access and decision support tools from third parties, positioned as OLAP and data warehousing solutions. But, as *InfoWorld*, points out, the tool, developed in conjunction with the Canadian Government, was originally intended to handle map information in a GIS system, and positioning it as an OLAP tool has been an afterthought.

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**Data General Corp's** two-year-old disk array business is becoming a growing part of the company's overall revenues, and will more than double sales of some products in 1995, Bill Wilson, corporate vice-president of Data General told *Reuter*: the CLARiiON unit scored \$50m of revenues from non-Data General systems in 1994, and that "will more than double this year".

**Digital Equipment Corp** expects a quarter of its business to come from the Asia-Pacific region in the near future, vice-president and general manager Enrico Pesatori said: "We believe that this area could very well represent in excess of 25% of the total business of the company, and we hope that we will be there in the next couple of years," he said; the firm currently derives around 15% of global revenues from the Asia-Pacific region.

If you have any Macs, hope your shop is secure as Fort Knox: gossip on the circuit says that replacement of stolen machines now makes up 10% of **Apple Computer Inc's** total annual business in the UK.

**ICL Plc** last week announced a global joint marketing and purchasing agreement with **Electronic Data Systems Corp** under which the companies will jointly market ICL software with Electronic Data-related services worldwide, and establishing ICL as a global vendor to the **General Motors Corp** subsidiary: the agreement initially covers a broad range of network security and messaging software, business process re-engineering, and analysis tools for law enforcement and fraud detection, but others may be added.

**Silicon Graphics Inc** has gone to **Cole & Weber** for its advertising, a \$115m Seattle, Washington-based agency.

**Hitachi Ltd** is to bundle **Baan Company's** Triton resource planning software with its 30350RX and 3500 Unix systems across the Asia/Pacific and has established an open systems development centre in Singapore to support the software.

**IDG** has an Information Superhighway Summit scheduled for September 11 to 15 at the Santa Clara Convention Center, California. +1 415 312 7180

President and COO **Jim Cannon** has left **Ontos Inc** and has been replaced by former executive VP **Douglass Warren**.

**Stratus Computer Inc** is putting HP OpenView network management up on its FTX Unix, claiming the first fault-tolerant implementation. It's due in September.

UK I/O connectivity supplier, **Specialix Ltd**, Byfleet, Surrey is offering a \$700 EISA or MCA Multigrafix terminal adapter card that pumps graphics from SCO and Interactive Unix systems to eight VGA/SVGA desktop displays; up to four cards can be housed together in a server. The company has an ISDN terminal adapter called ITA1000 due in May priced at \$600.

**AT&T Bells Labs** says it's really sincere about commercialising the Plan 9 operating system. It just doesn't know whether the thing could be the next Unix or if it could go head-to-head with Windows NT. It has to figure out how to commercialise it, how to license it and how to support it. Plan 9 currently runs on Intel, Mips, Sparc and the Motorola 68020.

Further sources have reinforced our doubts about the future of **Amdahl's** tie up with **nCube** (UX No 523). Seems **Cray** may have stole in under its nose.

We goofed. **Steve Chen's** supercomputing outfit was of course **Supercomputing Systems Inc**, not Supercomputing International (UX No 530). Meantime, veterans who were there say the machine didn't make it to first customer ships not because of technical issues but because **IBM** couldn't provide bridge funds after the original five year commitment ran out at the end of 1992. That year **IBM** was so deep into its own bloodbath that it couldn't justify carrying the venture any longer.

There are more **Sun Microsystems Inc** Netras in the works, we hear.

**HaL Computer Ltd's** Software Systems division has won **Siemens Nixdorf Informationssysteme AG** for its impressive DCE Cell Manager technology which **HaL** will port to **SNI's** RM Sinix Unix family for delivery next quarter.

**IBM Corp** has added HP-UX and Solaris versions of its Adstar Distributed Storage Manager backup and storage software which already runs on other IBM platforms in addition to Sinix and AT&T SVR4, plus 13 different clients. Prices start at \$5,000.

**Tandem Computers Inc** has installed the first of its NonStop K200000 Himalayas at Rabobank in the Netherlands where it'll support 144Gb data and be used to develop and deploy a new payment application system due in late 1995. The unit is built at Tandem's Stirling manufacturing plant in Scotland.

The US Air Force is supposed to put out an \$800m workstation contract that requires "single Unix," i.e. Spec 1170 compliance round or about April 15.

**Sun Microsystems Inc's** new federal systems boss has hauled in a \$45m deal with **Bell Atlantic Network Systems Inc** which will install Sun systems at 270 sites serving 13,000 users.

At **Network/InterOp** this week, **Checkpoint Software Technologies** will introduce a new version 1.2 of its Fire-Wall-1 IP security software, with user-based authentication, anti-spoofing and support for over 100 Internet protocols and services. It's \$5,000 for up to 50 nodes and \$19,000 for larger configurations, on SunOS, Solaris and Solaris x86.

**IBM Corp's** Software Solutions Division will debut a digital library today for storing and retrieving text, audio, visual and other multimedia information.

Stockholm, Sweden-based **Industri-Matematik AB's** Tarrytown, New York unit, has incorporated the BusinessObjects report and query system into its System ESS manufacturing and warehouse Unix software.

Cambridge, Massachusetts-based start-up **Vermerr Technologies Inc** has a set of WWW graphical development tools codenamed Pavilion it'll beta next quarter and ship by the fourth quarter for SunOS, HP-UX or NT servers and for Windows, NT and Mac front-ends.

Rumour has it that **Sam Spadafora**, senior VP and general manager of the **Santa Cruz Operations Inc's** worldwide field operations until December when he vamoosed and we lost sight of him, will shortly resurface as VP of sales at **Sun's** Sparc Technology Business unit.

There were 750,000 visitors to CeBit '95 compared with 682,500 in 1994. It'll be a seven day event next year starting on 14 March.

**SunSoft Inc** is now offering its multi-threaded **WorkShop** for C++ 1.1 development environment for Intel platforms; the Solaris x86 developer implementation is from \$700 bundled with Solaris 2.4 until the end of June - upgrades from ProWorks or ProCompiler on x86 to **WorkShop** for C++ are from \$500, also until the end of June. Single user licences are \$2,000 thereafter. The suite is already up on Solaris Sparcs and UnixWare 1.1 and is in beta on HP-UX.

**Novell Inc's** got a vertical market partner programme underway in the US, offering engineering and integration services to UnixWare OEMs and VARs. Admitting it's mostly ignored these folk in the past, it's signed **Scotts Valley**, California-based Unix house **Microport Inc** and Boston, Massachusetts-based **VenturCom Inc** to provide customisation services. Novell will allow OEMs and VARs to buy pieces of UnixWare components, including the GUI and NetWare client software, and says it'll charge resellers royalties rather than making them buy UnixWare up front.

What we forget to say is that **Willow Software Inc**, the Saratoga, California company formerly known as **Multiport**, which is supplying a toolkit for converting Windows applications to run under Unix for **Novell** spin-out **Caldera Inc's** Linux-based Corsair Internet desktop operating system, is of course the same company **Ray Noorda** invested in after he quit **Novell** (UX No 509).

We hear **Sun Microsystems Inc's** been comparing the performance of IEEE's SCI bus specification against the proprietary Xerox Parc XDBus it uses in its SparcServer and SparcCenter servers.

Raised from the dead after two years cryogenically suspended, **Birp Infopromotions Unix Solutions** is scheduled for 4, 5, and 6 October at the Parc des Expositions de Paris, Porte de Versailles.

**Natick**, Massachusetts-based software firm **Atria Software Inc** has debuted version 2.02 of its ClearCase software configuration management toolset now with a hyperlink graphical browser for SGI and Sun platforms. It'll offer ClearCase Attache for Windows in the second quarter to manage local workspaces on the client from ClearCase on Unix or Windows NT servers. Prices go from \$1,000.

San Jose, California-based **Visual Engineering Inc** has released version 2.0 of its Ovation 2.0 graphics software for Unix. Enhancements include HTML support, anti-aliased text and drop-in fonts. Ovation supports **Microsoft PowerPoint** and costs \$800. from May.

**Ed McCracken's** thunderous Unix-revelling anti-Microsoft keynote at **UniForum** the week before last (UX No 530) probably made the Guinness Book of Records for being the first keynote ever given in the industry that actually addressed an issue rather than degenerate into a spiel about whatever company the speaker's working for. Surely **Silicon Graphics** speechwriters would be willing to share the concept with other people's speechwriters.

In a move reminiscent of what befell *Open Systems Today* when it was folded into *InformationWeek* earlier this month, last week *Client Server Today* - or at least the testing labs part of it - was folded into *Datamation*. The rest of it was deep sixed.

Everybody can get a wry chuckle out of this one: **DEC's** got an new ad coming out that asks "What does Digital call **Sun**, **IBM** and **HP**?" and answers it "Breakfast, Lunch and Dinner."

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram · X

04 APR. 1995

The weekly information newsletter for the UNIX™ community worldwide

London, April 3-7 1995

Number 532

## MICROSOFT REJECTS TWO-PART OMG COM TO CORBA RFP

In what some observers say knocks a huge dent in the likelihood of Object Management Group bringing Microsoft Corp on board its object standards bandwagon, the OMG TaskForce last week issued a two-part Request for Proposal for specifications to link Microsoft's Common Object Model with its Common Object Request Broker Architecture. Part A seeks a specification to bridge what exists of COM or OLE2.0 today to Corba for the sake of current users. Part B, however, will address specifications for bridging future COM or Distributed OLE to Corba. But in a highly charged meeting, Microsoft voted against the RFP in favour of a single RFP based on the original draft. This, according to sources, only referred to COM and no reference was made to existing or future versions of the technology, which would have meant companies could submit any bridge spec, whether it was OLE 2.0 or Distributed. Politically, this division of opinion for and against the COM to Corba RFP does not bode well for the OMG and some fear things will escalate further if Microsoft, as is suggested, changes the COM architecture for Distributed OLE. The deadline for letters of intent for Part A of the COM to Corba RFP is June 23, with submissions by Aug 22. Letters of intent for Part B should be in by Oct 23, with technology submissions by Dec 22.

## DG CHALLENGES NOVELL AND SUN WITH OEM UNIX PLANS

Data General Corporation says it is currently in negotiations with an unidentified number of concerns to OEM its operating system. It believes it will see them productize the thing in the next 18 months. The move is a slap in the face to Novell and what was once Unix Systems Labs which many Unix OEMs regard as having given up all pretence of being a source of technology. "Novell is so far behind," DG exec Joel Schwartz said, "all it sees is NT biting its ass." DG's intentions are also a direct challenge to Sun Microsystems Inc which has been attempting, with little reward, to replace USL by OEMing its own Unix variant Solaris and which, DG sniffs, buys in what it would consider core technology. Sun and for that matter IBM, HP and DEC - with all their petty workstation concerns - are too low on the food chain, operating systems-wise, for DG to pay them much mind. It long ago set its sights on finer things and has managed to produce a hardened toughened *commercial* operating system that analysts like Jonathen Eunice of Illuminata rate as top of the heap. Data General has been preparing for this day consciously and unconsciously since the mid '80s when it was still on its proprietary Eclipse platform and, realizing it couldn't stay there forever, prepared for a shift downstream by creating little code that was unique to the chip. Then, when it finally went to the 88k, it continued the discipline and made its code more and more portable. Now, realizing its latent instincts, it's porting the code to "several" non-88000 platforms apparently against the day it will OEM them. It refuses to identify them but it's already known to be going to Intel for its own conversion to a P6 - possible quad - system in the foreseeable future (UX No 527). DG sources have also reported a port to the 64-bit Sun UltraSparc chip - if not for Sun then for Sparc cloners and resellers or possibly as simple upgrades. However there are believed to be other platforms involved. Data General sees itself as serious equipment. It snubbed the file system provided by USL as inadequate and wrote its own. It prides itself on its SMP capabilities and its high availability. It preens about being the only Unix operating system in the running for B2 security clearance. It's got its scalability in hand and can provide clustering modules. Now it's working on moving to multiple platforms. It's even got a modular systems management kit DG/UX Manager 2.0 to throw into the equation based on Windows NT and presenting the Windows face customers know and want. Moreover, in its book, Sun, its only challenger, is guilty of avoiding the obvious logic of a single source tree and writing versions of Solaris that are different on different platforms, different on Intel than on Sparc and now even character-based. It's not an example DG intends to follow.

## BULL TO CREATE SOFTWARE FRANCHISE IN JUNE

Keeping technologies for its home markets isn't the key to success, Compagnie des Machines Bull SA finally seems to have realised, and by the end of June it will have created a software solutions division under the charge of Axel Leblois, president and CEO of Bull HN Information Systems in the US. The P&L, headquartered in Billerica, Massachusetts, will begin marketing unbundled versions of existing software technologies and developing new solutions for worldwide markets. Included will be Bull's vaunted Distributed Computing Model technologies, Integrated Systems Management and other existing code, plus a slew of new products slated for the coming weeks and months. They include new mainframe-to-Unix connectivity software due in a couple of weeks, other enterprise connectivity and data warehousing software due at DB/Expo in May, and a new groupware product which will roll out at the same time as the new division. Alain Couder, president of Bull's Open Systems and Software operation is apparently putting the new division together, tapping marketing and development staff across various US and European locations. Leblois will report directly to Bull chief Jean-Marie Descarpentries. Bull says the new division will go ahead whatever the outcome of privatisation, due May 1st.

## OS/400 GOES GUI AND TWO AS/400 POWERPCAS PLANNED

Its green-on-black character screen stood out like a sore thumb at Network+Interop last week, but IBM Corp's AS/400 division isn't embarrassed about where it's coming from. The Unix industry hides its by-and-large character-based community behind groovy GUIs at its trade events. However now even the AS/400 division has succumbed, planning to add a graphical user interface to OS/400 as GUI/400. It will have OS/2 and Windows-style front-ends initially - a Motif look-alike is expected to follow. The GUI/400 interface will debut on a new release (a free upgrade, rather than a pay-for new version) of OS/400 which will roll on to the next-generation PowerPCAS-based boxes due in the fourth quarter. Now up to OS/400 3.1, the new release of the operating system has been slated internally to appear as OS/400 3.6, although there seems to be some movement towards giving the thing a name. Meantime it appears there will be two cuts of the 64-bit PowerPCAS multi-chipset variant of PowerPC 630 on which the combined AS/400-System/36 units are being built (UX No 531), one for uniprocessors, the other for multi-processor systems. Although OS/400's Vertical and Horizontal Licensed Internal Code (VLIC and HLIC) is being re-written in C++ as the object-oriented System Licensed Internal Code (SLIC) to run the operating system on PowerPCAS, the experience of AIX's ill-fated dabbling with personalities has forced the Rochester, Minnesota-based AS/400 labs - like other IBM groups - into a complete re-think about how it might run non-OS/400 applications under hosted personalities. The division's work to bring Spec 1170 Unix APIs to OS/400 is apparently unaffected, that's not regarded as a personality issue, but the job won't even be nearing completion by the time OS/400 3.6 or whatever it's called hits the streets. Meantime, IBM was showing-off Lotus Development Corp Notes and Novell Inc NetWare implementations of its File Server I/O Processor last week, an Intel Corp 80486 add-in card for managing PC LANs from within OS/400. IBM already offers a LANServer version of FSIOP. The Notes and NetWare implementations will be out by year-end, it promises. It had wanted to rename the ungainly FSIOP Server Accelerator, but found out the tag is already taken, so it's sticking with FSIOP until it can find something better.

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### VISIX SUPPORTS CORBA APPLICATION DEVELOPMENT VIA POSTMODERN ORB...

Developers can now create Corba-compliant applications using Reston, Virginia-based Visix Software Inc's Galaxy application environment courtesy of PostModern Computing Technologies Inc's ~~ORBeline object request broker (Object Observer 1)~~. PostModern has created a GalaxyDispatcher C++ class from its existing Dispatcher class, which maps ORBeline events to Galaxy events, allowing Galaxy applications to process Galaxy and ORBeline events at the same time. When remote applications invoke Corba objects the call is routed through Galaxy's event management system to the appropriate object. There's no formal relationship between the two companies, except some anticipated joint marketing activities, and developers that want to take advantage of Corba under their Galaxy implementations will have to buy ORBeline from PostModern.

### ...DEBUTS GALAXY 2.5...

At the same time Visix has also introduced a new release 2.5 of Galaxy which includes a Visual Datatag Editor for point and click programming of common functions; a Datatag Iterator that can iterate the transfer of functions and resource files between different components of Galaxy's Distributed Application Services; a new set of distributed help services for building a single, network-based help engine; and an enhanced version of the Galaxy print manager which can encapsulate distributed print sessions. There's some additional support for shared libraries - but not on Mac, Ultrix or SunOS C++ - a new combo box, new notebook icon and a floating window for Mac plus performance tuning. Galaxy is now up on 48 platforms - new additions are PowerMac and OpenVMS on Alpha. The C version is priced at from \$9,600, C++ from \$12,000, both per developer, with no runtimes.

### ...PLANS WIDER OBJECT CAMPAIGN; JAPANESE VENTURE IN THE WORKS

Visix admits that from a sales point of view the object exposure it's gaining from PostModern is proving to be more of a marketing lever than it had expected, and will likely have a more immediate effect on sales than the 2.5 rev of Galaxy. The integration work was undertaken at the behest of a couple of mutual clients Visix and PostModern share in the financial community who don't want to publicise their activities. Now smitten, Visix is champing at the object bit, keen to forge relationships with other ORB and object-enabling technology suppliers. It's heard subsequently that a mid-West integrator has already gateway'd Galaxy to the ExperSoft Corp ORB, but says it isn't sure how far that work has gone. Visix, now up to 150 employees, boasts a burgeoning professional services operation and has some 2,800 Galaxy licensees. It's finalising a joint venture with a Japanese company which will lead to the opening of a Visix office over there. It's adding a German operation in Frankfurt to its UK and French offices.

### "READ MY LIPS" - FILMMAKERS WILL FIGHT LIP-SYNCH PATENT SUIT OVER FORREST GUMP

As the Oscar awards dinner was taking place last week, a legal row was brewing over the lip-synch technology used to make US presidents speak in the film, 'Forrest Gump'. According to various reports in the *Chicago Tribune*, freelance computer consultant Richard Bloomstein is suing Paramount Pictures and Lucas-Films, with an eye on a share of some of the \$300m box office takings. Bloomstein apparently owns a patent on a method of dubbing foreign language films. The filmmakers used a morphing tool from Madison, Wisconsin-based Elastic Reality running on the ubiquitous Silicon Graphics workstations used in the film special effects industry. Elastic Reality president Perry Kivolowitz told *Unigram.X* that the company's software was simply a general purpose tool. "We make the hammers. If someone buys a hammer and throws it through a window, that's not our responsibility". Elastic Reality was also used on the film 'In the Line of Fire', though not on the lip-synching portion. The tool takes a "shape to shape" approach to lip-synching, tracing the shape of the mouth and then using drawing tools to outline how the shape of the mouth should change. Morphing itself was pioneered in the early 1980s at the New York Institute of Technology, and was first used in films such as George Lucas' 'Willow', in the late 1980s. Paramount and Lucas said the claim has no merit, and that they intend to fight it.

### PAFEC LAUNCHES DIGITAL DATA TOOL AT OIL AND GAS INDUSTRY

Strelley Hall, Nottingham-based Pafec Ltd has launched Pafec EDM for Imaging, aimed at companies converting large format engineering drawings into digital data. The product encompasses scanning, raster ~~viewing, manipulation of images, document storage, document management and output~~. Although Pafec is targeting oil and gas exploration companies, it says that the product is also suitable for text, photographs, microfilm and video information. The product is a modular system and, says Pafec, this means companies can integrate it, or parts of it, with the document imaging systems of their choice, and with computer aided design applications, word processors and optical character recognition products. The full system uses an Oracle database for storing and managing the data. Pafec recommends magnetic disks in a Redundant Array of Inexpensive Disks format for storing on-line data, or optical disks for near-line, and the product has some hierarchical storage management. However, users can use their own database and any storage system they would like to use, says the company. Pafec EDM for Imaging can be used as a stand-alone product on an 80486 personal computer or better, on a Unix box, or it can be networked. For multiple users, Pafec recommends that the product run on an Unix server with personal computers accessing the application. Pafec says good performance has been achieved by minimising network traffic, processing and memory requirements: images are always handled and moved around the system in their compressed format, and this makes for small memory requirements and only small packets being transferred across the network. In a wide area network the system can be configured so that only the bits of the picture the user wants to study are transferred to the graphical front end: this is called 'tiling', where the raster image is broken up and parts transmitted. Users can also view up to 10 different documents at the same time, copying, moving and deleting between images. The product has 'smart raster' which dynamically vectorises images. Pafec says that this enables users to make changes to images, offers computer-aided design-like functionality but is better than something like CAD overlay or paintbrush techniques. Computer-aided design diagrams can be stored, and viewed, at the front end, in either vector or raster form. The product has the facility to pan, zoom and create viewpoints. Users can clean up images, or just parts of the image, at the the click of a button, after the scanning has been done. Modules available with product are personnel manager, which defines users rights; document manager for archiving and retrieval; work manager, which supports the management of a document's life cycle; and distribution manager, which distributes documents. Pricing for the Imaging Viewer with snapshot browse for archive an retrieval costs £1,000. The imaging view and edit version costs £4,000 for one licence, £3,500 for the second to fifth licence, and £2,500 for sixth licence and over.

### LEGENT JOINS FORCES WITH SYSTEMS INTEGRATOR MARBEN IN FRANCE

Systems administration specialist Legent Corp, Vienna, Virginia is expanding its presence in Europe. Newly appointed chief executive Jerre Stead took part at the announcement in Paris, last week of a "strategic agreement" with Hewlett-Packard Co and Compagnie des Machines Bull SA systems integration specialist Marben SA, aimed at providing a heterogeneous systems administration offering. Under terms of the agreement, Marben and Legent will market OpenProcess/XP, which will comprise Legent's XPE and Marben GL's Open Process technologies. Marben is a 20-year-old company of engineers "always known for our technical knowledge and large profit margins - 5% to 8% after tax," quipped chief executive Christian Aubert. Over the last several years, it has expanded its activities into Belgium, Luxembourg, Spain, Italy and the US, growing to revenues of some \$100m. "I knew them when I was here before [as head of Honeywell Inc's Europe, Middle East, Africa division in Brussels]," Stead told our sister publication *Computergram*. "They are some of the best HP integrators I've seen and they are anxious to go global." He acknowledged that Marben was attractive to Legent because it needed Bull expertise for the French market, but that "they have products that go way beyond Bull." The agreement does not create a separate company: the product's marketing will be supported by Marben Management Systems, Groupe Marben's systems integration specialist and Hewlett-Packard industrial partner. The agreement in France will not be Legent's last; Stead said that he was off on a three-day tour of six countries, beginning with Spain, to conclude similar agreements.



### HUMMINGBIRD AGREES TO PAY \$11.5m IN SHARES FOR BEAME & WHITESIDE

Now that it has successfully floated its shares on Nasdaq, Canadian personal computer, X Window server software specialist, Hummingbird Communications Ltd is ready to flex its muscles, and has a deal to acquire Beame & Whiteside Software Inc for \$11.5m - \$7.8m cash and the rest by way of 202,200 new Hummingbird shares. Beame & Whiteside, based in Raleigh, North Carolina specialises in desktop-to-Unix communications software and did sales of \$5.1m for the year to September 30. Hummingbird wants to combine its PC X server products and X development tools with Beame & Whiteside's TCP/IP and Network File System products and reckons that customers of both companies will benefit by being able to buy their TCP/IP and X Window products from a single source.

### IBM PREVIEW SYSTEMVIEW FOR AIX, OR KARAT

IBM Corp was showing first cuts of its next-generation Karat network management environment at Network+Interop in Las Vegas last week. Karat is a collection of technologies IBM will add on top of core NetView for AIX modules that are grouped into three tiers. First are new graphical interface components that provide integrated access to management facilities. It's been showing features like a new launch pad, from which all NetView components can be accessed. The initial Karat GUI features will be launched next month. A second tier will bring new procedural and object-oriented technologies to NetView. The third layer will provide fully object-oriented applications and services. It's the same kind of functionality that IBM will gradually bring to management systems running on its other platforms, including OS/400, OS/2 and MVS. Indeed, IBM is bringing the SystemView nomenclature it employs on its proprietary lines to AIX; last week it was calling the new NetView environment SystemView for AIX and SystemView Karat in the same breath. The core NetView kernel will continue to evolve in a joint development with DEC, which has no plans to licence any parts of Karat. There will be a new release of the NetView kernel in the fourth quarter, along with a new performance monitoring and configuration management application. DEC says it's concentrating on the port of its PolyCenter NetView implementation to Windows NT and the COM/OLE object architecture. Thereafter it'll move PolyCenter onto ObjectBroker.

### LYNWOOD HAS RUGGEDISED, LUGGABLE SPARC, PA-RISC, ALPHA VERSIONS PLANNED

UK-based defence IT manufacturer, Lynwood Scientific Developments Ltd, a long-time Sparc developer, is readying a ruggedised, 27lbs, Explorer SparcStation-compatible for the defence and industrial markets, using Sparc 5 or 20 technology, with two floppy drives, a 10.4" TFT active matrix colour display, Ethernet, serial, parallel and audio I/O and SCSI-2 ports and 4 Sbus slots. Lynwood apparently has an HP PA-RISC portable up and running, with a DEC Alpha variant planned. Lynwood is now a subsidiary of New York based NAI Technologies Inc. Explorer will be available in the second quarter, with HP-RISCs and DEC Alphas by year end. Prices will start from £20,000. Lynwood manufactures workstations, X-terminals and character terminals, largely for the defence industry.

### DOWN-UNDER GCS OFFERS SPARC ADD-IN BOARDS FOR PCs

Australian Sparc-compatible house Graphics Computer Systems Pty (CGS), Burwood, Victoria has a set of Mbus workstation motherboards designed to turn PCs into Unix workstations for 20 per cent of the cost of a comparable Sun Sparcstation 20 model. Called the MXPeacemaker, the boards fit a standard 5.25" PC slot and, like the Opus Systems Inc SparcCard, enable MS-DOS, Windows and OS/2 users to run Sparc applications. There are two superSparc versions, the S50 and S61 (50 and 60MHz), two superSparc 2 boards, the S71 and S91 (75MHz and 90MHz), and three hyperSparc1 versions, the H901, H1001 and H1101 (90MHz, 100MHz and 110MHz). With support for cut and paste between PC and Sparc applications, MXPeacemaker will ship in three months with prices starting at around \$6,250.

### NIICE DATABASE API GROUP FORMS AROUND SYBASE; IBM BACKS OUT BEFORE GUN IS FIRED

By the time it finally got around to introducing itself last week, IBM Corp had bailed out from the X/Open Co Ltd-backed NIICE, New Information Industry Co-operative Endeavour, which aims to get the database community to open up its interfaces. NIICE starts life with Microsoft, Sybase, Computer Associates, Novell and Lotus. The fact that Informix and Oracle are absent suggested to observers, on the one hand, that NIICE is a Sybase front, driven by its PowerSoft acquisition, and that neither Informix or Oracle is in the business of handing their specs over to it. The alternative view was that NIICE implies databases are fast becoming commodity items - a prospect Oracle and Informix wouldn't relish - though last time we looked Oracle wasn't shaking in its boots. Common APIs for messaging middleware, repository tools, system management and application tools and ODBC technologies are what NIICE will investigate. With no dedicated staff to call its own, X/Open will do the administration and collect membership fees (not yet set) for NIICE. The first meet is at DB/Expo in May.

### TI, MICROSOFT BLAME CAIRO REPOSITORY DELAY ON SHORTAGE OF OBJECT EXPERTS..

Texas Instruments Inc now estimates the object repository it and Microsoft Corp have been developing for Cairo won't be ready until the end of 1996, a year later than the two had originally planned. The repository will also feature in a future version of TI's Composer CASE toolset. The timetable as it stands pushes the release of Cairo, Microsoft Corp's object-oriented follow-on to Windows NT, out to sometime around December 1996. TI said that both companies had underestimated just how much work was involved and blamed delays on the difficulty in finding and hiring staff with enough object experience. Microsoft is apparently not at all happy with itself over the way the project has gone so far. A first cut of the repository will go to strategic partners and developers in July 1996 as part of what TI describes as an open process for industry comment before the thing is frozen. A more polished repository, which observers say could be a piece of the Cairo beta, could be put out to a wider base around a quarter later. By December 1996, the repository, and Cairo are supposed to be complete.

### ...ESCHEW ACADEMIC OBJECT THEORY FOR COMPONENT-BASED ENCAPSULATION

TI describes its role as providing the enterprise knowledge, with Microsoft bringing the desktop. TI says the work is based upon a shared belief in a component-based approach for applying object technology to the real world, using modular libraries, rather than adherence to strict academic and theoretical notions of inheritance, reuse and polymorphism. TI says it, and Microsoft, believe that "encapsulation is the most important" piece of the object paradigms, while "inheritance has its pros and cons". It rejects the notion that no inheritance equals no object-orientation and warns that the "object-oriented world will have to modify its theories to tie in with mainframe and client/server environments". The repository itself is only one part of the application framework in any case; real tools for the environment are still some two or three years out, TI believes.

### TI OFFERS-UP COMPOSER APIS

Meantime, Texas Instruments Inc is offering up documentation and APIs to its Composer CASE software to encourage ISVs to write for the environment. The APIs expose TI's Composer Encyclopedia, which stores client or server application models, supposedly a nascent version of the object-oriented repository it's developing with Microsoft Corp for Cairo - *see above*. The APIs are free to TI's Open Initiative members - it says it's already snared half a dozen new companies, including CA, Legent, ObjectWare, Informix, DEC and HP, which will link its Softbench tools to Composer. Composer by IEF development environment will be up on Digital Unix by July. Users will be able to deploy Composer applications on DEC Unix or OpenVMS. Prices are from \$10,000. Composer won't support Microsoft Corp's SQL 6.0, the initial release of the SQL 95 database, it's waiting for the more robust SQL 6.1 due by year-end.

### MEMCO OFFERS B1 SEOS UNIX

Five-year-old Tel Aviv-based Memco Software Ltd, owned by Israel's largest bank Bank Hapoalim and some private Swiss and Israeli investors, has announced SeOS or Security for Open Systems, a new Unix security software that implements an active control mechanism instead of patching security holes as they're discovered. Based on B1 standards, it compares itself to highly evolved mainframe packages such as IBM/RACF and CA-ACF2. Memco has a subsidiary in New York City and apparently SeOS' design owes something to what Memco engineers learned at the Israeli Defence Forces Computer Center. SeOS provides a single administration point for all the different security environments in an enterprise, the company says, including mainframes, native Unix security and DCE. SeOS handles not only who accesses a system but what they can do once they are logged in. It deals with log-in restrictions, password quality control, authentication, superuser (root) ID protection, dividing roots authority, file access, privileged programs, substitution of UID and network protection. SeOS allows a flexible configuration, ranging from maximum security for sensitive servers to a more relaxed implementation for the less critical hosts. SeOS divides root authority between different administrators and suppresses the concept of an all-powerful superuser. Despite root access, there is shell file protection limiting access to configuration files, log and audit files, database and personnel records. The use of privileged programs makes Unix insecure. SeOS reportedly denies execution of any program if it was tampered with or illegitimately created. It constantly verifies that registered trusted programs are unchanged and if a trusted program is modified, it marks it "untrusted" and prohibits its execution.

### NEW NETRA INTERNET SOFTWARE IN THE WORKS, BUT NO HOTJAVA, YET

Looking to capitalise on the success of its Netra i Internet servers, Sun Microsystems Inc is readying an additional bundle of Internet applications and services it'll supply as a CD-ROM upgrade to the initial release. It's not saying exactly what will feature, but presumably it'll include the new 1.2 rev of CheckPoint Software technologies Ltd's FireWall-1 security system and a new browser. HotJava, the prototype world wide web browser and HTML development system now appearing on Sun's WWW page won't be in there and isn't expected to feature as a Netra i application until later in the year. HotJava is based upon Sun's Java object-oriented network application development language, which hails from Sun Labs. Americans understand Java as a generic term for any coffee, which was popular in the fifties and sixties. Meantime, Sun is now shipping volume quantities of the system management server configuration of Netra, which comes with the Netra s bundle of configuration and administration tools for managing PC networks.

### SGI SHY OF OPENGL GRAPHICS PERFORMANCE NUMBERS

Evans & Sutherland Computer Corporation is raising questions as to why Silicon Graphics Inc, its greatest competitor, is refusing to provide the results of the new Viewperf benchmarks on its high-end Reality systems. Viewperf was developed by the OpenGL Performance Characterization (OPC) subcommittee to measure the 3D rendering performance of OpenGL systems. OpenGL, we might note here, is an SGI product but without its data it looks like E&S' Freedom series - used by HP, IBM and Sun - walks away with top honours. As soon as we round up all the usual suspects and debrief them, we'll see if we can find out what's making SGI so shy. Viewperf is OPC's first benchmark, with GLperf due later this year and XPC due next year.

### AMDAHL SUES ENCORE OVER DISK ARRAY CONTROLLER DEAL

There seemed to be something wrong with Amdahl Corp's OEM agreement with Encore Computer Corp for mainframe disk array subsystems as soon as Encore announced very similar products of its own, after the original agreement had been billed as exclusive, and the whole affair has now ended up in court. Amdahl is suing Encore in the Delaware Chancery Court, asking for an injunction preventing Encore from terminating the contract, but a standstill until April 14 was later agreed for further negotiations. The complaint from the Sunnyvale company wants the suit settled very quickly.

### BANYAN TO UNPACK ENS AS PART OF THREE-YEAR VISION

Having decoupled the StreetTalk Global Directory, Intelligent Messaging, security and network management software technologies from its Vines Unix implementation as Enterprise Network Services (ENS), Banyan Systems Inc's next move will be to plant a bunch of flags in the ground for where it wants to be some three years hence. Then it'll work out how it's going to get there. It's a vision the company will roll out at the end of next month, at the same time as it debuts the promised 6.0 implementation of Vines (ENS plus Unix V.3). Whilst Banyan has an impressive record in providing what's effectively a meta-network on top of mixed NetWare implementations or across heterogeneous Unix systems, it's on the one hand getting squeezed by the increasing sophistication of vendor-specific LAN solutions and on the other, by the painfully slow emergence of broad-based distributed networking technologies such as OSF Distributed Computing Environment or Sun's Open Network Computing. With this in mind, Banyan plans to first unbundle ENS into developer products that perform distinct functions for find (using StreetTalk directory as the backbone), share (with its Intelligent Messaging system and services) and manage (based upon its DeMarc distributed enterprise management architecture, agents and applications). In conjunction with current partners such as HP, IBM, Sun and SCO, it'll create messaging and directory software leveraging what's already in place - Sun's NIS naming service for example - to create packages for managing PCs from Unix. Other stuff will handle the enterprise. As well as turning StreetTalk into an X.500-compliant directory next year, Banyan says it's also working on several new implementations, and has a prototype that can store 100 million references for example. It hopes its directory API (DAPI) initiative will pull in ISVs - packaging details for which will also surface next month, with Toolkits in July.

#### ENS support

At Network+Interop 95 last week, Banyan finally unveiled its delayed Solaris port of ENS, which costs from \$5,500 for up to 20 users to \$55,000 for 1,000 users. ENS is already up on NetWare, HP-UX, AIX and SCO. It has no plans for UnixWare or Digital Unix versions. After a Sinix implementation, Banyan's next port of call will be ENS on Windows NT, which it's promising by year-end, though it won't admit to having any working code internally, let alone anything worth showing customers or partners. It'll operate under NT System Management Server. Banyan Enterprise Backup and Restore modules are due next month. An Enterprise Data Distribution application for collecting and distributing data from Windows will ship in the third quarter. Vines still accounts for some 75% of eleven-year-old Banyan's revenues.

### 1776 READIES NEW FAULT-TOLERANT, RECOVERY SOFTWARE

Los Angeles-based 1776 Inc, the company known for SCO-based disk mirroring, RAID and clustering software and little heard from of late, is preparing to expand its reach with a new operating system-independent product line dubbed RNA, short for Replication Network Architecture. It is a family of software products meant to provide disaster recovery, wide-area data replication and fault-resilient clustering over LAN or WAN networks to most Unix variants and eventually Windows NT and Windows95. Current plans reportedly call for three mix-and-match products derived from a common C++ source code base. Safety Net is supposed to supply data mirroring, over networks at any distance. The company says it will not require the network to be up all the time to maintain mirroring but will catch up whenever the network's on through file system reconciliation. Replication Manager is supposed to manage scheduled uploading and downloading of files in wide area networks of replicated servers such as those in retail chains. It includes extensive GUI-based facilities for node management in larger networks compatible with - but not requiring - SNMP-compliant network management products like HP OpenView. Lastly, ServerGuard will supply local server clustering with both disk and system failover, permitting a high degree of fault-resilience for mission-critical servers. 1776 plans to roll out a SCO version of the stuff sometime in Q2 followed by AIX, HP/UX, Digital Unix and various flavours of SVR4. NT support will be supplied somewhere along the way. Versions for the different operating systems will interoperate on the same network. Prices have not been determined.

## J SERIES WILL BE HEWLETT PACKARD'S FIRST SMP DESKTOPS

The missing J Series in Hewlett-Packard's product line (UX No 531), will emerge in the summer and will be HP's first symmetrical multi-processing desktops. They will use the same 7200 chips and same Kittyhawk systems architecture as the K Series. If you want J Series products desperately enough, you can have them now: Lear Seat in Sweden has already taken delivery of the new workstations using Catia and the newly available Dessault CAD/CAM software. HP says it could have launched 120MHz 7200 systems straight off, but saw no reason to do so, it said, although it admits that availability was also a factor in opting for the 100MHz version. The first PA-8000 K systems will be out within a year.

## HP PLANS TO PUSH FOR 64-BIT UNIX SPECS

HP promises some initiatives in the area of 64-bit standards later this year, with the aim of providing greater leverage for independent software vendors contemplating the move up to 64-bit software. The current set of application programming interfaces, including Spec 1170, are all 32-bit, points out HP's PA-RISC spokesman Larry Inman, with the exception of the IEEE's double precision floating point standard. ISVs are currently reticent about 64-bit versions, and a measure of commonality between the vendors would give them some encouragement. There are two ways to get to such a standard, says Inman, one through the grass roots of the standards and specifications committees, the other by pushing through a *de facto* standard by teaming up with some strong partners. Inman wouldn't comment on suggestions that just such a tie-in with its new development partner Intel Corp might be on the cards.

## HP ROUNDUP

According to its own figures, the Hewlett-Packard Co four-way K400 server offers a 33% TPS performance advantage over its nearest rival, DEC's Alpha 2100/4, for a similar price. DEC's performance is let down by its use of the PCI bus, says HP, which has upgraded its own technology to the dual HP-HSC (High Speed Connect) bus. HP hasn't ruled out use of PCI altogether, however, and says PCI systems may appear in future low-end systems at some stage. Customers with existing peripherals can opt to use the old HP-PB bus on the new systems if they wish, although it's three times slower.

Meanwhile, HP's lower-end G, H and I Series will eventually be superseded by the K Series, and it is not anticipated that they will be upgraded to the 7200 chip. The T500s, however, are a different matter. Its runway bus technology has already been rolled down to the K Series, and T500s will be pushed upwards to the new chips over the next year.

Although its competitors - especially Sun Microsystems Inc, with bitter experience behind it - are hoping to make capital out of HP's move to the V.4 file system with the upgrade from HP-UX 9.0 to 10.0 - HP is claiming that the move will be easier than the transition from 8.0 to 9.0 was - the reason being its Fast Transition Links technology, which enables uncompiled 9.0 code to run on top of 10.0 without performance penalty, it says.

Continuing to pillage the proprietary systems software base, HP has now chalked up Dessault Systemes' Catia CAD/CAM package, best known from IBM mainframes, and System Software & Associates' AS/400 stalwart BPCS planning and control suite. HP says its goal is to overtake IBM as the number one mid-range system supplier by 1997 - it estimates IBM currently has 24% of the market (AS/400s and RS/6000s combined) to its 11%. It expects IBM's figure to remain fairly constant during that timeframe, with a big shift to RS/6000s. By the year 2,000, says HP, it will be the number one server supplier bar none.

Six months into its "ASsault" campaign to lever AS/400 users on to its HP-UX servers, and now also armed with its new PA-7200 K-Class SMP servers (UX No 530), HP claims to have turned "hundreds" of AS/400 and System/36 customers to its solutions. It says it's now got product development and marketing relationships with 13 of the top 15 AS/400 ISVs. HP says Renault replaced 180 System/36s with 70 HP 9000s - though it remains an AS/400 customer too; Laidlaw Transit Inc migrated its third party financial applications from AS/400, to RS/6000 and then to HP 9000 servers; whilst HP 9000 servers beat out AS/400s at Bristol-Meyers-Squibb's Matrix Essentials division.

## MERGENT EYES UNIX POTENTIAL

PC and Unix client security house Mergent International Inc, Rocky Hill, Connecticut, expects to join Bull's ISM partner programme soon (*see separate story, this page*). The privately-held, \$10m company claims some 1.5m users of its PC and Single SignOn Data Access Control System software packages, which secure PCs and Unix clients operating in network environments, without eliminating all floppy drive access. Mergent was formerly distributed by PC Guard in the US, and now has a London office. AIX, HP-UX and Solaris implementations are planned.

## BULL LEVERS ISM SYSTEMS MANAGEMENT INTO US WITH NEW PARTNER PROGRAMME

Little by little Compagnie des Machines Bull SA is making its more interesting technologies available to non-European markets. Last week at Network+Interop 95 it began a campaign to push its ISM, Integrated System Management network management environment into the US market via its Bull HN Information Systems unit, where it currently has only half a dozen customers, compared to 400-odd in Europe. Now up to ISM version 3, Bull has kicked-off a partners programme with 27 companies either porting applications, integrating platforms and third party software or marketing ISM, including Oracle, 3Com, Microsoft, Tandem and Novell. The vendors it's been lining up for ISM for some months (UX No 508), turn out to be Silicon Graphics and Sequent, in addition to Tandem Computers Inc. ISM is part of Bull's Distributed Computing Model for managing networks of heterogeneous Unix and PC systems over TCP/IP and ISO protocols as well as Bull's proprietary Distributed Systems Architecture comms framework, which runs on its GCOS mainframes and minis. ISM includes portions of OSF Distributed Computing Environment; OSF has added ISM APIs to DCE. It comprises 46 management applications supported by a common data repository. Bull is aiming ISM at HP, IBM and SunSoft network management environments. Version 2.0 of ISM Security Services, now renamed AccessMaster, is now out on most Unixes, NT and IBM mainframes, and has single sign-on, filtered Windows screens, integrated user management, audit trails, Generic Security Services API and secure data exchange.

## CHORUS PLANS BINARY MICROKERNELS FOR DEVELOPERS; NO WORD ON SCO DEAL

Moving on from its ClassiX source code development kits (UX No 509), French microkernel house Chorus Systemes SA is to begin selling binary implementations of its system software, starting with an Intel Corp iAPX-86 product due late this year. Versions for Motorola 680x0, Sparc and other platforms will follow in 1996, along with a campaign for development hearts and minds. Chorus says the binary software is aimed at second-tier developers who don't want or need source code and all of the problems that it brings. Meantime, Chorus, which according to what we hear doesn't actually have an agreement with Novell Inc that extends the use of its microkernel for use in the SuperNOS project, is also still waiting to tell its new Santa Cruz Operation Inc story. SCO and Chorus have been promising a new and wider agreement for some time (UX No 521). Seems likely SCO will use the inherent platform-independence of Chorus' microkernel technology to take its Unix implementation on to processors it doesn't yet reach. Chorus isn't interested in putting Spec 1170 APIs onto the microkernel itself, emphasising it's not a Unix vendor, but adds that OEMs will want to run their Spec 1170 Unixes on top.

## BEWARE OF THE UNIX TRAP, WARNS BELL

Explaining why, in the latest *Upside*, Microsoft Corp shouldn't be regulated by the US Department of Justice, former DEC VP R&D, now Bell Mason group director and Microsoft technical advisory board member Gordon Bell railed against the "Unix Trap called open systems" laid by "Unicee vendors", he believes are behind the lawsuit. According to Bell, the trap enables Unicee (Unix dialect) vendors to supply "fundamentally proprietary platforms to maintain high margins". Once a user signs on, Bell continues, a user "has to stay with a vendor for client, server and follow-ons because of compatibility, logistics and conversions. At least \$1,500m is spent maintaining multiple dialects of Unix, or about \$1,000 per copy by 10,000 programmers. (Microsoft's entire R&D budget is \$750m). Vendors would like to charge a Unix "tax" of at least \$6,000 instead of throwing it in free with hardware. Microsoft charges about \$650 for an NT server with SQL that runs on the the six hardware platforms that Unix dialects can't touch. Eliminating Microsoft maintains high prices for proprietary platforms and prolongs the inevitability of large commodity servers and PC-sized margins. With NT out of the picture, users lose. Computing inches forward, Unix by Unix."

### ORACLE7 GOES SPATIAL WITH THE ADDITION OF MULTIDIMENSION

Oracle Corp, with its new Oracle7 MultiDimension extension (UX No 531) is claiming to be the first major database vendor to provide support for spatial data. The company has a patent pending on the technology, which it says enables organisations to build enterprise-wide decision support systems around a common database architecture capable of handling all types of information - structured, text, images, video, audio and spatial. Oracle gives the name spatial data to data that is defined by multiple dimensions - latitude, longitude and elevation, which typically describes the geographic characteristics of a particular area or object. It suggests that an insurance company might use MultiDimension to work out the potential liability to its policy-holders of a major flood by plotting the location of their homes relative to the flood plain of the nearby river, and retailers might use a demographic database to target promotions or decide between alternative locations for new stores. The technology will initially be aimed at the Geographic Information Systems market, and later moved into the decision-support and data-warehousing markets. It says the algorithms in Oracle7 MultiDimension are designed for managing all kinds of spatial information, and are flexible enough to serve as the data engine for varied applications. The Oracle7 MultiDimension add-on starts at \$4,520 for an eight-user licence and arrives in May for Solaris, Digital Unix and HP-UX. It requires Oracle7 v7.1.4.

### CRAY COMPUTER THROWS IN THE TOWEL, FILES CHAPTER 11 PAPERS

Time has run out for Seymour Cray's brave Cray Computer Corp venture to keep the original Cray-1 line alive with a Cray-4 family, last week the company suspended work on its supercomputer systems, laid off its engineering, manufacturing and marketing personnel and filed Chapter 11 bankruptcy papers. The Colorado Springs company, spun out of Cray Research Inc in 1989, has thrown in the towel because it was unable to complete its planned \$20m placing of common shares with foreign and institutional investors; it needed the money to finance further supercomputer development and bring the planned Cray-4 family to market.

### IBM DECLARES WAR ON HITACHI'S FUTURE MAINFRAMES

In a bizarre announcement that can only be intended to kick its new PowerPC and CMOS mainframe processors partner Hitachi Ltd in the shins, IBM Corp last week announced that there would be a new upper limit for S/390 Processor Group 80 set at 80 Million CPU Service Units, MSUs, and that charges for software on single image mainframes that exceed that rating will be increased. The policy effectively reverses IBM's move last year to limit software charges for all its largest machines to those set for Processor Group 80. The odd feature of the announcement is that IBM does not have any machines that exceed 80 MSUs - the top-end 10-way 9X2 is rated at 78 MSUs. However, Hitachi is preparing a new line of monolithic mainframes that will exceed 80 MSUs at the top end, and the announcement - which does not include details of the higher prices - is clearly aimed at the forthcoming Hitachi machines - machines on which the Japanese company is still hoping for an OEM contract from IBM to cover it for those customers for whom clustered Sysplexes will not be acceptable. IBM's announcement says it is introducing a new Indexed Monthly Licence Charge, a new software pricing structure for single processors above 80 MSUs, which will be indexed to the total capacity of the machine on which the software executes on, in MSUs. The company says that the higher pricing will be consistent with that for software on its big Parallel Sysplex configurations but is introducing a penal rate of charging until the new processors have been rated to its satisfaction: it says software running on processors that are not on the IBM's Processor Group Exhibit, or have no MSU ratings established for new Indexed Charge, will be charged the Indexed Monthly Licence Charge price for 200 MSUs. The company further discourages anyone considering the new Hitachi machines by saying that users with software problems will be on their own - "Consistent with our current software support policy, IBM will provide program support only for errors that can be reproduced in a supported operating environment. Apart from IBM's Parallel Sysplex offerings, there is no specified operating environment for processors larger than 80 MSUs, it says.

### ERICSSON SUPPORTS SUN CTI

Ericsson Business Networks AB has added support for Sun Microsystems Computer Co's Solaris-based SunXTL computer-telephony integration software to its Consono MD110 PABX. The integration is via Ericsson's ApplicationLink implementation of the European Computer Manufacturers Association's Computer Supported Telephony Applications specification. Features available through SunXTL are said to include desktop call routing, predictive dialling and the ability to have callers' details automatically displayed on screen when a call is received. No word on the pricing.

### SEQUOIA BUYS ALPHA MICRO'S PICK64+ FOR TEXAS MICRO

Fault-tolerant Unix systems builder Sequoia Systems Inc, Marlborough, Massachusetts is diversifying with the acquisition of the Pick64+ software product from Alpha Microsystems Inc, Santa Ana, California. Pick64+ is a database environment that runs on Intel Corp iAPX-86-based computers and supports five to 195 users. Sequoia already offers Pick on its big machines, and says that Pick64+ will be sold with computers built by its other planned acquisition target, Texas Microsystems Inc, of Houston, Texas. The deal fills in Sequoia's Pick offerings below its Unix line and also gives it access to some 100 US dealers that have previously sold Alpha Micro products, and these will now be offered Pick64+ on Texas Micro machines, and will also be invited to offer the mid-range Sequoia Unix line. During 1994, Alpha Micro says it sold some 4,000 licences of Pick64+ to its dealers. Terms of the acquisition were not disclosed.

### ADVANCED MICRO-HP MAGIC PACKET AWAKENS GREENS

When a so-called green personal computer puts itself to sleep, network administrators have had to wander over to the machine and wake it up before they can do file back-up or update any of the software or access privileges on the machine - but not any more. A new concept called Magic Packet enables the machine to be jerked awake again from the administrator's console, and Advanced Micro Devices Inc and Hewlett-Packard Co are offering the first implementation. Advanced Micro has implemented Magic Packet on its PCnet-ISA II single-chip Ethernet controller without adding to the cost, and will add it as a standard feature on all of PCnet single-chip Ethernet devices in the future. Hewlett-Packard is to support Magic Packet in an upcoming HP OpenView network and system management application and will incorporate it as a standard feature in its network-ready personal computer product line and network management offerings later this year. The Magic Packet is a protocol-independent Ethernet frame that is sent to a single network node: it is recognised by the Ethernet controller and automatically wakes up the entire computer.

### LATEST R/3 RELEASE A MAJOR LEAP FORWARD FROM 2.2 SAYS SAP

Release 3.0 of SAP AG's R/3 system has "won the battle and the war on the marketplace for increased functionality", according to SAP North America chief executive Klaus Besier. "It takes us a giant step forward from Release 2.2," Besier said. Because the system's logical capabilities have been extended, the package now supports all types of production, Besier noted. SAP also introduced PP-PI, a production planning and control system specially designed for the process industry. It can be fully integrated into other higher-level systems as well as process control systems and laboratory information systems. SAP also used CeBIT to present an integration scenario with its new Application Link Enabling concept. Application Link Enabling enables communication between separate application systems and thereby enables companies to uncouple their application systems so they may be used locally and independently, SAP says. Following what Besier said was the successful launch of R/3 on the Windows NT, the company announced that there will soon be a Microsoft Corp database available for use with R/3. The implementation of the SQL Sever 6.0 by Microsoft in SAP's R/3 is the result of a long co-operation. Benchmark tests to measure the performance of the combination are planned for the second quarter of 1995. To date more than 260 R/3 systems have been installed on iAPX-86-based Windows NT systems since R/3 was released on Windows NT in April last year.

## CHECKPOINT REPOINTS FIREWALL WITH VERSION 1.2

As anticipated (UX No 531), Israeli software house Checkpoint Software Technologies Ltd announced version 1.2 of its CheckPoint Firewall-1 at Networld+Interop 95 last week. 1.2 supports all Internet ~~services and applications, can be used in conjunction with third party~~ one-time password schemes, such as Cambridge, Massachusetts-based Security Dynamics Technologies Inc's SecurID, prevents IP spoofing and now supports SNMP 2. Firewall-1's GUI acts as a kind of multiple choice table for enabling or shutting-off access from different communications systems, inspecting data on network entry and exit at each of the six logical layers of the ISO Seven Layer Model stack. CheckPoint claims it bridges traditional network security mechanisms that rely on application gateways and proxies or router and packet filters. In its view, gateways and proxies such as ANS InterLock, NetPartners Janus, Raptor Eagle and TIS Gauntlet provide security but not transparent connectivity for users. Router and packet filters from the likes of Cisco Systems and Bay Networks on the other hand deliver transparent connectivity, but are inherently insecure, it says. Firewall works at all layers, application (Telnet, Mosaic) where gateways and proxies reside, presentation (XDR), session (RPC) transport (TCP, UDP), network (IP) and datalink (where routers and packet filters operate) and hardware. Out in May on SunOS and Solaris Sparc and x86, 1.2 costs from \$5,000 for up to 50 nodes, up to \$19,000 for larger systems. Upgrades from 1.0 are free of charge with a support contract. 1.2 automatically generates router access lists for Bay Networks' Wellfleet 8 and Cisco Systems versions 9 and 10. Born from an idea handed to a consultancy by one of its clients, the concept of a Firewall product was spun-out into CheckPoint with VC funding that turned the idea into product within a year, with four developers. CheckPoint now has 20 staff split across three development groups; platforms, enterprise management and security. With network security nailed, it believes, other cookies to crumble across the security spectrum are authentication, data integrity and encryption (data security) and auditing. The company says it's got most other vendors clamouring for its attention, the next Firewall-1 implementation will be on HP-UX, other Unix versions will follow.

## SAS AUTOMATES NETWORK MANAGEMENT DATA COLLECTION

SAS Institute has added a new timestamp synchronisation component to the Unix version of its SAS/CPE network performance and analysis tool that it says streamlines access to data stored in NetView for AIX and OpenView by employing a fuzzing algorithm giving users the option of preparing data for analysis by its SAS EIS system automatically. SAS explains that the way NetView and OpenView log data is to put every metric into a separate file with its own timestamp and that unless the timestamps are synchronised, users have to summarize data manually or do some post-processing to get hourly or daily averages. It says the new component analyses and reports on disparate data sources regardless of individual timestamp behaviour. SAS/CPE licences are priced from \$3,000, annually.

## RATIONAL ADDS NEW LANGUAGE SUPPORT TO DEVELOPMENT TOOLS

Rational Software Corp has revved its development tools with support for Ada, C++, Smalltalk, Gupta SQLWindows and Trinzic ObjectPro. The Microsoft version of 2.7 can generate Word documents; the Unix versions work with Rational's Soda relational database document generator. 2.7 works with the Booch notation - with support for the Rumbaugh method to follow. Booch and Rumbaugh are currently working on a unified object method. Rational Rose, Rose/Ada, Rose/C++, Rose/ObjectPro, Rose/Smalltalk and Rose/SQLWindows are from \$500 to \$7,000 on Windows, AIX, HP-UX, Solaris and SunOS.

## DATAQUEST GET UNIX BOSSES GOAT

We don't have all the sordid details yet but last week the buzz going around was about how DataQuest had produced a report so outrageous on the face of it, that it brought outcries from the likes of HP chief Lew Platt to erase it from the face of the earth. Apparently this report or outline of a report was the source of those numbers quoted by the *Wall Street Journal* to knock Unix right before Uniform - the story that got Uniform keynoter SGI chief Ed McCracken's goat. Even Microsoft, who benefited from the comparison, was startled when the *Journal*, quoting DataQuest, said it would sell 22 million copies of NT Server in the year 2000.

## MOTOROLA SHOWS POWERPC OS RANGE

Motorola Inc's Somerset team was showing off 100MHz PowerPC 604 versions of its Big Bend desktop development machines at Networld+Interop 95 last week, claiming it's got some 300 of the things out with IHVs, ISVs and OEMs. At the show it was running a ~~Big Bend against a 90MHz Pentium, both fitted with Windows NT 3.51 and Office betas. No prizes for guessing which took the honours.~~ At its booth it had 100MHz IBM Corp PowerPC 601 Sandalforts running Solaris, AIX, OS/2 and NetWare. Like IBM (UX No 529), Motorola is shooting for 604 volumes in May, for desktops only to begin with. It says it may get some 620 beta boxes out by year-end, by which time it'll also have a PowerPC fault-tolerant story.

## COMPUTER MAJOR WANTS TO DO CRYOGENIC WORKSTATIONS

Santa Barbara, California-based Superconductor Technologies Inc, which last year announced that it was working with Sun Microsystems Inc, Ross Technology Corp and nChip Corp to build the world's first high-speed, cryogenically-cooled, workstation (UX No 508). The firm say it is now negotiating with a company that is interested in retrofitting slower, older-version workstations with the cooling technology in order to increase their speed without losing software compatibility, and that a major computer manufacturer is discussing a deal that would lead to implementation of the cooling technology in new workstations as early as 1997. Superconductor Technologies reckons that there are currently no other companies working on cryogenically-cooled workstations and says it is on schedule to ramp up production of the workstation cooling systems next year.

## NEW CUT OF ASHWIN BATCH SCHEDULING SOFTWARE

Creative Interaction Technologies, Chapel Hill, North Carolina, is offering a new version of its Windows-based AshWin automated batch scheduling software with support for PCs networked across Unix, Windows NT, AS/400 and OS/2 environments. AshWin 2.0 includes a new tree view that shows all AshWin-available systems on a network and ties into the Microsoft System Management Server, identifying all machines by class that are available for load balancing. It also has new notification feature that sends a message over e-mail, beeper, telephone, fax, NT Event Log or NetView Alert to inform the user of completed jobs or problems. A five-user licence is from \$5,000.

## AURUM ADDS REMOTE SERVICES TO CUSTOMER SUPPORT SOFTWARE

Customer support software house Aurum Software Inc, Santa Clara, California, has reconfigured its core SalesTrak system with a new GUI, multi-user support and optional support for XcelleNet Inc's RemoteWare Communications System for data synchronisation with nomadic users. SalesTrak 5.1 includes the core SalesTrak module, Admin and Serevr components. SalesTrak now includes Gupta SQL Routers, Admin sets up and administers SalesTrak data and all associated planning rules. Server supports multi-user connections to Sybase and Oracle databases and includes Gupta SQLWindows 4GL corporate edition development system. For 20 users, SalesTrak is \$1,900, Admin is \$500, Server is \$15,000 and quest reporter and report writer modules are \$250 and \$500 respectively.

## SEQUENT SETS OLAP MESSAGE

Sequent Computer Systems Inc is pitching into the on-line analytical processing (OLAP) market, targeting large organisations with multiple financial systems for software that will allow them to extract and manage data from Oracle Financials and other accounting sources. Sequent says DecisionPoint For Financials can also clean-up, integrate and load the extracted information into a data warehouse. It comes with a graphical security administration tool, SNMP system management services and query and report tools. Prices start from \$20,000.

## UNIFORM TO BROADEN ITS APPEAL

Looks like Uniform is in for a year of focus groups and repositioning statements along with the strong possibility it'll change its name no matter what Ed McCracken thinks (UX No 530). We're told Uniform must broaden its charter to soldier on and that a lot of people either don't find the name evocative - sounds too much like uniform - or identify too closely with Unix. Apparently it's going to take a lot of fine-tuning.

# unigram·x

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The first supercomputer from Intel Corp's Intel Super-computer Systems in China is going to the country's Daqing Petroleum Administration Bureau: the Paragon XP/S 5 supercomputer, sold with PGS Tensor Inc of Houston, will be used by Daqing Geophysical Exploration Co for seismic data processing in its prospecting for underground oil.

Clary Corp, Monrovia, California, added version 7.0 of its DataSave Plus power management software for its On Guard uninterruptible power supply units in Unix, NetWare and DOS flavours. The Unix version now supports X Windows, Motif and OpenView across 17 platforms. Prices are from \$250.

Continuus Software Inc, Irvine, California, which used to go by the name CaseWare, has put its configuration management software up on Silicon Graphics Inc Indy and Indigo workstations priced at from \$4,000.

Performance Software Inc, Newburyport, Massachusetts, has released its V-Test testing software for large-scale applications up on AT&T's MP RAS.

ParcPlace Systems Inc is offering a Japanese language version of its VisualWorks 2.0 Smalltalk development environment at from \$8,500 on Solaris 2.3, \$5,500 on Windows and NT.

Computer Associates is integrating Dazel Corp's output management software with its CA-Unicenter systems administration environment. Meantime, BMC Software is putting its Patrol application management software up under CA-Unicenter. Patrol modules will also be developed for other CA products.

Illustra Information Technologies Inc is putting its object/relational database technology through Nichimen Data Systems in Japan.

Innosoft International Inc, West Covina, California, will ship its version 5.0 of its PMDF e-mail interconnect software on OSF/1 from mid-April.

Legato Systems Inc is adding SNMP support to its NetWorker network storage management system and integrating the NetWorker for Unix event notification system with SunNet Manager and HP OpenView Network Node Manager. The SNMP module ships in June on Sun and IBM Unix boxes at from \$1,500.

New Hartford, New York-based Tower Concepts Inc has added version 3.5 of its issue tracking and configuration management tool with an enhanced GUI, wider project definition control and greater time and date information storage. The software is from \$500 on AIX, SunOS, Solaris, HP-UX and Irix.

Thursby Software Systems Inc, Arlington, Texas, has a new NFS implementation for Macintosh - not ported from a PC implementation it says. The Unix-to-Mac connectivity software, MacNFS, is from \$250.

IBM Corp will spend \$600m this year expanding its chip-making facilities, ending five years of spending cuts in its semiconductor business. The decision is largely due to its success in manufacturing chips designed by other companies. Chip sales are expected to cross the \$1,000m mark this year, up from a little over \$900m in 1994.

Electronic Data Services is to offer up San Jose, California-based Mercury Interactive Corp's code testing software; the two plan joint marketing and sales activities.

Fulcrum Technologies Inc, Ottawa, Canada, has an Internet search and retrieval engine called Surfboard based on its standard SearchServer text retrieval system. Surfboard databases can be searched by WWW browsers. It runs on SunOS, Solaris, HP-UX and NT and costs from \$15,000 in May.

Oak Brook, Illinois-based Devcom Mid-America Inc is beta testing new FaxFX c/s management software allowing Unix and NT servers to send faxes from Unix, Windows, OS/2, NT and Mac clients.

Software licence management house Elan Computer Group, Mountain View, California, is extending its software to the Internet, offering WebKey, a toolkit for distributing software over WWW. The WebKey toolkit includes Elan's core Licence Manager plus a 'key' which prompts a user, who has downloaded software, for information about his or her company, and provides a piece of code which unlocks the software for use. WebKey is from \$3,500.

With Mips, and now Intel washing their dirty linen in public, ie publishing bug lists for their processors, pressure is on the PowerPC alliance to do the same. Noises heard by our sister publication *PowerPC News* indicate the idea is under discussion, and that the alliance members realise they may have to respond to Intel's disclosures, but there is no consensus as to how to move forward.

French Societe Generale Bank Group subsidiary SG2 has given up on its AME systems management environment, selling the technology to Computer Associates Inc and becoming a CA-Unicenter reseller. SG2 will help migrate AME users to Unicenter. In conjunction with SG2 developers, CA-France promises to develop an AME-to-Unicenter migration route. SG2 offers Oses, open system evolution services, to European clients.

Naperville, Illinois-based Dynasty Technologies Inc says Version 2 of its Dynasty Development Environment (DDE) second generation application development system will ship in the next thirty days (UX No 521). DDE 2.0 is integrated with Tuxedo - CICS, Encina and Top End implementations will follow. It promises a new release by year-end.

Amdahl Corp says its year-long association with Foster City, California-based nCube Corp isn't dead, it's merely resting between engagements, and that its looking to grab the nCube 3.

Herlev, Denmark-based Dansk Data Elektronik has a 200MHz Mips R4400 RISC version of its Supermax Enterprise Server.

Sacramento, California-based Unify Corp is shipping the promised version 2.0 of its Vision application development system (UX No 511). It runs with the major databases and has its own messaging API. Tuxedo support is promised by mid-year. Prices go from \$5,000.

Legato Systems Inc has new modules for its NetWorker backup technology that can backup Oracle and Informix databases on-line. Oracle7 ships in May, with Informix On-Line 7.1 support due in June. Prices go from \$3,000.

IBM Japan has returned to profitability in 1994 thanks to PC and workstation sales. It scored a net of \$149.2m versus its first loss ever of \$265.6m the year before.

Tandem Computers Inc will open an office in the Philippines by the middle of the year to meet the needs of existing customers that are also setting up businesses there: ING Bank, Deutsche Bank, and Bank of Tokyo, are set to open commercial bank branches in Manila.

Guess IBM Corp really is ticked at us for doubting the longevity of AIX. RS/6000 chief Bill Filip's office called and said it'd stopped payment on the check covering his subscription to *Unigram*.

Baan Co has bought Paris-based Genesys Manufacturing which sold its Triton software and will make it its French subsidiary, changing its name to Baan France.

Ontos Inc last week expanded its Ontos Object Integration Server product to Oracle, letting object-oriented applications use information stored in existing Oracle databases without modifying those databases. Previously it was limited to Sybase. Ontos OIS is part of the company's Virtual Information Architecture, its framework for information access and distribution. OIS for Oracle will be available in the second quarter starting at \$70,000, a price that includes a developer's toolkit, a run-time licence, consulting and training.

Century Software has named its VP of operations Thomas McFarland, president. Greg Haerr becomes chief exec.

VMark Software Inc is now supporting the PowerPC-based RS/6000 SMP running AIX 4.1 with its uniVerse RDBMS. List price is \$435 a user for 4-63 users; \$365 a user for 64 or more.

Unify Corp has named James Fleming VP worldwide sales. He was VP, US sales for Borland International. Before Borland he had been with Informix as VP, US sales and client services.

SHL Systemhouse Inc has set up a three-way joint venture with the Mitsui Engineering & Shipbuilding Company Ltd and Mitsui & Company Ltd. The venture will sell SHL Transform software technology.

According to *SoftLetter* editor Jeffrey Tarter, "Apple is a brilliant hardware company under the psychotic delusion they are in the software business."

ICL plc will dish up UnixWare 2.0 on its Intel Corp TeamServers this month.

SCO's IXI chief, the Windows friendly Ray Anderson told *Computer Reseller News* that "CDE stands for Common Deadly Embrace. These people are heading down a dead end."

In a good mood last week, what with Sun Microsystems Inc stock moving - but not staying - up over \$37, CEO Scott McNealy volunteered to come and edit an issue of *Unigram*. Sounds like it might be a real gas. We've taken his suggestion under advisement.

Meanwhile, response to DEC's rechristening OSF/1 Digital Unix, Sun CEO and industry phrasemaker Scott McNealy muttered, "As opposed to what? Analog Unix?"

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.  
New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram · X

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11 APR. 1995

The weekly information newsletter for the UNIX™ community worldwide

London, April 10-14 1995

Number 533

## NOVELL WILL BE NEXT DOWN OBJECT LANE

It's as if there's a virulent case of "Simon Says" going round the industry. Now Novell Inc says it'll be getting itself an object repository and an object framework as part of a company-wide object strategy it promises to delineate "in the near future." Novell recently described some of the ways it'll bring the OpenDoc compound object technology to its NetWare, then UnixWare environments, though VP strategic planning for NetWare and object technology Joe Firmage told *Unigram.X*, it was wrong to characterise those plans as simply "componentising" its product lines. The company's long-term ambition is to offer object-oriented application partitioning with all business logic residing on SuperNOS servers, its envisaged NetWare/UnixWare microkernel meld, with Windows, Mac and OS/2 front-ends. Application partitioning, because "upsizing and downsizing converge there," Firmage says. The road to this object destination begins with the provision of an object infrastructure to NetWare and UnixWare - OpenDoc (including its support for Microsoft Corp OLE) overlaying IBM Corp's System Object Model ORB - client and server services and a common set of tools. These are not parallel developments - NetWare will get fixed-up first. However much of the work is scheduled to be available for use by Novell's envisaged common SuperNOS code-base due late next year. First part of the journey includes Compound Document Services for NetWare supporting OpenDoc, OLE and integration with NetWare Directory Services. Pre-beta OpenDoc for Windows with all OpenDoc 32-bit features is out now, an SDK of the 1.0 release is due in the autumn. Novell's application group will add OpenDoc to its packages through 1996 and 1997. Novell says it has SuperNOS code up and running utilising the Chorus Systemes SA microkernel (UX No 529), its just that it isn't showing the stuff to anyone just yet, partners or customers. It's saying it has signed an agreement with the French microkernel concern covering the further extension of Chorus' kernel for use in SuperNOS.

## SUN TAKES PERSISTENCE OBJECT-RELATIONAL LINK FOR DOE

SunSoft Inc has chosen Persistence Software Inc to provide all relational data access for its Distributed Objects Everywhere (DOE) development environment (UX No 517). San Mateo, California-based Persistence, markets a Relational Interface Generator and a Relational Object Manager, applications which allow developers to create network objects and interact directly with mixed relational database elements. SunSoft says it has chosen Persistence after evaluating all other options - UniSQL, Ontos, Rogue Wave, Next, HP and Oracle each do this kind of technology in one form or another - for its scaling and connectivity features. The Persistence technology encompasses three activities; business object mapping - automatic mapping of objects to relational tables; client object management, which enforces rules and controls transactions; and interfacing to relational databases. Developers use a front-end object model - whether an object-oriented Case tool, relational data dictionary or application object model - and generate relational interfaces using the Persistence engine which are applied across these activities. SunSoft will distribute and support a version of Persistence for DOE. Persistence is currently up on SunOS, Solaris, HP-UX and NCR Unix. An NT version with relational interfaces is due in the summer, Windows 3.1 support this month and AIX in the fourth quarter. Persistence supports Encina, Tuxedo, Oracle and Sybase data dictionaries and Paradigm Plus, StP/OMT and OMTCase tools. It claims its technology requires no hand coding of gateways or client interfaces and in-built integrity handling. This year it'll add support for Corba, offer a multi-user developer tool, intelligent client object manager and DB/2 and ODBC interfaces. OLE/COM and a repository-based developer tool are promised next year, along with a shared object manager, IMS interface and OS/2 and Smalltalk support. In 1997 Sun plans to add support for Cairo, VSAM and OO Cobol and develop an enterprise development tool and distributed object manager. Solaris users can use Persistence technology for back-end development for now; early betas of DOE's front-end application framework, OpenStep, are now promised late spring through summer, pushing a full release back later in the year.

## DEC PUTS CICS ON NEW HIGH-END SERVERS

In addition to rolling out new AlphaServers and Turbo Lasers this Tuesday April 11 (UX No 531), DEC is going to announce IBM Corp's CICS transaction processing software on Digital Unix, reportedly priced at \$7,800 for the server and \$300 for the client. Meanwhile, DEC's new high-end AlphaServer 2100 5/250, aka Gamma, based on a 250MHz model of its 21164 "BIPS" chip, will reportedly go for \$60,000 as a Unix uniprocessor with 128Mb inside and 2Gb of storage. The high-end Turbo Laser it's calling the AlphaServer 8400 5/300, also based on the 21164 chips but a 300MHz model, will go for \$195,000 as a uniprocessor. Turbo Laser Lite, aka 8200 5/300, will be \$100,000 as a uniprocessor, sources say. Its SCSI-based OpenVMS clusters, which support two or three AlphaServers or AlphaStations, will start at \$35,000.

## DCE 1.2 FINALLY NAILED

DEC, HP, Hitachi and IBM (plus IBM's Transarc) have finally nailed their joint development agreement for version 1.2 of OSF Distributed Computing Environment and will present details of their plan this week. DCE 1.2, which under the old-style Open Software Foundation was originally promised by the end of 1995, will be managed through one of OSF's Pre-Structured Technology groups. The vendors optimistically talk of having code by year-end and products by 1996, but in the five-year history of DCE we can't remember anything actually making it out on time. DCE 1.1 binaries will only begin showing this summer. The old-style OSF envisaged 1.2 as a \$10m development; the new model has whittled it down by maybe a third. Final changes were handed down though an OSF architecture programming council (APC) meeting in the UK last week. Rather than a pot of development money going to a prime contractor, this time around each vendor gets to do a piece of the work on its own platform, followed by porting and interoperability work to the other platforms. DEC and HP will be doing the majority of the work, it's understood. The goal of 1.2 hasn't changed; its focus is greater scalability, usability, manageability and easier end-user deployment. There are file system enhancements and performance tuning; the only real architectural change will be an RSA Data-type public key encryption security mechanism that'll be offered alongside existing Kerberos private key authentication. Public key security is more lightweight and doesn't pre-suppose an on-line authentication server on the network, although Kerberos offers additional security services public key doesn't. Promised enhancements to Federated Naming Service for DCE to bring it in line with X/Open's Sun ONC+-derived naming scheme will be part of a separate project. OSF politics aside - it is still facing a \$100m anti-trust lawsuit - DCE has attracted a lot of flak recently, in part because its proponents oversold it at the outset, and second, because trying to implement the technology natively has proved extremely difficult even for the largest organisations.

## PARALLEL LINES

Unisys Corp is set to unveil its long-gestating massively parallel commercial Unix boxes co-designed with Intel Corp's Supercomputer Systems Division on the 26th of this month in a worldwide announcement that will feature Oracle Corp - backer of rival MPP house nCube Corp - as the third partner. The development dates back to August 1993 (UX No 448). In response, Hewlett-Packard Co and Convex Computer Corp are expected to extend their MPP architecture - HP resells Convex's PARISC-based Exemplar MPP boxes that run native HP-UX applications - in an announcement expected out of Italy a week later. Convex badly needs a filip following a 25% dip in its share price last week after it said first-quarter results would fall below analysts' estimates.

### PLATINUM PICKS UP TWO MORE FIRMS

Insatiable Oakbrook Terrace, Illinois-based Platinum Technology Inc has just snapped up two more companies - RelTech Group Inc and Answer Systems Inc, its sixth and seventh in less than six months. Platinum has furthered its data warehousing ambitions with acquisition of RelTech, Fairfax, Virginia relational-based data repository software products specialist. Platinum says the RelTech repository technology, alongside offerings from its Brownstone Solutions acquisition, will help it in its plans to offer repository-enabled system software products for the client/server market. Terms of the agreement were not disclosed. The pact with San Jose-based client/server help desk software specialist Answer Systems is only at the agreement in principle stage, but Platinum likes the company's Apriori support automation product with its patented Bubble-Up problem resolution technology, and has agreed to pay \$30m in shares.

### WINDOWS95 TO MONOPOLISE THE DESKTOP IF IBM DOES NOT ADOPT MAC OS

OS/2 dies next year, Mac OS withers away within five years unless IBM Corp adopts it, and Microsoft Corp wins a monopoly of the desktop with Windows95. That is the gloomy prognostication of an unpublished Dataquest Inc report that has been seen by the *Wall Street Journal*. The report believes Apple Computer Inc and IBM will be swamped by a successful marketing blitz this August by Microsoft on behalf of Windows95, and predicts that IBM will kill OS/2 for the desktop sometime next year, while Apple's share of the total operating-system market will drop by more than 50% over the next five years to a perilous 5%, at which point software developers would defect in droves. Dataquest analysts recommend that to forestall this, IBM should adopt and market Mac OS for its Power Personal Systems. The report's writer forecasts that Windows95 will achieve shipments of 33.5m units in the fourth quarter alone, and that by the end of 1999, about 200m users will be on Windows 95 or its successors.

### IPC AND BULL AGREE WIDE RANGE OF COLLABORATIONS

IPC Corp Ltd of Singapore and Compagnie des Machines Bull SA have put together a string of agreements that will justify IPC taking a small stake in the French flagship computer company later this year. The two will form a joint venture to manufacture printed circuit boards in the Zhuhai Special Economic Zone in Guangdong province, China, with Bull providing equipment and expertise from its Brighton, Massachusetts plant and IPC the land, other equipment and operational funding. Both will be major customers of the planned plant. On Smart Card technology, the Bull CP8-Transac Smart Card subsidiary and IPC will form a CP8 Technology Pte Ltd joint venture in Singapore to develop Smart Card business terminals for the Asian market, excluding Japan, and develop applications in banking, identity cards, health and the electronic purse, and IPC will hold the majority stake. A second Smart Card venture, with Bull having a majority stake, will promote, market and distribute electronic payment and collection systems in China, Hong Kong and Taiwan. Products will include Bull automatic teller machines, and point-of-sale terminals from both companies. And IPC and the Zenith Data Systems personal computer division of Bull will establish a joint venture to manufacture and distribute Zenith products throughout Asia.

### SATAN: FRIEND OR FOE?

In case you missed it, there's a bit of a flap going on in Internet circles over Satan, which stands for Security Administrator Tool for Analyzing Networks. Sounds harmless enough, and the fact that it was released as freeware on the Internet last Wednesday sounds like cause for rejoicing. Not so, say critics, because while the software probes your system for its weak points, by its very nature, it also shows tyro hackers how to break in to even relatively secure systems. It was created by former Silicon Graphics Inc employee Dan Farmer with Wietse Venema, a security expert at the University of Eindhoven in the Netherlands - Farmer quit Silicon Graphics because the firm did not think much of his idea of releasing the program. Satan enables administrators of computers connected to the Internet to test their systems for security lapses, pointing out weaknesses and how a hacker might exploit them, and suggesting corrective steps - and while it is by no means unique, the worry is that it has such an easy-to-use interface that many more non-technical hackers can use it.

### TEMPLATE, SGI TEAM ON WEB VIRTUAL REALITY

Silicon Graphics Inc is extending its Internet interests with an agreement with Template Graphics Software Inc, San Diego under which the two will offer commercial products designed to deliver three-dimensional graphics and virtual reality to Internet users. The companies have introduced WebSpace, a Virtual Reality Modeling Language viewer based on OpenGL and Open Inventor, which they say adds three-dimensional viewing, browsing and navigation to Internet World Wide Web browsers from the likes of Netscape Communications Inc and Spyglass Inc. Template Graphics will be providing WebSpace for all systems, including all Unix workstations, Windows and Macintosh systems. The initiative is also said to be backed by Digital Equipment Corp, Intergraph Corp, Network Computing Devices Inc, NEC Corp, 3Dlabs Ltd, Accel Graphics Inc, Oki Electric Industry Co Ltd's Advanced Systems Inc, the San Diego Supercomputer Center, the Centre for European Research into Nuclear Physics - CERN, and Viewpoint Datalabs. Netscape and Spyglass each signed initial agreements to take licenses to WebSpace from Template. WebSpace will be available from Template within 30 days for Silicon Graphics, Sun Microsystems Inc and IBM Corp Unices, and for Windows 3.1 and Windows NT 3.5 systems. WebSpace for Hewlett-Packard Co's HP 9000 Series 700 and Power Mac will be available by summer. Supported versions are \$50. Meanwhile, graphics specialist 3Dlabs says its Glint graphics accelerator is the first device to be certified as supporting and fully accelerating the Internet Virtual Reality Modelling Language.

### APPLE REORGANISES AS DIERY QUILTS

Apple Computer Inc finally announced its major reorganisation last week, saying the changes were designed to put increased focus on expanding its presence in high-growth customer segments where it is strongest worldwide - home, education and business markets and the entertainment industry. Two new large organisations - Worldwide Marketing & Customer Solutions and Apple Research & Development are created. The first, under Daniel Eilers, formerly Claris Corp chief, will focus on high-growth market segments and will include a newly formed unit that will concentrate on the entertainment industry; both Claris and eWorld will report to Eilers. The second division, under AppleSoft chief David Nagel, will include the Advanced Technology Group, company-wide operating system and technology licensing efforts and development of Newton. Sales and support continue reporting to the heads of the three geographic units. As expected, Ian Diery, executive vice-president of the Personal Computer division, will resign "to pursue other interests" - Apple said he "decided the new structure did not provide a role that would meet his personal goals."

### INTEL "PREPARING 180MHz PENTIUMS, 200MHz P6"

The highest speed talked of thus far for a Pentium is 150MHz but according to *Infoworld*, Intel Corp plans to get the clock to 180MHz in parts to ship within the next 12 months, and is pushing the P6 up to 200MHz from the 133MHz announced. Intel may price its entry-level P6 lower than the high-end Pentiums - much as it did with the pricing of its 80486DX4 line - to get people to switch to P6. Intel's promised 133MHz and 150MHz Pentiums will ship this year, as will the 133MHz P6. In early 1996, the 180MHz Pentium and the 166MHz and 200MHz P6 parts will arrive, the paper says, adding that a 166MHz Pentium is expected to ship late this year. A new P55c Pentium variant is also in the plan according to the paper, which says it will be the first pure-CMOS rather than BiCMOS Pentium (remember IBM Corp knocked back its rights to make the Pentium because it didn't have a BiCMOS process and did not want to invest in one?) The P55c will start at 150MHz and it will feature lower operating voltages, possibly a larger cache, and some signal processor acceleration techniques for Native Signal Processing applications, the paper was told. Some advanced features of the P6, notably parts of the Dynamic Execution technology, may also be incorporated into the P55c.



### NEXT BUYS RIGHTS TO OBJECTIVE-C...

NeXT Computer Inc made a flurry of announcements last week. First, it has bought all of the rights to Objective-C and the Objective-C trademark from its creator, Sandy Hook of Connecticut-based Stepstone Corp on undisclosed terms. NeXT will develop Objective-C - Stepstone gets royalty-free rights and will continue to develop and market its own Objective-C products, including Objective-C-to-Ansi C pre-compilers. NeXTStep is written in Objective-C, a loosely-coupled implementation of C that provides dynamic binding for creating relationships on the fly. NeXT licensed Objective-C from Stepstone eight years ago. We assume Stepstone gets a lump sum payment plus future royalties out of the deal as the company says part of its business is tied to the future success and proliferation of NeXTStep and its OpenStep implementations. Stepstone says Steve Jobs' outfit is in a much better position to make a commercial success out of the language; Stepstone has accrued 5,000 licensees over its 12-year existence. Stepstone tried unsuccessfully for two years to get IBM Corp to adopt Objective-C for its object products before the company went down the Taligent Inc route, it says.

### ...SHIPS NEXTSTEP 3.3 FOR PA, SPARC, PLUS NEW DEVELOPER RELEASE

NeXT has now begun shipping NeXTStep 3.3 on PA-RISC and Sparc - 3.3 has been out on Intel Corp iAPX-86 platforms since last December. Additionally it's now shipping the developer release of 3.3 on PA-RISC, Sparc, iAPX-86 and Motorola 68000 workstations. That release is seen as the stepping stone to Solaris, OSF/1, Windows NT and Windows95 OpenStep implementations. The developer system has a new C++ compiler, but still supports the Objective C/C++ compiler for Objective C in which NextStep is written. The developer release is \$5,000, upgrades are \$1,250. Regular 3.3 is \$800, or a \$200 upgrade. NeXT is also shipping the anticipated 1.1 release of its Enterprise Objects Framework for creating persistent objects from Oracle and Sybase relational database elements. 1.1 is a dot release with performance optimisation and adapters for both databases on four NeXTStep platforms, Intel, iAPX-86, Motorola 68000, PA-RISC and Sparc. EOF applications can be deployed across DEC, HP and Sun servers running their native operating systems with NeXT's Portable Distributed Object 3.0 model atop. EOF is \$300 - upgrades are \$200.

### GATES POURS SCORN ON SUN

If Bill Gates intended to pour oil on troubled waters with his latest interview in *Business Week*, he didn't do it. Despite all the flak Redmond's been catching lately, the Microsoft Corp boss decided to be petulant and whiny about everything from the press to the Consent Decree. He certainly showed himself touchy and argumentative on the issue of leverage. Early on in the Q&A, Gates named Sun Microsystems Inc as one of the anonymous companies funding Wilson, Sonsini partner, Gary Reback, to keep the Consent Decree quashed (UX No 528). "Take Sun Microsystems," he said, about to address Sun's real motivation. "Sun is funding Gary L Reback and saying they're concerned about retaliation? Help me with that one. No reporter seems to get it. It's a joke. Sun's prices are being brought down because the PC industry is so much more competitive than the industry they're in."

### PICK STILL UNTANGLING OWNERSHIP AS SUITOR WAITS IN WINGS

Jim Zukin, the man who wants to buy Pick Systems Inc and is willing to pay cash (UX No 512), says that issues surrounding the late Dick Pick's wills, coupled with his verbal representations to people, make the question of who owns what stock pretty murky. In fact, he says, if he were to walk in there and plunk \$20m on the table the company would be hard pressed as to where to go for the stock. Still, the heirs, once the rightful ones are sorted out, have to pay death duties and may be obliged to take Zukin up on his offer. It is believed the Pick board may meet soon to wrestle with the problem. Meanwhile, Pick Systems has re-acquired rights to the Pick-based Ultimate Operating System including Ultimate Plus from its now defunct reseller and arranged with Operating System Support (OSS) in Boca Raton, Florida to provide sales and support to existing Ultimate users and dealers. Pick estimates that Ultimate OS and Ultimate Plus have been sold on some 8,000 systems worldwide including Bull, RS/6000 and HP 9000 environments.

### OEC CHANGES PRODUCT DIRECTION, OFFERS RPC GATEWAY FOR PCs, MACs

As expected, Boston, Massachusetts-based Open Environment Corp is changing gear, aiming to move from its position a supplier of tools to the distributed application development industry to become one of their own, a full-blown second generation enterprise application development house a la Dynasty and Forte (UX No 531). Release 2.1 of OEC's Entera suite (formerly Encompass) now includes two-phase commit for Oracle, Ingres and Informix databases - a further rev is required for Sybase - which OEC says negates the need for an OLTP monitor, new runtime environments, additional compiler support and front-end support for ParcPlace Inc's VisualWorks Smalltalk development environment. As part of its plan to run across all client, server and legacy systems, OEC is jointly developing an implementation of Magna Software Corp's Magna X Unix-to-mainframe Cobol 4GL OLTP environment for use with Entera later this summer. It'll generate code for Entera rather than the Transarc Corp Encina TP monitor Magna uses. Entera runs over Distributed Computing Environment and OEC's proprietary RPC - it has half a dozen or so DCE users, out of 70 in total - and will support OLE in its next release, plus Apertus Technologies' screen scraper and Blyth Software Inc's Omnis development system at a later date. It's looking at a Corba/COM implementation. OEC's also developed a lightweight gateway to run RPCs from PCs or Macintosh for those which have found Gradient Technologies Inc's PC-DCE too cumbersome, or who want access from Apple Macs. Interestingly it's also going to begin offering the gateway unbundled. Entera, which also runs across TCP/IP - applications can be recompiled for DCE without recompilation the company claims - costs from \$16,000 per developer and \$2,000 per runtime server licence. OEC expects its IPO to be complete in a week or so.

### CLIENT/SERVER LABS TO OPERATE IBM CLIENT/SERVER BENCHMARK

Atlanta, Georgia-based consultant Enabling Technologies Group has spun-out a separate division, Client/Server Labs, to operate a client/server benchmark developed by IBM Corp's AS/400 division called RMark. IBM handed the suite to ETC last month - although the move was planned last year - when it realised no-one was going to take a 'blue' benchmark seriously. IBM used Reference Platform Mark - RMark - to run AS/400s off against HP 9000 Unix and Compaq NT servers at Comdex last year. ETC believes RMark is the first benchmark that evaluates complete client/server system performance. RMark has transaction, file serving and decision support (with PCs initiating queries on the server over ODBC) and is based upon a subset of the TPC-C benchmark modified for additional client support. The composite rating, the RMark is based on the weighted average of the three workloads, the higher the rating, the better the performance. It says it has won Gartner Group and the Aberdeen Group to RMark. Annual RMark site licence is \$15,000 - testing reports will be published monthly beginning June. AS/400 division developed the thing because it wants to be taken seriously in the client/server world.

### ICL LAUNCHES ODB-II OBJECT DATABASE

ICL has now launched Fujitsu Ltd's ODB-II object database onto the European marketplace, the result of a collaboration it announced last June (UX No 493). ODB-II, which Fujitsu launched in Japan last February and for which it now has around 200 installations, is described as an "industrial strength" object database consisting of a kernel database engine, a graphical development environment called ModelWorks, and several class libraries including multimedia and document management. There are interfaces to C, C++, Visual Basic and other Windows-based client applications, and an interface between ODB-II and ICL's DIAS object request broker. It can also be used in conjunction with GraphicsPower, the development tool jointly developed by ICL and Fujitsu. (UX No 365, 368). ICL is doing all the porting work for itself and Fujitsu at its Dublin-based development labs, with versions for HP/UX, UnixWare 2.0 and Sun Solaris as well as ICL/Fujitsu's NX/7 Unix implementation for Sparc. An NT version is under development. ICL will initially target the publishing industries, and has a prototype application - the ICL Publishing Content Store. UK prices start at £3,800, single user.

## STANDARD PLATFORMS TO BRANCH OUT OF DOCUMENT IMAGING AND INTO WORKFLOW

Struggling storage and retrieval specialist, Blackburn, Lancashire-based Standard Platforms Ltd, is now expanding its range of products with a workflow offering, FlowFile. It was bought from insurance company Windsor Life of Telford, Shropshire, and Standard Platforms says FlowFile is a brand new type of workflow product, built to suit business requirements, rather than technology (UX No 531). The company had, about 18 months ago, decided to develop a workflow product itself, believing this was a logical extension to the work it had done in document imaging, but began to feel uncomfortable about the development, believing that it was reinventing the wheel. When working with Windsor Life, it found that the company had been developing, for the last four years, an office management system using Visual Basic, based on business principles, that fitted Standard Platforms' criteria for a workflow product. So the company bought it and in return for full rights to the product, Standard Platforms is installing a document image system for Windsor Life. FlowFile is an object-oriented product that Standard Platforms says is easy enough for none technical people to use. The user interface is a 'virtual office', a picture of an office and desk, with users being able to activate bits of the application by clicking on the pending tray, or the filing cabinet, and so on, in a highly intuitive manner, making the application event-driven. One of the basic concepts of the system is that each piece of work has an 'owner' who may need to have work done by other people who then become 'customers'. FlowFile has a number of parts to it: Process Designer, which enables non-technical staff to build the actual workflow process, using English, and the standards expected of case workers; Process Analyser that analyses historic cases; Case Server, which allocates work to people based on pre-set priorities and enables supervisors to monitor, in real time, workers' performance; and Case Owner, which has the virtual office interface. Although the application is designed to be simple to use, the actual object repository would have to be developed by technical staff to meet the company's requirement. FlowFile talks to desktop applications through something called the Program Register, it works with any database that has Open Database Connectivity, such as Informix and Sybase SQL Server on Windows-based systems. And it has application programming interfaces that link into most document imaging packages. It will be available this month with an entry level and evaluation version costing £3,000. A system for a dozen users will cost £1,000 per user but Standard Platforms says that for 250 users or more the costs drops to £500 per user. Unix servers, Santa Cruz Operation Inc Unix, HP-UX and AIX, and X Window client versions will follow in three to four months when the product is converted into Visual C++. Standard Platforms, one of the UK's tiniest quoted companies, with just 20 employees and a turnover of £1.5m, went back to the market last year for an additional £1.5m of funds, which it says it wants for acquisition and new product development. Despite its recent losses, it claims an impressive list of blue chip companies, and says between 150,000 and 200,000 pages are scanned per day in the UK on Unix-based document image systems that it has supplied.

## ADOBE'S ACROBAT TO BE INTEGRATED WITH NETSCAPE

Adobe Systems Inc is generating some excitement with a deal it has done with Netscape Communications Corp under which the Netscape Internet navigation product will be combined with Acrobat and its PDF Portable Document Format so users of Adobe software products for printing can give their documents the same appearance when they are put up on the World Wide Web. Mac and Windows versions of Netscape Navigator 1.1 will support the Acrobat Weblink software plug-in, a free add-on application that enables Acrobat documents to link to other documents on the Internet. The Mountain View neighbours say a jointly developed future version of Netscape Navigator will seamlessly view documents in the Portable Document Format created by Acrobat software, and they will adapt the Netscape server software so users can download PDF files in bits for faster on-screen viewing. A future version of Adobe Pagemaker will import and export PDF files and output to HyperText Markup Language more effectively than now.

## MICRO FOCUS BRINGS COBOL TO SPAIN

Micro Focus Plc, due to open offices in Madrid and Barcelona, has officially opened its 60,000 square foot premises in the capital of Catalonia, on which \$400,000 has been spent. Graham Harrison, vice-president of European sales, announced that, for the time being, no further subsidiaries would be set up elsewhere in Europe, although he did not rule out the possibility of acquisitions or mergers with distributors. Managing director of Micro Focus SA Marc Perez predicts turnover of \$2.6m for its first year of operation.

## ORACLE, PYRAMID TO COLLABORATE ON VIDEO SERVER FOR EURO TRIALS

Oracle Corp still pushes Oracle7 on nCube Corp machines as its preferred media server, but nCube is a comparatively untried company, and many potential customers will not be keen to commit their business to it. Oracle is therefore forming parallel alliances for the software and has now joined the Pyramid Technology Corp arm of Siemens Nixdorf Informationssysteme AG to put together interactive television video servers for use in trials in Europe this summer.

## NETHOLD GIVES SUN-THOMSON OPEN TV ITS FIRST ORDER

Sun Microsystems Inc and Thomson Multimedia SA have landed the first customer for their Open TV interactive television system in the shape of Nethold NV, described as one of the world's largest pay television companies. Dutch company Nethold plans by mid-year to launch interactive television services to its subscribers in Europe and South Africa via satellite, and the Open TV technology will provide access to services such as home shopping, ticket ordering, interactive commercials, interactive game shows, and improved electronic programme guides.

## TANDEM HAS CYBERWEB FOR FT INTERNET WEB SITES

Tandem Computers Inc believes that if you are going to establish a World Wide Web site on the Internet, you are going to want the thing to be fault-tolerant, and the Cupertino, California company has put together a very broad suite of products for its NonStop and Integrity Unix machines under the name CyberWeb. The suite was not assembled without a little help from its friends, which in this case include Open Market Inc, and its own Atalla Inc and UB Networks Inc; it is also working with Netscape Communications Inc and Verity Inc to extend the CyberWeb family. Tandem claims that its Web server software is the first to be scalable across multiple processors and the first to be fault-tolerant. For security, CyberWeb supports Secure HTTP and Secure Sockets layer as a separately-priced option. Verity Inc is to provide its search engine. The three components of the offering are; CyberWeb Server, for Unix System V and NonStop, with Windows NT planned; the CyberWeb Security Component; and CyberWeb Commerce Connection, which is Open Market's Integrated Commerce Service for enabling marketers to receive payment. The CyberWeb Internet Security Processor adds a hardware cryptographic system from Atalla. CyberWeb products will be available on Integrity and Himalaya this summer and under NT in the fourth quarter. Pricing goes from \$1,068 to \$12,280 for the CyberWeb Server software, \$2,857 to \$32,857 for the Security Component, and \$714 to \$8,214 for Commerce.

## CYBERSOURCE SETS UP EMERGING SOFTWARE DEVELOPERS PROGRAMME

CyberSource Corp, provider of the software.net on-line software distribution service, has set up an Emerging Software Developers Programme. The programme is designed to encourage fledgling software houses to adopt an electronic distribution channel for their products. The main advantages over traditional distribution channels are that it is cheaper, easier and faster than current methods, says James Hogan, the company's vice-president of marketing and sales. The programme is targeted at software houses with annual revenues of less than \$5m. Companies wishing to join the programme need to supply Cybersource with information on their products in HyperText Markup Language, a copy of their distribution agreement and a digital copy of their software licence. The company says the initial charge for one product will be \$1,930, and thereafter they will be charged \$1,475 for 10 or more products put up on software.net.

## INTEGRATED MICRO'S FT-SPARC LINE TO BE SOLD BY SUMITOMO IN JAPAN

Consett, County Durham-based Integrated Micro Products Plc has won Sumitomo Corp of Tokyo as a distributor of its fault-tolerant, Sparc-based Unix machines. Sumitomo will distribute the ft-Sparc system to telecommunications equipment providers and systems integrators throughout Japan, and provide sales, technical consulting and customer service. Sumitomo launched its new IMP distribution services and product demonstration centre in Tokyo on April 7.

## MICROSOFT TO FREEZE DISTRIBUTED COM ON OCTOBER 24; OBJECT VENDORS WILL HAVE TWO MONTHS TO ADDRESS IT WITH RFP REPLIES

At the Object Management Group's COM-to-Corba Task Force vote in Cambridge, UK last week, Microsoft Corp voted against the final decision to issue a two-part RFP: one for existing OLE and one for COM (UX No 532). It wanted - and had drafted along with DEC (UX No 503) - a single RFP that would have allowed submitters to respond to either entity. This problematical proposal was rejected by OMG's Task Force.

~~After 40 minutes of discussion, we are told, Sybase made a motion and a vote was subsequently taken on OMG boss Chris Stone's suggestion~~ that it issue a single RFP in two parts - virtually two separate RFPs stapled together - with different dates for submissions. The COM part of the

RFP has a longer response time (December 22) than the OLE part (August 22). Both Microsoft and DEC voted against this compromise but, Stone says, without being alienated or driven from cooperating with OMG further. The leavening agent that makes this concoction work is that - thanks to prior negotiation - Microsoft agreed to freeze its COM specification on October 24, the day after letters of intent to reply to the COM Part B section of the RFP are due. This concession gives the industry two months to respond to COM as it actually will be and insures that Microsoft will be responding to the same specification everyone else is. Object vendors walked away from the meeting apparently feeling they won't be inevitably outflanked by Microsoft and its ability to change the COM spec to suit Redmond's strategy of hegemony at the last minute. Microsoft's decision process has little to do with any desire to deal with OMG. The reason it's conceded the COM specification, we understand, is because of pressure from large users, such as British Telecom, who have demanded its participation in the object standards process as a prerequisite for future procurements from Microsoft. As one insider put it, "Microsoft couldn't have ignored it even if they had wanted to." As everyone now seems to agree, issuing the RFP is not a big deal. The real fun begins - the \$@%\* hits the fan - as one party succinctly phrased it - when the responses come in. The main issue then will be whether COM technology becomes a central part of OMG's architecture, or whether it is treated as DEC's DCE proposal was, to the Corba 2 UNO decision, as just a bridge or gateway.

*Below is what Object Management Group president Chris Stone sent in last week and asked that we run as a letter to the editor. Mr Stone is unhappy with our coverage of the RFP affair in the last issue (UX No 532).*

Last week's *Unigram X* lead story read "Microsoft Rejects Two-Part OMG COM to CORBA RFP" was yet again another example of how misinformation, however well intentioned, gets mangled. This was probably my fault. I should have learned from past articles to call you first, but I digress....

First - OMG and Microsoft are NOT at odds with each other. To the contrary, there is NOT a huge dent in Microsoft's cooperation with OMG. (see the press release we just issued with Microsoft quotes). Furthermore, "fears that this will escalate further" is something for Sporkin to worry about, not OMG.

Second - Microsoft did NOT vote against issuing an RFP - they proposed the RFP! They were against issuing \*two\* RFP's, one for existing OLE and one for COM. They wanted (and drafted) one RFP that allowed submitters to respond in any way that they desired. This did not make it by the Task Force. The only thing highly charged about this was the Cambridge police SWAT teams aiming automatic weapons at the Pizza Hut next door (and you thought this was an American phenomenon?) After 40 minutes of discussion, a motion and vote was then taken to issue a single RFP, in two parts (which was MY idea, so blame me) with different dates for submitters. The COM part of the RFP having an elongated response time over the OLE Part.

Third - This whole issue centered around available documentation for COM. Vendors were concerned (and rightfully so) that this would be a moving target since Microsoft build products, not specs. So Microsoft agreed to a date (finally) of October 24, 1995 which will be the freeze date for submitters to respond to the COM RFP.

Fourth - Why the hell is issuing an RFP such a big deal in the first place? The real fun (if you're a masochist) will be when the responses come in to the RFP's. This is where the technology meets the rubber, which meets the road.

## FEW FEET FIT THE DCE BOOT

The chorus of DCE-naysayers swells by the week, however industry-watchers we spoke to believe supposed lack of DCE deployment speaks mostly of the fact that there are few organisations yet capable of exploiting its enterprise functionality. Moreover for those complaining DCE doesn't fit lower down the scale, well DCE simply isn't designed to live there, at least not yet, they say. What's true is that ISVs are slow in coming to the environment. Even apparently rising stars in the client/server world you'd think would be ripe for DCE, such as SAP AG, has no plan to accommodate it into the guts of its R/3 financial and accounting software, although it will allow DCE application to attach themselves. SAP, which looked at DCE along time ago, instead plumped for a lightweight, proprietary RPC called Remote Function Call, which supports SAP application-related traffic. Swapping-in DCE would require heavy-duty hacking and once you're in RFC, your in for the count. As a result, R/3 enjoys none of DCE's benefits, having only minimal or non-existent network security, unlike rivals such as PeopleSoft Inc which is trying the DCE boot for size.

## COMPUTER LICENSES GUPTA'S SQLBASE TO CREATE CA-OPENINGRES/DESKTOP

Computer Associates International Inc, Islandia, New York has paid \$7m for a non-exclusive OEM licence to Gupta Corp's SQL-Base and made a \$10m long-term loan to Gupta, Menlo Park, California. Computer Associates is using the SQLBase database technology as the basis of a new CA-OpenIngres/Desktop. Desktop is designed to enable clients to work remotely and still have full database functionality at the desktop without sacrificing the power and capabilities of CA-OpenIngres database server. Complete gateway and replication features are available when the desktop system is connected to the server via a cellular or other communications medium. The aim is to enable Ingres users to extend their existing applications to Windows desktops and mobile computers without compromise. Gupta will be helping with the development work and the first iteration of CA-OpenIngres/Desktop will be integrated with the CA-OpenRoad application development tool to provide applications - on any system using any database - with a wireless deployment environment. No date was given.

## LEGENT ADDS SPECTRA LOGIC BACKUP SOFTWARE, NEW HSM SOLUTION

Legent Corp has added new network backup and storage software packages as Reliance/XP. There's a new hierarchical storage management software for Sun, HP and IBM Unices called Reliance/XP Open Storage Manager. It doesn't replace existing files systems, the company says, but migrates them to disk, leaving stub files behind to provide a consistent file system view. Now up on Solaris 2.4 and HP 700s at from \$6,500 - \$25,000 for a 20Gb system - Reliance/XP will feature on RS/6000s from June. Reliance/XP Network Backup & Restore is built from the Alexandria Backup Librarian software Legent is OEMing from Boulder, Colorado-based Spectra Logic Inc. Up on Sun, HP and IBM Unices and supporting Spectra Logic, Exabyte and Odetics storage systems, prices go from a base \$6,500 to \$25,000 on one server, 25 clients and support for two relational databases. Spectra Logic will add support to Alexandria for Legent's Agent-Works for managing systems, network and databases. Legent claims the Unix-based NBR won't supersede or conflict with its existing ESM backup software for OS/2 and Windows NT LANs. NBR is up against the likes of Epoch, Computer Associates and Legato solutions.

## FRANCO-AMERICAN ALLIANCE SETS OUT WORLD WIDE WEB STOREFRONT AS CERN HANDS OVER THE BATON

By Marsha Johnston

In the coming months, network security and commercialisation issues, such as how to create paying services, will be the highest priority subjects for Internet development, says Olivier Muron, director of promotions and technology transfer for France's INRIA National Institute of Research in Informatics and Automation. Up until a few weeks ago, INRIA was just another Internet service location and M. Muron's sentiment would have been just another Web user's speculation. But following an agreement with CERN, the Centre for European Research into Nucleonics, in Geneva, INRIA, along with the Massachusetts Institute of Technology, is now responsible for supporting and managing the evolution of World Wide Web technology (UX No 527). CERN has been the centre of Web technology development since Tim Berners-Lee, a CERN researcher, invented the thing in 1989.

### Elite

That the invention came from the elite international community of high-energy physics was not surprising, since it "is a very geographically distributed and computer-literate community that has been using computer networks to distribute documents and for electronic mail for a long time," says Mike Sendall, secretary for CERN's Large Hadron Collider experiments committee. The World Wide Web was a welcome development because it alleviated the physicists' headache of using multiple incompatible networks around the world to exchange the voluminous test data that is critical to better understanding the behaviour of the universe. Having invented Web technology, CERN naturally developed as the centre of the standardisation effort for "the Net" (the Internet). "In the early days of the Net, it was entirely appropriate for us to be the focus of activity," Sendall says. Today, however, is an entirely different story. No longer is the Internet the privileged domain of a largely academic computer user audience. The Internet Society reported that new Net subscribers grew 22% in the fourth quarter of 1994 alone, while the .net domain, used largely by commercial service providers, increased by an astonishing 66%. At this rate, the society predicts the Net will count 100m hosts by 1998. "The centre of gravity has shifted, if you like; the Net is now of much broader interest than just to our community," Sendall said, by way of explaining why CERN chose to disengage itself from Web development and promotion. "It was a question of the amount of work there is to do and to what extent it maps onto CERN's mission," said Sendall. He added that the approval in December of the collider project made it increasingly difficult for CERN to continue its historic Web role. At the time, Sendall was already in discussions with the Massachusetts Institute and the European Commission on establishing joint European-US support for the Web standards.

### Hottest companies

"Both the EC and CERN wanted a strong European presence with the standard and INRIA seemed like a good bunch of people to take it over," he said. Indeed, INRIA has been the starting point for some of France's hottest young information technology companies, including object database management system developer O2 Technology SA, C++ tools developer ILOG SA and Standardised Generalised Markup Language expert Grif SA. Aside from running its own professional Web service, INRIA developed "100 Years of Light in the Paintings of French Museums" as a Web service for the Ministry of Culture and was retained by the European Community as a "national host" for advanced Web services in its Advanced Communications Technologies & Services. "INRIA has done quite a lot of Web development. They have not played a big role in central standardisation issues, but they are quite experienced in networking and security issues," Sendall said, adding that those are the two most important areas for The Net at this stage. Jean-François Abramatic, INRIA's director of development, says he and Massachusetts expect to conclude a memorandum of understanding on the details of their collaboration by the end of the month. "There are no problems, everything is moving along as it should; everyone is full of good intentions that the uniform standards will be maintained," he said. No decisions have yet been made on how to split development duties, he said. Service support will be "divided up more or less geographically to minimise our telecommunications charges, but it will be transparent to the user," he said. Broadly stated, however, INRIA and the Massachusetts Institute's work will comprise four main areas: evolution of Web components, including the HTML HyperText Mark-up Language, the http and url client/server dial-up protocol, the universal residence locator; development of a reference code; supply of general information about the Web; and promotion of the technology and its distribution. Muron noted that ergonomics and further improvements to the HyperText Language, such as better means for handling maths formulae and text

flows around illustrations, are also on the table for development. Sendall said CERN will continue Web developments that are targeted specifically at its own user community, rather than generally focused issues. "We want to stay in the game for our own community because we see the Web as an essential tool in maintaining coherence in our large physics collaboration," he declared.

### Computing power

Muron places great importance on the informational aspect of INRIA's charter. "We have to provide enough detailed information about the Web so that someone who doesn't know anything about it could learn on their own how to use Web technology," he said. In the meantime, INRIA is planning for an increase in its current computing power. "We already have a Web service, but it doesn't get the same volume of access. To pass to the level of directory service consultation as CERN's, which is automatically accessed by thousands of users every day, we need bigger workstations and increased network capacity," he said. Sendall is not worried that CERN's departure will cause Web standards to evolve away from the requirements of its users. "We use lots of other standards that we don't define," he quipped.

## MCI, SUN AND QUANTUM TO HOST WORLD'S FAIR IN CYBERSPACE

A heady mix of US government sponsorship and corporate clout plans to stage a world's fair in cyberspace next year. The Internet 1996 World Exposition will be designed to educate the uninitiated into the delights of the Internet. The fair will be played out on computers systems in the US, Japan, the UK, the Netherlands and Thailand and will be backed by corporate sponsors including MCI Communications Corp, Sun Microsystems Inc and Quantum Corp. It will include a number of virtual "pavilions." The "Reinventing Government Pavilion" will include a database of all US patents, trademarks and Securities & Exchange Commission filings while the "Global Schoolhouse Pavilion" will feature live video broadcasts from Washington's Kennedy Centre and cameos of swimming fish at the Tokyo Aquarium. Other electronic displays will address small business use of the Internet and a "Town Hall" feature that will broadcast monthly video sessions from the National Press Club in Washington. Another pavilion, ToasterNet, will broadcast the winners of technology-invention contests at trade shows sponsored by Japan's Softbank Corp. Quantum is donating the \$500,000 worth of disk storage for the event which it says will amount to more than 1Tb of storage space. The Internet Multicasting Service, a main organiser of the event, says it plans to establish a high speed T-3 telecommunications link up to all computer systems involved which will remain in place after the event as a public resource. SSDS Consulting Inc, based in Englewood, Colorado is donating a technical engineer to work on the project full time.

## COMPUTER PRICES "ARE TOO HIGH" SAYS MIT MEDIA LABS CHIEF

Visiting the UK last week to promote his new book, *Being Digital*, Internet guru Professor Nicholas Negraponte of MIT's Media Labs told a packed audience at the University of London that computer companies were keeping the price of computing artificially high. "Andy [Groves] makes a faster processor and then Bill uses more power, Andy makes another and Bill uses more". He predicted that within two years the Internet market explosion would force companies to go back to basics and start offering 286-based bare machines with NetScape built in for \$75. When someone in the audience from Silicon Graphics Corp tried to plug his company in the guise of a question, Negraponte told him "Your computers are too expensive, and you are miserly about contributing technology to universities".

### SOFTLAB TAKES MAESTRO TO CLIENT/SERVER; CREATES NEW UNIT

Next generation tools for Softlab GmbH's Maestro II maintenance environment for legacy systems will be developed by a new software development unit being created at Softlab's US base in Atlanta, Georgia. Recently appointed (UX No 524) Softlab Inc president and CEO Mark Bartolomeo expects to hire 20 developers this year for the group and plans to more than double the US unit's overall headcount to 100 - and its \$130m revenues - over the same period. The new group has worldwide responsibility for product management, marketing and development of the Maestro II maintenance toolset. Softlab, which has around 800 employees worldwide, is owned by German car manufacturer Bayernische with headquarters in Munich. Maestro II provides the ability for workgroups to maintain legacy Cobol and other mainframe software from client/server systems, to automate workflows across mixed environments and ultimately identify and redevelop legacy components for client/server deployment. Now up to rev 4.0, the five-year-old Maestro II is currently hosted on Unix servers, fronted by Windows or OS/2 process and configuration management tools, and linked to mainframes - where the production environment remains - over various SNA or TCP/IP connections. A future cut of the technology will bring support for mixed legacy-client/server configurations. Softlab will put up a repository and all communications functions on Unix or Windows NT servers. The company has already created a Tool Integration Facility layer for integrating third party solutions such as Cobol Workbench, Endeavor Link, Digitalk Inc Parts and McCabe & Associates Tool Set. Its existing maintenance tools will also attach directly to the Unix/NT host. A software distribution component that will shoot data back over to all attached nodes in a system, and up to mainframes, is currently in beta at Dresner Bank in Munich.

### POET UPGRADES DATABASE TO ODMG-93 RELEASE

San Mateo, California-based Poet Software Corp will ship Poet 3.0, its long promised ODMG-93 (Object Database Management Group) compliant object database next month (UX No 479). Unix versions will have to wait until the end of the quarter, but in the meantime the database is up on Windows for Workgroups, Windows NT and Novell NetWare. Poet is a C++ ODBMS with support for encapsulation, inheritance and polymorphism. It boasts object querying, sorting, indexing, transactions, class versioning, container classes, variable string and binary large object (BLOB) types. It includes support for OLE and ODBC, schema versioning, check in/check out (loading part of a database onto a notebook computer), on line back up and a workbench which includes class and object browsers. Poet includes the ODMG type classes in its C++ interface with Poet OQL (Object Query Language), which it claims, enables queries of complex objects and navigation with syntax similar to SQL. Poet is still working on the SmallTalk subset of ODMG-93, saying its due by the end of the year. Next month it will reveal third party tools including CASE, GUI and report writing. Poet 3.0 is up on HP, IBM, Sun, SGI, OS/2 and Macintosh later in the quarter. No prices.

### DEC CLAIMS WORKSTATION LEAD WITH \$20,000 ALPHASTATION 250

Digital Equipment Corp last week launched the first workstation built around its hot (it dissipates a daunting 40 Watts at peak) new 266MHz Alpha 21164 RISC, which was introduced last September. The part is rated at 290 SPECint and 440 SPECfp and the workstation starts at \$20,000 with Digital Unix (\$13,900 running NT), said to be substantially cheaper than any other high-performance workstation. The company believes that the market is finally ready for the Alphastation 250, as the machine is called, because major software vendors have now caught up with its technology and have optimised their code for 64-bit working. DEC claims that the new AlphaStation 250 is 50% faster than any competitor in many types of operation, and is less than half the price of systems that perform scientific floating-point operations equally fast. \$20,000 buys a system with 32MB RAM, 1Gb disk, floppy drive, CD-ROM, 21" colour screen, the 17.3 Xmark 93-rated ZLXp-E1 eight-plane 2D graphics, Open3D licence, NAS 150 licence, Digital Unix or OpenVMS base licence and multimedia services. The \$13,900 NT configuration has 32Mb RAM, 535Mb disk, CD-ROM, 17" colour screen and DEC 864 2D graphics.

### CHIPSHOTS

Looking at the performance of microprocessors in currently available systems, Andrew Allison notes in the latest issue of his *Inside The New Computer Industry* that Ross Technology's HyperSparc II "is not only the best of breed Sparc... but is also neck-and-neck with the PA7100LC for second place overall" behind Alpha 21064. PowerPC doesn't even figure on Allison's Q1 95 relative performance table, which uses the 100MHz Pentium's integer performance as a mean; Alpha 21064 leads HyperSparc II, PA7100LC, R4400, SuperSparc II, Power2+, Pentium, R8000 and R4600 in that order. "The poor showing by Power and PowerPC should be of concern to PowerPC fan club," he says; "it's also noteworthy that the R4600, the processor currently used in most of SGI's Indy products, is outperformed by Pentium". DEC, meanwhile, "clearly has the edge in the performance-sensitive segment". If the company can ever figure out how to get its story across, it has the opportunity to repeat the HP 'Snakes' story. A look at Allison's Q1 96 table for performance based on production systems due by then - with P6 integer performance the mean - sees Alpha 21164 ahead of PA8000, then PPC620, R10000, UltraSparc and PPC604. Based upon tape-out, UltraSparc has a five month lead over the three other new processors and is about nine months behind 21164, Allison estimates. Q1 96 DEC and HP boxes will offer twice the per-processor integer and three times the floating-point performance of the best Intel boxes. "PowerPC, UltraSparc and perhaps Mips-based systems will offer roughly 50% better integer and twice the floating-point performance. The 64,000 dollar question is whether that's good enough to prevent Intel ISA systems from decimating the workstation and server markets". Only if there are "clear price/performance as well as performance advantages," Allison figures. The next big issue, he acknowledges, is funding development of processors that'll compete with HP/Intel and the pressure they'll bring to jump architectures.

### INSTRUCTION SET FOUNDERS FORM NEW DISTRIBUTED COMPUTING COMPANY

The Instruction Set founders (and co-authors of Unix - the Book) Mike Banahan and Andy Rutter have formed a new company, The Ratio Group, to concentrate on software product distribution, consultancy services and education in the UK. The current staff of ten also includes ex-Instruction Set members Mike Southern and Frank Burnett-Alleyne. Based in Fulham, South West London, Ratio's aim is to help customers get the best out of distributed computing. To kick off with, Ratio has signed up XVT Software Inc for its cross-platform C++ development tool. XVT recently broke up with its long-term UK distributor Personal Workstations Ltd (UX No 531). Ratio will also distribute NobleNet's EZ-RPC remote procedure call toolkit, and says it is looking for two or three other companies that provide portable rapid application development tools that won't lock customers in. On the services side, it aims to build up a pool of skilled consultants for systems design work. The Instruction Set, early pioneers of Unix kernel hacking, was eventually sold to Hoskyns in October 1989 (UX No 252), but most of the original members left Hoskyns some time ago. They claim some of the original frisson has been carried forward to the new company.

### DEC REV'S WINDOWS OLTP TOOL

With a wide-reaching upgrade to its Admire forms-based online transaction processing tools due mid-year (UX No 518), Digital Equipment Corp has come out with a dot release of its Windows-based DECAdmire for Visual Basic on OpenVMS. The rapid application development tool uses an OpenVMS repository for generating Visual Basic application objects, forms definitions, stored procedures and project files. DECAdmire supports Visual Basic clients with enhanced ODBC, accessing Rdb, Oracle and Microsoft SQL Server databases. It also supports Visual Basic clients with generic ODBC, accessing any ODBC-compliant database on any platform and ACMS on servers. Digital Equipment Corp claims 135 Admire customers and is seeking 300 more by year-end. Prices start at \$700.

# unigram·x

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Remember the **IBM Corp** envelopes saga a year ago, when chief financial officer Jerome York was finally energised to get to grips with the fact that the company had four classifications of confidential envelopes - IBM Internal Use Only, IBM Confidential, IBM Confidential Restricted, and Registered IBM Confidential (that actually meant Top Secret, cleverly disguised so that only IBMers would know it), and two sizes for each level of security - to meet its requirement of 4m envelopes a year, plus a rule book to spell out which level of bureaucracy had access to each level of confidentiality? York finally blew his top when he received a particularly tame memo sealed in an IBM Confidential Restricted envelope, and 12 months later, IBMers finally have only one category of secrecy - IBM Confidential, and only one size of envelope - but why did it take so long? Well the old envelope contract didn't run out until July and then a "migration plan" had to be set up to help employees declassify hundreds of electronic documents - and anyway, notes Dow Jones & Co, it is going to take a while to use up all the old envelopes.

**IBM Corp's** GUI/400 AS/400 interface (UX No 532), comes from Dordrecht, Netherlands-based **Seagull Business Software BV**, with a base in Poway, California. IBM has licensed the run-time version. The Dutch software also crops up in Atlanta, Georgia-based **American Software Inc's** DeskPro for AS/400 application, which provides a Windows interface for its suite of AS/400 Supply Chain Management software. American Software is also distributing GUI/400 development kits so that users can extend and customise DeskPro.

**Sun Microsystems Inc** employees are used to shocks from their cheerfully outrageous chief executive, Scott McNealy, but they were a bit non-plussed on Saturday when a message from the boss advised "I think it is crucial at this moment in Sun history that we take a hard look at our dress code - are jeans and Hawaiian shirts really appropriate for representatives of a \$5 billion company?" and directed them to an image on their computers of the new dress code, which showed McNealy in tuxedo - and tennis shoes, with paper clip cufflinks.

It's clear that **Integrated Micro Products Inc** gets homesick for good old Medomsley Road, Consett when it's across the Atlantic, but to try to feel a little more at home, it sited its North American headquarters in Bannockburn, Illinois.

Suppose that means the band Half Man Half Biscuit will have to change its name to Half Man Half Wafer if it's still around. **Sun Microsystems Inc's** head of research Michael Deering tells last week's edition of *Computing* in the UK that a new breed of hybrid humans - part human being, part computer - may be more than science fiction, and that chip-grafting could create such hybrid humans. Stanford University has already grafted silicon chips into the legs of rabbits, Deering says, and prisoners in some Scandinavian jails have volunteered to take part in research assessing how chip grafting works on humans... haven't they heard of heart pacemakers?

**Bell Atlantic Business Systems Services** got its knickers in a twist when we said that it was Bell Atlantic that was putting its 49% stake in the Sorbus third-party maintenance business into ICL Sorbus. ICL owns the rest and the pair have created a third entity (UX No 527).

**Sun Microsystems Inc** and **Oracle Corp** announced a marketing agreement for selling Oracle client/server database software for use on Sun's Sparcserver and Sparcstation computers and personal computers. The plan calls for SunIntegration to become customers' single point of contact for buying and getting support for the full range of Oracle client-server database and enterprise management software offerings for the Sparc machines and personal computers; the two companies will also be offering a range of products for transaction processing and decision support systems.

**The Object Management Group** is billing itself as the world's largest software development consortium, a dubious distinction at best.

NT house **Aspen Systems** in Colorado is using a 21171 cut of DEC's hottest 21164 Alpha chipset for new Digital Unix and OpenVMS boxes dubbed Timberline. Aspen expects boards based upon 21171, otherwise known as Alcor, by the end of the month. Aspen says rival 21164 house, **DeskStation Technology**, can't get Digital Unix or OpenVMS up on its architecture. Timberline could demo in May and ship in June. DEC could have Alcor boards and a box at Comdex Spring next week. Other 21164 chipsets in the works at DEC are the systems group's Mizar and Kodiak, from the semiconductor unit.

**The Transaction Processing Council** has got its TPC-D decision support benchmark away; TPC says decision support is characterised by a few users executing complex queries against large data volumes and TPC-D models the analysis end of a business where data produced by an OLTP application is queried to compute trends and aid in the decision making process. TPC's got three more OLTP benchmarks earmarked for this year. TPC-D has 17 queries, the metrics test for raw speed OppD, concurrent execution of queries OthD (per hour) and cost per query, OphD.

Satan can't get into **Harris Computer Systems Corp's** Unix: the company says its B1 secure CyberGuard firewall saw off Satan on its release last week.

**Illustra Information Technologies Inc**, Oakland, California, and **Virage Inc**, San Diego, California, will debut their jointly-developed Visual Intelligence image retrieval system based on Virage's Visual Information Retrieval system in a new **Illustra VIR DataBlade**. With the Visual Intelligence GUI, the datablade will search any kind of image by clicking on a sample image, sketch or scanned image. The VIR DataBlade and Visual Intelligence GUI ship mid-year at from \$1,000 and \$600 respectively.

**Weitek Corp** is cutting prices of its Sparc Power Up upgrade chip for SparcStation 2 and IPX workstation users to \$800 from \$1,000 - kits with installation tools are \$1,000, down from \$1,200.

**SunSoft Inc** has licensed **Tektronix Inc's** SerialXpress connectivity software and will integrate the serial PC-to-X technology into Solaris as SolarNet PC-X, for out-of-the-box PC-to-X client networking.

**Computer Associates Inc** is now promising its White Paper on OpenIngres 2.0 this month.

**Unisys Corp** has unveiled an integrated storage system including disk, tape and optical drives. Prices go from \$50,000 on U6000, Sun and HP servers.

**Cincom Systems Inc**, Cincinnati, Ohio has a suite of object software called Total Framework which includes an object-relational database, object-oriented application development environment and workflow technology. Cincom says it still intends to develop its **SupraServer** relational database (UX No 475), adding more functionality in May, but is looking to leapfrog the competition with its object-relational stuff.

Almost as an afterthought, **Open Software Foundation** says an end-user from its membership will sit on a Project Steering Committee alongside representatives from **DEC, HP, IBM, Fujitsu, SunSoft, Novell, Hitachi** and its own staff, to manage the Common Desktop Environment/Motif Pre-Structured Technology group that's been given the nod by the OSF board.

**Hewlett-Packard Co** neglected to mention that its new 2,616 tpm-C/\$544 tpm 3.0 four-way K-Class PA-7200 server was beaten by the latest **IBM Corp** RS/6000 four-way J30 numbers which are 1,410 tpm-C at \$497 tpm-C. In fact *Inside The New Computer Industry* believes the HP \$/tpm numbers are not comparable to any other TPC-C result published prior to Feb 15, expecting HP to come in at around \$750/tpm on an apple-to-apples comparison.

According to market researcher **IDC** 18% of European users surveyed now have a lower commitment to Unix because of the introduction of Windows NT.

Remember when **Hewlett-Packard** told everyone it was closing down its Exeter, New Hampshire-based workstation plant last year, well the company seems to have changed its mind and given it a stay of execution and it will remain in operation for the foreseeable future.

New York's **Magna Software Corp** has introduced the anticipated release 2.1 of its Magna X Unix-to-mainframe OLTP development environment (UX No 530), and has added an interface to Informix. 2.1 automatically creates Visual Basic client services and access to **Sybase, Oracle** and **Informix**.

Will Ed Zander live up to his commitment to a level playing field, Andrew Allison's *Inside The New Computer Industry* wonders. **Sun VARs** are currently barred from carrying Sparc-compatibles which SunService won't service in any case.

The **Silicon Graphics Inc**-derived OpenGL graphics library API is gaining momentum in its bid to become the three-dimensional application programming interface of choice, especially with Microsoft Corp backing it. It's overshadowing the old PEX lib, beloved of **Sun Microsystems Inc** and **Hewlett-Packard Co** as a significant 3D API. **Template Graphics Inc** is already offering the stuff pretty much wherever ever it's not available natively. Would it come as a surprise to learn that Sun is steeling itself to utter to "O" word? The company wouldn't confirm or deny rumours last week that it plans to support OpenGL natively on Solaris, but admitted that it "could" make sense.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram · X

The weekly information newsletter for the UNIX™ community worldwide

London, April 17-21 1995

Number 534

## DEC AND ORACLE PITCH RAW SPEED AND RAM AS THEIR MAINFRAME CHALLENGE...

Digital Equipment Corp has finally found a use for its 64-bit computing environment, a premature architecture we once said was built in response to a dog whistle that only DEC could hear. Last week, thanks to Oracle Corp, it was able to claim phenomenal improvement in handling large databases by coupling the raw speed of its 300MHz 21164 Alpha with huge amounts of random access memory (RAM) to a new 64-bit Oracle Corp technology called Very Large Memory (VLM). Oracle7 and Rdb varieties of VLM exploit DEC's 64-bit Alpha and Unix enabling the database to address large amounts of main memory, map huge chunks of a database directly into RAM, and perform I/O operations in 32Kb chunks rather than 2Kb packets. DEC's new 8400 5/300 and 8200 5/300 AlphaServers (the Turbo Lasers), have from one to 12, and one to six, CPUs and up to 14Gb and 6Gb RAM respectively. Running VLM on them, users can expect performance increases of between three and twenty times over the same applications running under 32-bit Oracle environments on the same platform, according to Oracle president and CEO Larry Ellison. The combination will drive tasks where SQL statements repeatedly use all of the data in a database block - such as decision support, or very large row/multimedia applications (video-on-demand) and GIS - at warp speed. It will be less useful in applications such as OLTP in which many concurrent transactions access small pieces of data. DEC and Oracle plan to extend VLM on AlphaServers with support for diskless sorting and new tuning/prediction tools.

## ...TURBO LASERS SEEN AS KEY TO DEC'S FORTUNES

With Turbo Laser apparently key to DEC's strategic turnaround and the growth of its core business, DEC chief executive Robert Palmer billed last week's announcement the most important since he took over two years ago. Ellison was excited enough to describe the combination as the first Unix solution that is faster and more reliable than a mainframe, citing one customer that benchmarked IBM Corp's DB2 on a \$20m IBMulator against Oracle7 on a \$1m AlphaServer and found that one application that took nine hours on the mainframe took 30 minutes on the AlphaServer. One problem is, as analyst Amy Wohl pointed out, that system cost is on average way down in seventh place in users' lists of considerations for transitioning to open systems, whilst overall cost of servers is small compared to the cost of the end-user seats they support. With the addition of a new PCI Memory Channel interconnect from its Alpha partner Encore Computer Corp (on AlphaServer 2100s this summer, on Turbo Lasers in the autumn), DEC expects to be able to string up to four, and then eight systems together as AdvantageCluster Production Servers, and promises to overhaul Tandem Computer Inc's industry-leading 20,000 tpm-C performance by July. Full cluster file system and single-view system management environments won't figure until 1996. DEC estimates Turbo Laser uniprocessors at 425 tpm-C, six-ways at 2,000 tpm-C and 12-ways at better than 3,000 tpm-C. The 8400 goes to 91,580 SPECrate\_int92, 140,571 SPECrate\_fp92 and some 9,000 AIMS (compared to 4,000 on the biggest 7000 system) as a 12-way, with a maximum 144 PCI slots and over 10Tb disk. It comes in the same housing as DEC's previous top-end 7000 series. The 8200 goes to 50,000 SPECrate\_int92 and 71,000 SPECrate\_fp92 as a six-way with 108 PCI slots. Both use DEC's 300MHz 21164 cut of EV5 Alpha AXP - the company already sees two further generations of this part destined for future Turbo Laser models. \$100,000 buys a uniprocessor 8200 with 128Mb RAM, 2Gb disk, Digital Unix or OpenVMS; it's also available as a rackmount. An 8400 with 256Mb RAM and 2Gb disk is from \$195,000. VLM will be available on OpenVMS as soon as the 64-bit cut of that OS is finished at the end of the year. NT will figure later, DEC says. The Turbo Lasers are out in May. VLM is an option for existing Oracle7.1.6 and Rdb 6.1 users - it'll be free of charge for customers of next Rdb and Oracle7.2.2 releases. A detailed explanation of what Turbo Laser means is being offered by DECwatchers Illuminata this Tuesday 18th; call +1 212 595 4918 for info.

## SEQUENT MOVES UP A GEAR TO 100MHz, PITCHES SCALABLE INTERCONNECT WITH ORACLE7 AGAINST "EXOTIC" MPP

Sequent Computer Systems Inc is pumping up its Symmetry 5000 boxes, adding 100MHz Pentium processors, enhanced I/O controllers, memory controllers and Dynix/ptx 4.1 operating system software to the commercial SMP Unix line. Eschewing what it describes as the "exotic" world of massively parallel computing - although that appears to fly in the face of other developments, *see opposite* - Sequent hopes to unveil its promised Scalable Data Interconnect (SDI) for distributing complex database queries across as many as 120 Pentiums in clustered SMP nodes in September. SDI will utilise new ptx/Cluster 1.3 software linking up to four Symmetrys. Sequent is hanging its hat on an optimised version of Oracle Parallel Server and Query for SDI being ready around the same time. Oracle is currently the only environment in sight that will be able to use SDI. Oracle is working to shift its MPP-only environment on to a clustered SMP architecture, has SDI in-house and says it thinks it will work, but offers no dates, except around year-end. The new 5000 SE30, SE70 and SE100 models come in for existing 66MHz SE20, SE60 and SE90s which can also make use of the new processor and other technologies. Sequent says they offer 1.3 times better performance on OLTP applications - 1.5 times on decision support - than the 66MHz models. *Details, page 7.*

## NOW SEQUENT GOES PARALLEL; TAKES INTEL SPP, ORACLE MEDIA SERVER FOR VIDEO-ON-DEMAND

The ink was still drying on the deal as we went to press, but it looks as though Intel Corp's campaign to move its massively parallel technology out of science labs and into the commercial world is coming to fruition (UX No 494). As well as rolling out Pentium-based massively parallel technologies through its partnership with Unisys Corp and Oracle Corp on the 26th of this month (UX Nos 478, 533) Intel's Scalable Systems Division (SSD) last week snared Sequent Computer Systems Inc and Oracle - the database company which seems to have its fingers in every pie at the moment - to provide a range of video-on-demand platforms based upon its parallel technology, from the fourth quarter. Sequent will put its Dynix/ptx Unix up on what appears to be the same SPP Pentium technology Unisys is utilising, and OEM the resulting parallel systems; technology Sequent apparently still regards as "exotic" (*see opposite*). The triangle is completed by Oracle's Media Server, software which currently runs on Dynix/ptx-based Sequent Symmetrys being used as video application servers in Bell Atlantic Video Services and BT video-on-demand trials. Sequent will develop and optimise Dynix/ptx to run Media Server on further SMP systems and the OEMed Intel SPP parallel technology. Throw services and consulting into the pot and Sequent believes it'll be able to offer all of the necessary content management and delivery components for storing and transmitting services to users. Symmetrys will be used to monitor ordering and invoicing for the services.

## SUN RESELLS NETSCAPE SERVERS, SEEKS WEB-WIDE SUPPORT FOR JAVA

Sun Microsystems Inc and Netscape Communications Corp have extended their 1994 Internet security co-development agreement. Sun will begin selling all four versions of the Netscape Server for Web sites and bundling the technology with its Netra servers. There are no results from their joint security work yet, but on May 23rd on the first day of SunWorld, Sun promises to detail a slew of packaging, pricing and development arrangements for all of its WWW technologies. By then it's expected to have ready plans for Java, its WWW development language. In the run-up, it's trying to persuade the browser houses to adopt Java - currently deployed in its experimental HotJava interface, *see page four*. Sun estimates Netscape holds around 80% of the market. It says it requires agreement across the board to support Java, to prevent fragmentation and incompatibility around the Web. It isn't saying how far it has got.

### MICROSOFT BOWS TO WANG PATENTS, WILL INVEST \$90m FOR 10% STAKE

Microsoft Corp has bowed to Wang Laboratories Inc over its 1993 patent infringement lawsuit by agreeing to invest \$90m in the company and signing a multi-year technical, service and marketing alliance. Microsoft will buy \$90m face amount of 4.5% convertible preferred stock due 2003 which would represent 10% of the enlarged equity on conversion. Wang is to grant Microsoft a license for its portfolio of software and software-related patents, and its desktop imaging and object controls - subject of the patent infringement - will be included in future releases of Windows95 and Windows NT "to bring improved document imaging and workflow management capabilities" to Windows users. Wang's image controls will also be included in Microsoft's Visual Basic, and the two plan to work together to accelerate development of workflow automation software, and co-operate on work management application programming interfaces. The Wang technology will not be in the first release of Windows95, but will be included when the underlying desktop imaging and object control technology is set. Wang will also develop Windows NT versions of its imaging and workflow server family.

### IBM ENTERS NEURAL COMPUTING LISTS WITH ZISC RADIAL BASIS CHIP

Choosing the Neural Computing Applications Forum at Cambridge University, England, as its platform, IBM Corp last week entered the neural networking business with launch of the ZISC0360 chip, the product of a £4m development project with Paris-based Neuroptics Consulting SA. The chip uses the Radial Basis Function network and IBM says that theoretically, there is no limit to the number of chips that can be linked together. It is selling the chips singly and also on a board called the Neuro Board 576/ISA, which has 16 of the ZISC processors on it. The ZISC chip has a zero instruction set and 36 independent processors on each chip, makes it a parallel processor. There are 64 component vectors, each of which is 8-bit and 395,000 transistors. The board is out now and is £6,250; each chip costs \$300, also available now.

### HITACHI LAUNCHES TOP-END IBMULTATORS AS SKYLINE SERIES

Backing its conviction that the remaining large-scale mainframe users are going to want the most powerful monolithic machines possible, Hitachi Ltd last week unveiled its next-generation IBMulator, which was launched by its 80%-owned Hitachi Data Systems unit as the HDS Skyline Series. The new generation of mainframes is claimed to run at twice the speed of current models - in fact uniprocessor performance appears to be a little over 60% greater than IBM's biggest current uniprocessor - while occupying less than half the floor space. The power consumption and cooling costs per unit of performance are cut by more than 70%, the company claims. It quotes Gartner Group as saying that the new system operates at up to 780 MIPS, depending on operating system, application workload, software and hardware configurations, and usage. The machine is built in a variant of BiCMOS that the company calls ACE, saying it combines discrete ECL and CMOS circuit elements within a lattice on the same chip. The technology is claimed to have made possible a 13-to-one reduction in components per instruction processor compared with current systems. The company is offering the machines in 10 models, the largest being an eight-way multiprocessor; first shipments are planned for the fourth quarter this year.

### GRIF CLAIMS FIRST WITH SGML WORLD WIDE WEB EDITOR

One of the first Web editing tools providing content-based document editing via SGML Standardised Generalised Mark-up Language was presented at the World Wide Web conference in Darmstadt, Germany last week by French mark-up language specialist Grif Systemes SA. The product, Grif Symposia, will bring two technical advances for Web document creators when it is available in June. It says its SGML creates more reliable document information by providing precise research and classification capabilities; and it makes Web editing more interactive, eliminating the need for complex document transformation procedures by supporting direct editing on the server itself. HyperText Mark-up Language is a subset of SGML, and Grif and French state research body Inria, co-manager of the World Wide Web with the Massachusetts Institute of Technology, will also offer Symposia as Web freeware. The most widely used Web browsers, Mosaic and Netscape, do not yet support SGML documents, but support is promised in both "soon".

### INTEGRAPH TO PROVIDE VICTORIA WITH EMERGENCY DISPATCH SERVICE BASED ON I/EXECUTIVE & I/INFORMER

Intergraph Corp has won a \$120m contract to supply a computer-aided despatch, radio and voice-switching system for the Bureau of Emergency Service Telecommunications for the State of Victoria, Australia to handle emergency calls across the state. The system enables operators answering emergency calls to view an on-screen map locating where the incident is, together with the name and address of the caller automatically. The operator can then despatch the relevant emergency unit directly from the workstation. The Dispatch Management System is based on Intergraph's I/Executive software which manages the data flow between system databases. The central database contains street maps of Victoria, together with records of the name and address of all residents within the state. I/Informer enables information exchange with local, state and national databases. The system is Unix-based and uses relational databases as the central data repositories; Intergraph claims the system supports Ingres, Oracle and Informix relational databases. Incoming emergency calls are automatically routed to the appropriate dispatcher by I/Calltaker, it also verifies callers' addresses to speed up the process of pinpointing a location on the on-screen map. I/Dispatcher provides the despatch capability via two screens. One screen features the despatch form which operators fill in to activate the emergency unit, and a map of relevant emergency services. The other displays an interactive map with customisable icons for real-time monitoring of incident and unit. The map also acts as a query window to other databases containing such information as detailed architectural and engineering plans, hazardous materials, fingerprint and mugshot records and firearm registrations. The system provides communication support for mobile data transfer systems and automatic vehicle location devices via I/Messenger and I/Tracker, the Huntsville, Alabama company says. As a result of being awarded the contract by the State of Victoria, Intergraph has formed a Public Safety division which will develop, market and implement computer-aided despatch systems.

### IBM MAGSTAR SERPENTINE TAPE DRIVE LAUNCHED

IBM Corp has launched the long-awaited New Tape Product as the IBM 3590 High Performance Tape Subsystem, and as an OEM product as the Magstar. Supporting AS/400s, RS/6000s, the SP2 parallel systems and Solaris boxes via a Fast and Wide SCSI-2 interface as well as System/390 mainframes via the channels, the 3590 can read and write data at an instantaneous rate of 9M-bytes per second, and as promised each half-inch cartridge can hold 10Gb of uncompressed data, and up to 30Gb compressed. Delays in the launch of the tape drive had been attributed to problems with the logical volume management of small data sets, seen as crucial to the attractiveness of the product, and it appears that it is being launched without this capability. IBM says it will deliver volume stacking, a technology that enables multiple logical volumes of data to be stored on one tape cartridge, on its Escon-attached library in 1996. With Magstar, IBM has adopted a serpentine, longitudinal recording technique that enables data to be recorded and read-verified in a bidirectional mode; IBM says a large number of tracks can be recorded across the width of tape, thereby increasing data capacity but not access time. It says this technique also causes less stress to the tape or heads than helical scan technology and one of Magstar's magnetoresistive heads can be expected to last 10 to 20 times longer than a helical scan one. IBM says that in a stand-alone configuration the 3590 can operate as a mini-library with up to 300Gb of storage for compressed data in a ten-cartridge Automatic Cartridge Facility that has a random access mode of operation. Magstar can be integrated into IBM's existing tape libraries, the 3495 and later models of the 3494, to offer Terabytes of data storage. The SCSI models will be available on July 28 for end users, and in evaluation quantities for potential OEM customers in the third quarter; the Escon version will follow "in the second half". No prices were given.

### ICL UNDECIDED ON WHICH FUTURE SPARC

ICL plc, which by now had planned to use Sparcs from its Ross Technology cousin in its SuperServers (UX Nos 477, 492) - and HaL Computer Systems Sparcs ultimately - is now back to evaluating its options. It says the next major overhaul of its Sparc lines will be in the fourth quarter, when any decision on a new chip will be made. The UnixWare 2.0 port to Sparc is now also due by year-end. Meantime, it'll upgrade its 66MHz TeamServer and SuperServer lines - which are also available with Intel parts - with 75MHz SuperSparcs, in May and June respectively.



### ORACLE'S 64-BIT VERY LARGE MEMORY OPTION

Oracle Corp's 64-bit Very Large Memory option - *see front page* - will allow existing 32-bit applications to take advantage of the raw performance power on DEC's AlphaServers running 64-bit Digital Unix; it'll roll on to other 64-bit architectures as they appear. VLM includes two components, LSGAs and BOBs. Large Systems Global Areas (LGSAs) increase the amount of database buffer cache that can be addressed way beyond the 4Gb possible on existing 32-bit systems. Indeed DEC believes VLM will be able to take advantage of systems it expects to follow with upwards of 50Gb RAM, when 64Mb DRAMs eventually roll out. The performance of databases is directly related to the amount of the database that's cached in memory, the object being to avoid CPU time-consumption and therefore costly I/O transactions. LSGA uses as much memory as it can to cache database blocks; ideally an entire database would be mapped from disk into main memory. LSGA is transparent to applications, so code doesn't have to be changed. BOBs, Big Oracle Blocks allow blocks of data up to 32Kb in size to be transferred in each I/O operation, up from the 2Kb allowed by 32-bit systems, or 8Kb under existing 64-bit architectures. VLM is suited to operations that use the same data sets repeatedly, full table scans and few I/Os.

### ROUNDUP: DEC AND ORACLE

Oracle Corp's exemplary performance on Turbo Laser gives the database the wherewithal to take on DB2 on the mainframe, a delicious opportunity it's never had before. DEC took unkindly to our suggestion at the press conference that Oracle might have trouble advancing its cause because, quite frankly, people who buy computers don't buy DEC anymore. Oracle chief Larry Ellison argued manfully, if simply, *a la* Field of Dreams that because it performs they will come.

DEC VP Enrico Pesatori, emotionally exercised and - how shall we put this delicately, ahh, obviously ticked at us - seemed to think that DEC should be regarded as having been through the Valley of the Shadow of Death and as having emerged a whole man, a supposition patently absurd on the face of it considering DEC, with one marginally profitable quarter to its credit, has yet to prove it can sustain itself.

The exchange did produce the information that Turbo Laser is key to DEC's strategic turnaround and the growth of its core business. Pesatori said DEC had leads and "tens of orders" for it now from a handful of customers, apparently the result of their having demo'd the thing at CeBit, with Oracle seen as the "killer application for 64-bit computing". Oracle7-on-Turbo has of course also be demo'd at Decus.

Ellison estimated that 15%-20% of his customer base could avail itself of VLM's and Turbo's powers. First deliveries are expected in mid-May followed by early volumes in June. Oracle also has Rdb up and shipping on the 64-bit Digital Unix, with an OpenVMS version to follow later this year when that operating system goes 64-bit.

"Thank God I'll be retired by the time we get to 128 bits," says Oracle's Larry Ellison.

Oracle Very Large Memory option will follow on the AlphaServer 2100s, but to take advantage of it in the kinds of situations DEC and Oracle were talking about last week you need large amounts of RAM (like 6Gb) and lots of I/O and processor-memory bandwidth. A, costly. And B, likely to grind a 2100's backplane into the ground.

Oracle is so impressed with Turbo Lasers performance it's buying-in a bunch for its internal financial and decision support requirements.

As expected (UX No 533), DEC also introduced IBM Corp's CICS/6000 OLTP monitor for Alphas running Digital Unix costing from \$7,800, including the Transarc Encina components, and \$300 for the client. DEC also has a new data warehouse advisory service and plans to open Database Technology Centers in the Boston area, Palo Alto, Tokyo and France.

DEC has also revamped its AlphaServer 2100 Sable line with the model 5/250, based upon a 250MHz 21164 from \$60,000; the 21064-based 4/233 at \$22,000; the 275MHz 21064-based \$26,500, and the 233MHz 21064-based 4/233 at from \$18,000 (UX No 525).

### HP SPREADS FUD AMONGST ISVs OVER 64-BIT TRANSITION

Hewlett-Packard Co appears to be in the process of generating Fear Uncertainty and Doubt amongst independent software vendors over the transition from 32-bit to 64-bit architectures (UX No 529, 532). HP, which faces the transition itself once the PA-8000 emerges early next year, has been looking at some of the problems DEC ISVs have had moving from 32-bit to 64-bit Alpha systems, and sources within HP say over ten ISVs have reported problems so far. Amongst potential problems, HP detailed the following: When an ANSI C array of double precision pointers is ported to the Alpha, for instance, every other pointer is skipped because a double precision pointer, now 64-bits long, equals two 32-bit ones. If buffer size definition is done in terms of words a 5K word buffer on a 32-bit machine equals 10Kb, but only 5Kb on a 64-bit system. The program ends up with half the buffer size required and runs unpredictably. If string manipulation is done by shifts left and right then the shift distances will be wrong as you move from 32-bits to 64-bits. There is no IEEE standard for dealing with underflow and overflow on 64-bit numbers, as there is for 32-bit numbers, so 64-bit systems might do it differently and produce the wrong results. This could be important in moving encryption code, where 128-bit digit numbers may be used, to 64-bit systems. According to HP, X/Open Co Ltd's XPG4 standard guarantees valid code on porting but not accurate results. XPG4 and SPEC 1170 stop at the application programming interface level. Below that are these undefined areas which cause problems for ISVs, hence HP's concern. It says if standards exist (and it is said to be working on just such a standards initiative, maybe in conjunction with its partner Intel Corp) that will leverage porting efforts by ISVs, encouraging them to make the transition. But of course the FUD could also have the effect of slowing down DEC's efforts to migrate its software to 64-bit until HP's own efforts are more advanced.

### LEGENT TAKES LARGE BITE AT PROCESS MANAGEMENT

Surveying the rising tide of point products in the help desk, trouble ticketing network or systems management markets, Legent Corp is mustering all of its resources, and more, into a broad-based, head-long assault it's calling the Paradigm/XP Process Management Suite. The suite includes four applications and six services, all expected to be in place by the end of 1995. First of the new applications is Paradigm/XP Knowledge Manager, due in the third quarter, which Legent has licensed from and will co-develop with Emerald Technologies, which markets the software as Empower. Knowledge Manager comes with tools and a repository for storing service information learned within a company and can be tied to external databases such as SecureWare Inc and Knowledge Broker Inc or on-line help files. Also due next quarter is Call Manager, which provides front-line access to users' call history and environment profiles. The Windows or Unix application can be tied to automatic name identification systems, Legent says. Change Manager, due by year-end is a workflow application for initiating, tracking and managing requests. The fourth application, Problem Manager, is Legent's existing trouble-ticketing system, now at version 2.1 (UX No 504). Two of the six services are due next quarter, Enterprise Domains and Enterprise Web client. The first allows management tasks to be delegated and shared around and organisation, the second is a Web server and browser for accessing Paradigm/XP information. There are four services that already exist. Network Monitoring Interface provides APIs between Problem Manager and OpenView, NetView for AIX, SunNet Manager, Cabletron Spectrum, its own AgentWorks, and Novell NMS (UX No 504). Legacy Gateway allows trouble ticket information to be shared with mainframe helpdesk applications such as IBM Info/Man. There's also a custom reporting kit and C APIs (an SDK) to Legent's XPErtware middleware in the XPE distributed management environment. A Problem Manager starter kit with four clients, database interface and one admin client is from \$17,500. Start-up services cost \$7,500 for five days, including installation and training. The Network Monitoring Interface is \$4,500. The SDK is \$2,500. The Legacy Gateway is \$35,000. Custom Reporting is bundled with Problem Manager. No prices for the new modules. Legent's help desk solutions are aimed primarily at the Clarify, Remedy, Scopus and Vantivex-type markets. Paradigm/XP Process Management is part of Legent's XPE distributed management environment technology. The other part of the company focuses on application development.

## IT'S THE WORLDWIDE WEB, BUT NOT AS WE KNOW IT - SUN'S HOTJAVA

By Chris Rose, *PowerPC News*

In the past six months, development of the Worldwide Web has begun to fizz thanks to an injection of commercial competition. We're not talking here about the proliferation of Web sites, but rather the break-neck speed at which browsers are developing.

~~Since the luminaries who wrote Mosaic at the NCSA left to form Netscape Communications last year, they have been striving to differentiate their browser - the Netscape Navigator - from the competition: partly by good coding - the way it loads multiple images concurrently, for example - and partly by supporting proprietary extensions to the Hypertext Markup Language (HTML) which is used to define Web documents' structure. Netscape extensions to the language leave document designers in something of a quandary: they are very attractive because they give authors much finer control over the look and feel of their pages. The whole history of Web-page construction has been one of people pushing the medium slightly further than it was ever designed to go. With the commercialisation of the Web, this innovation is accelerating. On the other hand, only people running Navigator will actually see the enhancements. Worse, those running other browsers may actually end up seeing a big mess, as their browsers fail to comprehend the commands embedded in the document. Netscape argues that it is simply implementing proposed extensions to the HTML standard, adding that its implementations will change, if necessary, to match the finished HTML 3.0 specification. Last week, the latest draft of HTML 3.0 was published by David Ragget of Hewlett-Packard Laboratories in Bristol, UK - ahead of the WWW conference. HTML 3.0 adds virtually all the facilities included in the latest beta of Netscape, plus a heap of others. It is quite possible that once it is ratified the industry will solidify around it for a time, until the next big thing hits, at which point there will be a rash of new browser releases. But there is still the underlying problem with the Web - implementing something new and exciting requires producing a new browser, and getting it widely accepted. It's a recipe for fragmentation, confusion and Webs within Webs.~~

### Wow

However a new, experimental browser from Sun Microsystems could change all this. HotJava (dreadful name, great idea) had its second Alpha release last week and is the most revolutionary extension to the Web we have seen ... ever. People tend to remember the first time they saw the Worldwide Web viewed through a graphical browser - their reaction tends to be "Wow". Java is the first thing we've seen that made us go "Wow" on the Web for more than a year. The idea behind HotJava is quite simple - add a complete programming language and build an interpreter into the browser. Do this, and the browser becomes essentially infinitely extensible. The development team have already put up a few simple pages which demonstrate the flexibility of the approach. There is, for example, the page that shows a wire-frame drawing of a helicopter: nothing exciting there, it looks like a straight .GIF, except that if you place your mouse over the picture and drag, you can actually rotate and spin the picture in three dimensions. Other pages have interactive games of Reversi, Hangman and even a simple spreadsheet built in. The site's home-page has the team's mascot merrily waving its hand from alongside the HotJava logo. Basically, it seems that virtually anything you can do with a CD-ROM today, you will be able to do with HotJava in the future. You should be able to code a home shopping application or 3D interface, or your very own proprietary communications and encryption system, and anyone with a Java-capable browser will be able to dynamically grab the code and use it. The programs that achieve these effects are termed applets, and are invoked from within standard HTML documents by a single new pseudo-HTML tag, <app>, which is used to invoke the code and pass it parameters: so your HTML document isn't cluttered up with the full source code for applets. The Java language itself is closely based on C++, but simplified somewhat and with automatic garbage collection added. In addition it has been made so that it is completely architecture neutral, with the quirks of the particular platform being handled by the interpreter. Currently the beta only works on Solaris 2.3, however Mac OS and Win32 ports are being carried out in-house.

### Scary

There are obvious and scary implications inherent in having lumps of executable code landing on your machine and running without warning. How long until the first Web document with embedded virus appears? The team have incorporated a barrage of security features which attempt to prevent this. The exact details are too long to detail here, but can be found at the project's Web server at <http://java.sun.com/>. In brief, the

~~security model is based on interlocking layers of security ranging from features built into from the Java language at the bottom to specific file and network access protections at the top. So, what can you do with HotJava? What can you not? In theory anything you can write as a C++ program can now run in your Web page - no more mucking about with cumbersome shell-script programs running in the /cgi-bin directory. Today there are only a few tiny applets that have been designed as small demos. Once the browser becomes available for commercial use, expect to see the Web transform itself into something quite different. Expect also, C++ programmers to become very popular.~~

### LINUX ON POWERPC EFFORTS CONTINUE

The effort to get the Linux freeware variant of Unix ported to the Power Macintosh is continuing, despite the fact that its original student founders have now given up the reins. The new co-ordinator of the project is Joseph L Brothers. The project previously stumbled because of a lack of information from Apple concerning the lower level operation of the Power Macintosh hardware. However Brothers reports some progress on the non-PCI PowerMac port, thanks in part, to assistance from the company. The first target platform for the Big-endian operating system remains Apple's 601-based NuBus Power Mac. After that the team will look at Motorola's 603-based PowerStack machines, and then RS/6000s. Whether to port to the PCI-based Macintoshes is still under consideration. Both Motorola and IBM have donated code for their boot-up firmware to the effort. The big unknown is when the code will be ready. The developers refuse to make themselves hostages to fortune by saying when they expect the work to be completed. People will be able to judge the progress of the work for themselves, as finished software is made available on the Internet.

### IBM AND MOTOROLA FUMBLE ON OPEN FIRMWARE

Our sister publication *PowerPC News* thought it odd that Motorola Inc's recently announced Firmware 3.0 software, didn't conform to the Open-Firmware standard. Odd since the PReP specification demanded that compliant systems support the standard by June. This week IBM confirmed to us that its own Power Personal systems will not support Open Firmware in their first incarnation either. Odd, since both companies were the moving forces behind PReP in the first place. Both companies tell essentially the same story - they had to start developing machines before the standard was fixed and they didn't have time to duplicate Firmware efforts subsequently to track the standard. That's fair enough except that other companies do have chips today that presumably IBM and Motorola could have bought in and used. IBM and Motorola would no doubt argue that switching to OpenFirmware on their own machines would necessitate other changes to peripherals and boot devices that they do not have time to make. So IBM is promising Open Firmware support in the next revision of its Power Personal systems, though whether it means future PReP machines, or a forthcoming CHRP range, isn't clear. However, Motorola's decision to send out a high-profile press release detailing the delights of Firmware 3.0 looks an odd way to promote the standard. Motorola vice president and director of RISC software Anne-Marie Larkin told us this week that the company would have its own Open Firmware implementation ready during the second half of the year. Since Firmware 3.0 won't hit general availability until the second quarter of the year, it doesn't give Motorola OEMs very long to design and build a machine, before finding themselves with obsolescent Firmware. Moreover, Larkin says Motorola gives all its OEM partners details of companies offering Open Firmware components anyway. So why bother continuing the development of its own proprietary Firmware? She points out that Motorola's effort does have some advantages, such as its ability to support cards developed for Intel-based PCs, and its compact size. Does any of this actually matter or is it merely a semantic nicety whether vendors can slap 'PReP compliant' labels on their boxes? In fact it does matter to two groups of people: those manufacturing add-in cards, and users who might want to buy them. Owners of first generation PowerPC-based machines will have to find out what kind of Firmware their boxes use, before going out to by peripherals needed at boot-up. And peripheral makers are going to have to choose which platform to target. Compare this with the situation where one add-incard should work across any PReP system, and Apple's forthcoming PCI-based Power Macs.

### SGI IS SECOND NON-IBM PLATFORM FOR DASSAULT'S CATIA CAD PACKAGE

Silicon Graphics Inc's announcement that it is adding IBM Corp's Catia computer aided design software family to its SiliconWorks manufacturing software toolset marks the second non-IBM platform to be supported by the Catia software since IBM agreed in May 1993 to let it be available on non-IBM Unix workstations. Dassault Systemes of Paris owns the rights to Catia and develops the product: it is working to port Catia to run on SGI hardware at the moment, and should have it ready by year-end. Catia came out on Hewlett-Packard HP 9000 Series 700 workstations earlier this year. Before that it only ran on the IBM RS6000, aside from on the mainframe systems from whence it came. New versions are ported from a single source tree, with less than 2% of the code hardware dependent, according to Jean Michel Morin, head of multiplatform marketing at Dassault. Most of the modifications are to fine-tune the product at the graphics level, he said. Further platforms will emerge next year, and the company has already established a relationship with Sun Microsystems. IBM still acts as the marketing channel for Catia, and set up IBM ETS, short for Engineering Technology Solutions, at the start of last year to distribute the product on multiple platforms. There are three ETS groups worldwide serving Asia, North America and Europe. Catia goes through an upgrade every four months for which Dassault has a team of 450 developers working on the product.

### CINCOM CHERRY-PICKS ITS OBJECT STORY

Although CinCom Systems Inc would prefer to wait until "there's a bit more meat on the bone", the Cincinnati, Ohio-based company nevertheless feels there's enough to flesh out some of the details behind its object-oriented Total FrameWork, a suite of application development software solutions based on products from third party software houses (UX No 494, 533). The company plans to integrate the products as a set of services and synthesise aspects of them under a single point of support. For part of Total FrameWork, CinCom has gone to Austin, Texas-based UniSQL Corp for its object-relational database management technology and to Burlington, Massachusetts-based Easel Corp, recently acquired by VMark Software Inc (UX No 524), for its development tools. It will add those companies new offerings where it sees fit. Total FrameWork comes in three parts. First an object-relational database including an object-relational model, multimedia data integration framework, object-oriented SQL, call-level interface and graphical database access and application development tools. Second, an object-oriented application development technology which comes bundled with Smalltalk class libraries and comprises a series of tools, both general and focused. Targeted at application developers, CinCom's turned to Smalltalk because it's available on Windows, OS/2 and Unix. Features include Easel Corp's Synchronicity, its business object management tool, and Enfin, the SmallTalk and GUI development environment. CinCom will pick a WorkFlow automation technology by August. Prices start at \$20,000.

### UNISYS LINC 4GL NOW UP ON THE IBM RS/6000

Unisys Corp's Linc applications development environment is now up and running on the IBM RS/6000. Linc, described as an integrated, procedural development environment for commercial applications, is suitable for the development of on-line transaction processing applications, can support two-phase commit operations, and even uses object-oriented concepts such as code modularity, separation of specification and implementation and close coupling of data and business rules, according to Unisys. It has, however, been around for some time and was originally a native application generator for the Burroughs A-Series mainframe. Unisys subsequently ported it to Unix and its Intel-based hardware boxes, including re-badged Sequents. A Sun Sparc version was announced last year. The new version uses a Microsoft Windows-based development and testing environment for collaborative development over a local area network, with the RS/6000 used to generate the complete application system and to execute the runtime production environment. It uses the Oracle database and generates Cobol native to the platform - Micro Focus Cobol on Unix systems. Prices for the Windows-based Linc development environment begin at \$12,500 per developer, with run-time versions costing \$2,400 for up to eight users, \$300 for each user beyond eight.

### K2 OFFERS GEORGE FOR AUTOMATIC DOCUMENTATION

K2 Developments Ltd, a Manchester, England-based provider of software engineering solutions has an automatic documentation tool, called George which its targeting at software engineers developing in C and C++ source code. It provides automatic creation of documentation from users source code into FrameMaker and Interleaf. Documents created by George are automatically hypertext integrated, enabling on-line access to documentation and source code with navigation across the code base. It also boasts automatic indexing via textual or graphical representation. K2 plans to include RTF (Rich Text Format) and HTML in May. The HTML version of George will enable code document generation by clicking on a button. Additional outputs such as SGML (Standardised General Markup Language) are scheduled for later in the second quarter it says. George was originally developed two years ago to service K2's own in-house documentation and was released in the UK last year. Its now been upgraded and will be distributed in the US by software solution house UniPress Software Inc, headquartered in Edison, New Jersey. K2 is also upgrading ADI 4.0, an integration tool for Cadre Technologies TeamWork CASE tool (UX No 513). ADI is meant to improve quality and productivity in the design automation environment. Latest features enables capitalisation of the extensive information base within a document by dynamically linking design tools, documents and source code. The company, founded in 1987, is privately-held and has its fingers in other parts of the software supply business, distributing Persistence Software's object interface to relational databases (UX No 533), Centerline Software Inc's programming tools (UX No 507), FrameMaker and InterLeaf. George is up on Sun and HP workstations, with PC Windows and NT due in May. Prices start at \$5,000.

### CENTERLINE SURVEYS EURO CODE RE-USERS, PLANS REUSE UTILITY...

CenterLine Software Inc has carried out a European survey of 300 or so Unix and object-oriented software developers, asking them about software reuse. A third of the companies asked were investing heavily in object-oriented languages, 90% of them choosing C++. The number one goal is apparently software reuse (37%), with 33% looking for better quality code and 29% hoping for faster development times. But there is some argument over just what reuse is, with 24% meaning simple cutting and pasting, another 24% using commercial class libraries, and 25% developing their own class libraries in-house. Only 9% currently have a formal reuse programme in place. The biggest barrier to implementing code reuse is the high-entry costs associated with producing reusable code (the cost savings come later on down the line), and a general lack of commitment from managers. Centerline hopes to stimulate the market by introducing its own reuse enable this Fall, allowing code developers to publish and retrieve reusable code over the corporate network using text retrieval facilities. It also plans a "yellow-pages" style CD of third-party class library suppliers.

### ...VERITAS VISTA TEST TOOLS WILL BE INTEGRATED BY NEXT MONTH

Meanwhile, Centerline has duly completed its acquisition of the Vista code testing division of Veritas Software Inc (UX No 528), taking on all the 25 staff to bring its total up to 175. The Vista product will be integrated into Centerline's evolving TestCenter product line. The first results should be evident by the end of May. According to Christine Eyre, director of business development at Centerline, the resulting product will cover the same ground as a combination of Pure Software Inc and Mercury Interactive Corp tools, (see page 7) and will be linked into the company's mainstream CodeCenter and ObjectCenter products. TestCenter will be available on Sun, HP and IBM Unix platforms.

### DB2 VERSION 2.0 WILL ALLOW APPS TO BE PORTED FROM MAINFRAME TO UNIX

Major upgrades for Unix and OS/2-based versions of the IBM DB/2 database are on the way, reports *InfoWorld*, that will lay to rest some of the current incompatibilities that prevent easy porting of DB2 applications between the mainframe and other platforms. DB2/6000 2.0, which has been in beta test since last June (UX No 489) is due out this June, according to the paper, will support both object and text data, tying in with new video server technology called Digital Library that should emerge some time this month. Digital Library will allow video data to be stored and retrieved through DB2. A PowerPC version of DB2 is in the works for both OS/2 and AIX, and NT is said to be still under consideration. A desktop version, Ultralite, for Windows and OS/2, goes into beta testing this month.

## SO FAR, SO GOOD FOR IBM AS IT PLUNGES PAST THE 29TH FLOOR: THE HARD PART IS STILL AHEAD

By Hesh Wiener

IBM reported net income of more than \$3 billion for 1994. After three years in the red and total net losses of nearly \$16 billion, IBM's rebound has brought new hope to the company's shareholders, employees and customers. According to the company's management, which has promised a further \$1 billion reduction in costs, there is every prospect for IBM's earnings to rise by a third during 1995, bringing more than \$4 billion to the bottom line. IBM's total debt, which exceeded \$29 billion in 1992, has been pared down to slightly more than \$22 billion; its net worth, which had fallen below \$20 billion in 1993, is now \$23.4 billion; its share price, which had been as low as \$40.63 two years ago is now well above \$80. Wall Street analysts are generally confident IBM's earnings - and share price - will rise again in 1995. Big Blue's revival has come at an enormous cost. IBM's payroll is down to 219,000 from a peak of about twice that in 1985. Many of its factories have been closed and other facilities have been relocated from the advanced countries to the third world.

### Firm footing

Moreover - as the company's forthright leaders have repeatedly pointed out - IBM has not solved all its old problems nor provided satisfactory responses to the new challenges that have emerged in recent months. It is possible, even likely, that IBM will have to take additional drastic measures before it is once again on firm footing. Although IBM is in far better financial shape than it has been in years, its most recent annual report reveals that the company still has severe structural weaknesses. The trends since the installation of IBM's current management team are generally positive, so there is indeed a basis for optimism about the company's future. But some of IBM's problems may force chairman Louis V Gerstner Jr to go beyond the general restructuring that has marked the past few years. The next wave of change that will wash over IBM will include a review of all the company's product lines - both goods and services - and their priorities. Having returned to profitability, IBM could continue along its current course. But unless the company makes further radical changes in its operations, the problems that beset it in the early years of the decade will very likely recur... and this time IBM will be unable to combat them using the same cost-cutting techniques. The most severe structural problem IBM now faces lies in the group of activities it classifies as hardware manufacturing. Unbelievable as it may seem, IBM isn't making money on hardware and apparently hasn't for some years. While IBM is believed to be bringing money to the bottom line from certain product lines - mainframe processors are probably the prime example - its losses on personal computers and some other machinery are so great they are dragging Big Blue into the red. Nor can IBM allow itself to continue losing money in services... or expect that its services business will automatically become profitable if the 1956 consent decree is dropped. Moreover, where IBM does make substantial profit - in software, in maintenance and, to a lesser degree, in financing - the basis of its success lies still very much in the mainframe business. Mainframe software and hardware maintenance seems to fuel IBM's entire business. Thus any changes in IBM's revenues from these activities will have an enormous impact on the company's profitability. IBM cannot expect its problems in hardware manufacturing simply to disappear. Even if hardware returns to profitability as the cost-cutting campaign takes hold, one fact will remain: assuming mainframes and AS/400s are successful, other portions of IBM's broad line of computing equipment must be deeply under water. This observation should not come as a surprise. IBM executives have said that the company is disappointed with the performance of its PC group. This harsh assessment is one of the reasons IBM does not break out PC revenues and earnings but instead lumps PCs with RS/6000 workstations and servers.

### False sense of security

But IBM may not really appreciate how much it must change - and how soon - in order to survive. If IBM does not make very great progress well before the end of 1996, it may not survive the decade as an industry leader. In fact, it may not survive the decade at all. IBM's pre-eminence in mainframes is its greatest asset; its dependence on mainframes is its greatest liability. When IBM loses a mainframe site to an alternative (rather than a compatible processor) it loses not only hardware revenue but also the income from software, maintenance and peripherals. Further, IBM's future opportunities to sell goods and services are foreclosed. No company that leaves the mainframe environment will ever return. IBM may be lulling itself into a false sense of security as its mainframe business rebounds in reaction to the

attractive 9672 processors and the compelling financing bundles in which it has wrapped the new computers. But IBM's strategy is as inflexible for the vendor as it is for customers. While preserving the base that had included 3090s, 9121s, 9021s and even 4300s, the 9672 package forces customers to view an IBM mainframe as a single cost item that must be burdened with personnel and physical plant expenses (plus canned software fees). For the first time in years, IBM is compelling IT directors - and enabling their general and financial managers - to see precisely how much it costs to run a glass house. It presents a clear target to competitors, such as Hewlett-Packard, and it also makes it easy to compare the costs of in-house computing with outsourcing. The result may well be an upsurge in IBM's services business, which is only now beginning to approach profitability. It will certainly bring many users to the doorstep of outsourcing. It is bound to pit IBM against in-house information processing departments and it may encourage large enterprises to contemplate a strategy that IBM should fear: moving glass house operations to an outsourcing company and then creating a new computing infrastructure based on networks, open systems and competitive procurement at every level. A third of IBM's installed mainframe base is moving in this direction already, using Unix servers with an aggregate computing power that dwarfs their mainframe systems. If another third follows, the remainder of the base will have no practical choice: it will have to increase its emphasis on open systems at the expense of the mainframe. IBM's position is made all the more precarious by huge losses in PCs and its losses in the RS/6000 market too.

### Razor-thin margins

IBM's revenue from computers based on Intel and Power chips now exceeds what it gets from its proprietary lines (mainframes and AS/400s). Intake from the loss-making open segments of its business is growing, while that from its profitable closed segments is not. Drag-along business in the proprietary processor group is falling, due principally to the loss of mainframe disk market share to EMC (and by the end of the year, Hitachi, too) and compounded by pressures on the tape market, the printer business and the transition from 3745 communications controllers to PC-based gateway servers. Even if IBM can bring (or has already brought) its RS/6000 business into the black, it is doubtful that it could prosper in that market without making huge improvements in its desktop computing business. The cost of servers is small (and diminishing) compared to the cost of the end-user terminals they support. The companies that IBM must compete with can survive on razor-thin margins and, during less stressful periods, use the increased profits to extend their reach. IBM, by contrast, can report profits during the fat years, but seems unable to create adequate reserves for lean times. Its situation may be better than it was one, two and three years ago, but it still more closely resembles one of the big auto makers than it does its thriving competitors, such as Hewlett-Packard, Compaq or even tiny EMC. Wall Street is praising IBM, and it may be right about the next year or so. IBM has brought money to the bottom line, reduced its debt, slashed its overhead and introduced a large number of improved products. But beneath the surface and beyond the horizons that limit investors' views, IBM must surmount barriers that could prove as daunting as any faced by its prior management. As IBM struggles against competitors, against circumstances, against its own ingrained bad habits, it will be forced to make some difficult choices. IBM is no longer the protector of customers it once was; it may not even be able to protect itself.

## SEQUENT MAKES ITS MOVE TO 100MHz PENTIUMs...

The new mid-range Sequent Symmetry 5000 SE30 - *see front page* - is designed for large relational database environments and supports hundreds of users across from two to ten 100MHz Pentiums, up to 3.5Gb RAM and 504Gb disk. It starts at \$166,000 with two CPUs, 64Mb RAM and 11Gb disk rising to \$823,000 as an eight-way with 768Mb RAM and 110Gb disk. ~~Sequent figures an average configuration of six processors, 256Mb RAM and 20Gb disk will go for \$456,000. The SE70, for enterprise OLTP, decision support and data warehousing has from two to 30 Pentiums, up to 3.5Gb RAM and 1.7Tb disk. It starts at \$438,000 with two CPUs, 256Mb RAM and 34Gb~~ disk, rising to \$2,500,000 with 22 processors, 3Gb RAM and 407Gb disk. An average system is expected to weigh-in at around \$1,260,000 with 10 CPUs, 1.5Gb RAM and 110Gb disk. The clustered SE100 comes with two or four SE30s or SE70s, shared disk and software. It's \$566,000 with two dual-CPU SE30s each with 256Mb RAM and 2Gb disk, plus 20Gb shared disk. Two dual-CPU SE70s with 256Mb RAM and 2Gb disk each linked to 47Gb shared disk cost \$1,046,000.

### New I/O, memory controllers, Dynixptx 4.1...

Sequent is also introducing an Enhanced Quad Channel I/O controller, a SCSI-2 disk/tape controller it says increases I/O transfer efficiency across the 5000's internal 240Mbps HSB highly scalable bus by around 40%, and takes up one backplane slot. Each board can support 48 disks at 20Mbps per disk channel. The controller reduces the number of system bus cycles required to process I/O requests and will sell separately from the 5000s - except for the SE100, where it's integral - at \$25,000 from June. Up to 1Gb RAM can now be configured per system slot via a new Symmetry high density memory controller. Used in conjunction with the I/O controller and new release of Sequent's Dynix/ptx 4.1 Unix, the \$100,000 controller allows up to 3.5Gb memory to be configured on the SE70. As well as support for addressing 3.5Gb RAM, Dynix/ptx 4.1 supports disk partitions of up to 1Tb, an SNMP management host MIB and costs from \$9,000 for a 25-user licence next month. The operating system gets a new ptx/EFS enhanced file system with improved intent logging, reducing file system recovery time; extent-based allocation providing higher performance for databases that use file systems for storage; support for online file system resizing so configuration changes can be made without taking the system down; and on-line file defragmentation allowing file system tuning, again without downtime. The file system will cost \$10,000 from May. Users of Sequent's previous generation of systems, the Symmetry 2000 can get up to the new 5000 models via an Advance 5000 upgrade programme.

### ...Clustered SMP alternative to MPP - the Scalable Data Interconnect - due September, with optimised Oracle7...

Perhaps the most important part of Sequent's game plan is news that its promised Scalable Data Interconnect for allowing database queries to be processed across as many as a 120 Pentiums distributed around up to four clustered SMP systems will begin to ship in September. SDI will be used in conjunction with a new 1.3 release ptx/Clusters software. Sequent describes SDI as a direct memory-to-memory or node-to-node communication pipeline allowing cooperating applications - such as those using the optimised Oracle7 release, *see front page* - to use all of the processing power of CPUs in a cluster to handle database queries. Each SDI link will have up to five 40Mbps connections. All current Sequent systems will support SDI, which has evolved out of joint development work Sequent and Oracle have been doing on Oracle Parallel Server since September 1993. Sequent says SDI removes the requirement for "proprietary or exotic MPP solutions." SDI hardware and software includes an I/O controller, firmware and cluster software. Pricing for ptx/SDI isn't given, but to use it customers will require the optimised Oracle7 available later this year, the new \$25,000 I/O controller - see above - Dynix/ptx 4.1 and the \$50,000 ptx/Clusters 1.3.

### ...Bundled high-availability software and services

Sequent is additionally bundling-up Symmetry 5000s with high-availability software and professional services targeted at organisations seeking high-availability data management centres. A new data centre rapid start programme is aimed at getting large organisation up on open systems and covers all aspects of planning and management. The program takes four to six months and costs from \$150,000. Sequent cites CI InfoCorp numbers which give it 19% of the high-end commercial SMP Unix market, with HP at 16%, Amdahl 14%, Tandem 12%, Pyramid 10%, IBM 6% and others 23%.

## HP ADDS 486 DESKTOP CLIENT

Hewlett-Packard Co has added a floppy-less, diskless Intel Corp 80486 desktop client for PC-LANs with up to 52Mb RAM in 66MHz or 100MHz variants. Seen as a replacement for terminals or low-end PCs, the Windows Client comes with bundled DOS/Windows and client software licences for NetWare and LAN Manager PC servers. WRQ's Reflection 1 and 2 for Windows is used to hook the Client to HP's 9000 Unix or 3000 MPE by NFS over TCP/IP. Support for NT is promised by mid-1995. Client prices go from \$1,065 to \$1,675 with from 4Mb to 8Mb RAM, DOS, Windows and Reflection. Server kits are \$300 for DOS/Windows, \$500 for DOS/Windows/WRQ bundles. Optional 260Mb disks are \$300.

## MERCURY OFFERS CLIENT/SERVER TESTING BUNDLE

Sounds similar to what it did back last July for its code-testing modules (UX No 497). Now Santa Clara, California-based Mercury Interactive Corp is packaging up its LoadRunner/PC and LoadRunner/XL load-testing modules as a LoadRunner Client/Server bundle priced at \$50,000 - apparently a third less than what the two cost if bought separately. The PC product is a load-testing tools for Windows applications - XL simulates SQL calls from Windows applications to a Unix workstations. Together they'll allow organisations to determine how many users a system will support ahead and how well it performs, ahead of its deployment, Mercury says.

## FRAMEMAKER 5 DUE IN JUNE

Frame Technology Corp will debut version 5 of its FrameMaker and FrameViewer publishing software on SunOS, Solaris, HP-UX, Mac and Windows on June 1. There's a bunch of productivity and design feature enhancements, Adobe Type Manager and 35 Adobe Type 1 fonts are to be bundled as well. The fonts will be stored in a common location so they be shared with other Adobe applications that may be running. FrameMaker 5 also supports Adobe's Acrobat 2.0 document format technology so that FrameMaker document elements - such as indexes, table of contents and hypertext links - are converted into Acrobat bookmarks, links and threads. Multi-user Unix licences are \$2,600 - \$900 for Mac or Windows. Frame developer kits are \$2,000 on Unix, \$1,500 on Mac or Windows.

## INFORMIX GETS MOTIF NEWERA AWAY

Informix Software Inc is now selling a Motif version of its NewEra development environment on Solaris, HP-UX and AIX, and will bundle its Informix-SE database with every copy of NewEra shipped for Unix or Windows. A new pricing scheme for NewEra, which now supports Intersolv's PVCS version manager, means users need only purchase the specific deployment modules they require not the whole bundle of ODBC drivers, SE database, connectivity and NewEra runtimes previously required. Development licences are from \$4,500 per client, the deployment class library bundle is \$500 per client and a basic deployment set is \$150 per client. Unbundled, ODBC drivers are \$100, SE for Windows or Motif runtime is \$250 and Viewpoint report runner is \$150, all per client. Stand-alone, SE \$500 per user for development, \$250 for the runtime.

## SYBASE DEBUTS ITS TIVOLI-BASED ENTERPRISE MANAGER

Sybase Inc has released its enterprise-level SQL Server Manager on Unix, which is built upon Tivoli Systems Inc's Management Framework. An NT version is seen early next year when Tivoli gets its NT code together. The Sybase Enterprise SQL Server Manager is designed to centralise dB servers at geographically disparate locations and to integrate directly with products from the 35-odd ISVs and vendors which have adopted Tivoli, including IBM, Informix, Unisys and Data General. Up on SunOS, Solaris and HP-UX - with AIX due in two months - prices go from \$900 to \$33,500 per managed SQL server.

# unigram·x

The weekly information newsletter for the UNIX™ community worldwide

This issue closed early Thursday morning EDT, 14th April. Europe is on its Easter holidays Friday 15th and Monday 18th.

**Apple Computer Inc**, which recently removed all detailed information about how applications perform on Power Macs, has admitted to our sister publication *PowerPC News* that detailed performance figures from its Ingram Labs bench test had been withheld at the request of ISVs. Ingram tested 10 applications and instead of giving results for individual applications, as previously, it gave results for categories: thus, "graphics and publishing" applications on a Power Mac performed an average of 84% to 94% faster than on similarly clocked Pentium boxes, while scientific and engineering applications ran as much as 49% faster. But office applications managed only a measly 9% improvement. Could it be that Apple is protecting Microsoft's application division from embarrassment? Paranoia fans may enjoy an alternative theory, says Ingram: that Apple is keeping the figures quiet for its own reasons. What if it were shown that a single key Mac publishing or graphics application actually ran substantially faster on the Pentium than on the Power Mac. Apple wouldn't want that sort of information to get about lest reprographic bureaux dash out and buy Intel boxes.

Know any software engineers proficient in all the latest techniques and dissatisfied with their current job? **Computer Associates International Inc** is finding it so hard to recruit such people - Cobol is out, SQL, C and C++ are in - it is offering employees a bounty of \$2,000 for each such person they round up and haul in, once the candidate is taken on by the company.

Mountain View, California Web browser specialist **Netscape Communications Corp** has sold equity stakes in itself to five larger companies, **Times Mirror Co**, **Knight-Ridder Inc**, **Hearst Corp**, **Adobe Systems Inc** and the **TCI Technology Ventures**, unit of Tele-Communications Inc; terms were not disclosed, but the five have 11% of Netscape between them.

**Oracle Corp** finally confirmed that it has held talks with other companies on a consortium bid for **Apple Computer Inc**, and said the plan had failed so far because its would-be partners - who would have been expected to take the hardware side away - did not want to participate; in an interview on national television in the US, chief executive Larry Ellison said Oracle has no continuing discussions with either Apple or with **Lotus Development Corp**, another company that Oracle is said to be interested in buying.

Pleasanton, California-based **OpenVision**, fighting back from rumours of its imminent demise (UX No 523), has kicked in with **OpenVNetBack-up** for Digital Unix. It's intended to increase data integrity through automatic backup, archive and restore services for files, directories, raw partitions and large Oracle databases.

**MegaPipe Imaging** is readying a single-slot Sbus accelerator card for Sparc workstations based upon **Texas Instruments Inc's** C80 or MVP embedded processor, says *Electronic News*. The S/TP80 is slated to deliver two billion operations per second next year, the paper says. Existing 25MHz C80 devices currently offer around one billion ops.

**DEC** may cut an additional 2,000 to 3,000 staff on top of the job cut plans already announced, chief executive Robert Palmer told CNBC in an interview, adding that the possible job cuts represent "a very modest additional trimming that might take place in a few overhead areas; I wouldn't characterise (the company) as turned around, but it's clear that we're doing the right things," he asserted - "We're more than half-way through the financial part of the turnaround (and) we're about half-way through the cultural and transformation part," he declared.

Latest intelligence on **IBM Corp's** plans for the AS/400s with the PowerPC AS-derived processors is that customers may get a briefing on them before the summer, but the announcement will not come until after. There is no date yet for first deliveries, although they will ship well before the end of the year for all models except for new high-end ones, which will come in above the 9406 Model 320 upgrades. As IBM promised, the new machines will be available as processor swap-outs for those that upgraded to the latest models. The very top-end machines are expected in the first quarter of 1996.

Santa Clara, California-based **Hitachi Data Systems** is making 250 employees, or about 10% of its worldwide staff, redundant in a preemptive strike to prevent any possible fall in profits. It says that although demand for its mainframes and disks is strong, price-cutting in the market made cuts necessary to ensure profitability. The lay-offs will be in all 30 countries in which the \$1,700m-a-year company operates, and it warns it will also be looking at all its regions and taking "appropriate action" to gain business and remain profitable. This has led to speculation that the firm may restructure or close down its operations in more peripheral countries.

Now **Platinum Technology Inc** has gone for the eight-ball, proposing to acquire long-time Unix-to-PC connectivity house **Locus Computing Corp**, Englewood, California, in a share swap valuing Locus at \$33m. It's Platinum's eighth swoop in six months.

**Novell Inc** has announced **NetWare Unix Print Services 2.1**, which give NetWare and Unix clients access to a common set of printers and print services. Available from this week, prices start at \$1,000.

**DEC** claims it has shipped more than 100,000 Alpha AXP RISC-based systems worth more than \$3,000m and expects to have shifted a further \$1,500m Alphas by the time the first HP, IBM or Sun 64-bit systems ship.

**Oracle Corp** may have abandoned runtime pricing for applications running on Windows, but Motif and Mac clients are still being hammered for \$180 a pop.

**Sybase Inc** is continuing with its spending spree and has bought its Brazilian distributor, **Tecnologia Cliente/Servidor Informatica SA** from **CI Compucenter**, and will operate it as a local subsidiary, **Sybase do Brasil Software Ltd**. To head up the operation, Sybase has installed **Weslyeh Mohriak**, former CI Compucenter partner as VP Latin America and managing director of the subsidiary.

Adding to the high-end of its family of Network File System (NFS) servers, Santa Clara-based **Auspex Systems Inc** has introduced the **NS 7000/600 Series NetServer**. It features new 3.5", 4.29Gb drives and support for dual expansion cabinets supporting 210 drives for a total of 900Gb storage. It's based on dual-HyperSparc 55Mhz processors and is geared for storage and delivery of multiple data types including text, graphics and video. Prices start at \$113,000.

Meantime, **Auspex** has entered into a joint marketing and development agreement with electronic publishing software house **Archetype Inc** to integrate its NetServers with Archetype's pre-press workflow software. It's also tied up a reseller agreement with **Image Resources**, a system engineering firm which specialises in electronic printing and textile/apparel computer-aided visualisation systems.

**Bachman Information Systems Inc**, Burlington, Massachusetts, has put its **Ellipse** application development system, which supports partitioning, up on Solaris servers with an NT port promised for later in the year. The development system's repository goes from \$25,000 per Unix server and \$15,000 per NetWare server - development clients are \$3,500 per seat. The production system is from \$2,500 per server for up to five users - \$25,000 for 100 users.

**Banyan** has sold a 20% stake in its Japanese unit, **Nihon Banyan Systems KK**, to **Marubeni Corp**. It's looking for another partner to take a further 20%. Meantime it's secured **Hitachi Ltd** as its first worldwide OEM. Hitachi will distribute Banyan's network management, messaging and directory software and integrate the technology into its own products.

**TPC** revised the spec of TPC-C 3.0 recently such that results published after Feb 15 aren't compatible with the few published previously. A response to creative benchmarking on the part of vendors, who were substituting inexpensive third party terminals for the more costly ones they actually sell. The new spec eliminates terminals from the pricing model.

**DEC** is obviously eagerly anticipating the arrival of 64Mb DRAMs to drive its run-your-database-in-RAM strategy.

Frightening. System cost is now just 16% of the overall price of Unix system ownership, according to **IDC**.

**Mike Southon** of **Ratio** (not Southern as we wrote in error last week - UX No 533) wrote to tell us that he was not just a member, but one of the founders of **The Instruction Set** way back in 1984. Although he is helping out his old friends at Ratio, his main "day job" is business development at **Insights Ltd**, **Will Carling's** sports psychology company that also involves sports personalities such as Gary Lineker, Mary Peters and Sebastian Coe. His "night job" is being confused rock legend and 70s fashion guru **Mike Fab-Gere** (of **Mike Fab-Gere** and **The Permissive Society**).

**Compaq Computer Corp**, which decries **Intel Corp's** Intel Inside sticker campaign, continues the battle with its annual report: the cover carries the tag "When you have Compaq on the outside, you don't have to worry about what's on the inside."

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 206 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram · X

The weekly information newsletter for the UNIX™ community worldwide

London, April 24-28 1995

Number 535

## **NOVELL WANTS SOME MINDSHARE BACK; WILL RE-BRAND, RE-POSITION AND ADD NEW TECHNOLOGIES**

Novell Inc's been quietly fretting for months now about how to regain lost momentum from Microsoft Corp, and, in an attempt to start winning back mindshare, it is set to give its entire set of applications and services - NetWare and UnixWare excepted, for the present - a fresh lick of paint. In an announcement expected late May, or more likely early June, it will re-name, re-brand and re-position existing technologies, including Tuxedo and PerfectOffice, in a move that will also beat a final retreat from the failed AppWare initiative with a bunch of new products and services designed to re-point the company's application and middleware strategy. The new nomenclature will apparently better describe what the various products actually do. The company will be hoping it can drag some market share along with mindshare, and is likely to point to NT being used as an application server alongside, rather than as a replacement for NetWare servers.

## **DCE DIVIDED INTO TO CORE AND ADD-ON SERVICE STREAMS**

A year and a bit after its makeover, Open Software Foundation's board has signed the first of its new-fangled Pre-Structured Technology processes into life. Development of version 1.2 of the Distributed Computing Environment is being funded by DEC, HP, Hitachi and IBM (UX No 533). OSF doesn't expect there to be any change out of \$20m. Core code will be frozen in July, early releases will go to investors by year end and initial products are anticipated by mid-1996. OSF hasn't decided how 1.2 components will be delivered; it's weighing releasing the technology in two tranches, DCE 1.2.1 and 1.2.2. DCE 1.2, a near-term project as far as OSF is concerned, calls for the development of better integration with other distributed environments, including the ability to share files with and provide administration across Sun Microsystems Inc's Open Network Computing environment and Novell Inc NetWare. Version 1.2 will also include registry synchronisation, allowing ONC and NetWare users to access the DCE Security Registry. As well as the anticipated public key encryption login, principals from a foreign cell can be added to a group in a local cell. It also features a new C++-to-DCE Interface Definition Language compiler for distributed object development and support for single-threaded development application environments on client systems. There will be better scaling, security and naming functionality plus DFS 1.2, the new cut of the Transarc-based Distributed File System.

### **StreetTalk, Federated Naming and other PSTs**

From here on, OSF is floating DCE development down two streams; core services and add-on technologies, which could come in at higher or lower levels. Core distributed services, security, naming and file system will be developed as one technology block. Stuff which isn't dependent, but can be deployed for use with DCE core services, will be the subject of a clutch of parallel development initiatives, if OSF can attract PST funding from vendors. One of these will be the promised effort to develop Federated Naming and interoperability between DCE's naming service and Sun's X/Open Co-backed NIS system, a project now stripped from the core development effort (UX No 533). OSF says it's had discussions with Sun on the subject, has a preliminary design on the board, but hasn't architected the thing yet. Another PST - or maybe the same one depending on how it's played - will develop Banyan Systems Inc's StreetTalk directory as a desktop naming service for DCE. It's pretty much a necessity given OSF's plan to accommodate NetWare integration. Federated Naming will allow users to get into DCE through a bunch of mechanisms, including StreetTalk, an X.500 version of which Banyan promises next year (UX No 532). Details of other PSTs, for DCE or otherwise, are expected after OSF's members meet in June. OSF says there are already seven or eight proposals for additional DCE technologies under review, including instrumentation, performance enhancements and objects (all for DCE). Separately, OSF says it's already got engineering resources devoted to enhancing security for DCE's Mosaic-based WWW technologies. Moreover, it's investigating why DCE's vaunted security mechanism, Kerberos, has found so little use around the net, and what it can do to propel the thing into use there. The security stuff is seen as a medium-term project. More nebulous issues include technologies to address DCE-to-Corba 2 interoperability - which depend upon the outcome of the latest jockeying for positions in the object world, see opposite - and how messaging for the asynchronous world can be addressed by DCE. OSF's Architecture Planning Council is investigating these longer-term issues and how they and other technologies can be provided as specific services to Unix and non-Unix end-users rather than as new architectural frameworks. OSF claims the US Army has now standardised on DCE for all of its client/server applications and that Schlumberger is rolling out DCE on between 1,000 and 2,000 servers and 20,000 clients. Alongside DCE 1.2, the Common Desktop Environment and Motif integration and development effort is OSF's other near-term project. A joint development agreement for that work has not yet been signed. The status of the OSF/1 operating system and associated microkernel and embedded development efforts are the subject of a separate OSF round table in Cambridge, Massachusetts, this week.

## **HP "REVERSING" INTO INTEL ARCHITECTURE**

By all accounts Hewlett-Packard Co is reversing itself into the Intel Corp architecture under its 1994 microprocessor agreement with the chip builder. First implementation of what we're not supposed to call Very Long Instruction Word and other post-RISC and -CISC techniques will appear in Intel's P7. PA-RISC compatibility will be an *option* for users of the architecture. We're told HP users can expect P6 performance out of P7 weighed-down, with PA-RISC compatibility achieved maybe in hardware, maybe software, maybe in both. We don't know. HP is providing engineering resources and development staff that Intel's other partners, including Compaq, Unisys, Sequent and AT&T GIS are now leveraging.

## **MICROSOFT PLAYING OSF, X/OPEN AGAINST OMG?**

We learn that Microsoft Corp or its messenger (the list now includes Candle, CA, DEC, HP and maybe Lotus) has approached X/Open Co Ltd, the Spec 1170 standards bearer, and the Open Software Foundation, that other quasi-Unix standards organisation, to get them to endorse OLE or better yet COM as a *de jure* standard before the Sun Microsystems Inc-led forces of UNO, the Object Management Group's CORBA 2 solution, realise what's going on. Maybe even let OSF hold the spec. Observers suggest OMG should be reminded that it's sworn to accept as standard what the other two recognise as such. Does this sound to you like a prescription for deflating Sun and IBM's intention of trying to treat OLE/COM as second-best, the way they did DCE in UNO, reducing it to a mere bridge option, and maybe even trying to persuade Microsoft and its friends not to answer the second part of the new COM-to-CORBA RFP and just stick with the OLE-as-it-is Part A? We shall see what we shall see soon after Windows World at the end of this month.

## **NEW INGRES PARTNER, WHITE PAPER, DUE AT DB/EXPO**

Computer Associates Inc has leaked so many details of its promised White Paper for CA-OpenIngres 2.0 that it's put the thing off until DB/Expo, when it'll also announce a new industry partner supposedly bringing a raft of applications to the database. Amongst other things, the White Paper calls for: development of OpenReplicator for use between databases, even where there is no OpenIngres server present; new parallel implementations; FastPath dual access paths to data; cacheing and OLTP performance; a GUI-based Management Workbench tool for tuning and management; a GUI-based object class definition addition to its Object Management Extensions; separate gateways to connect OpenIngres with mainframe databases - Datacom and IDMS - Oracle, Sybase, SQL Server, Informix and Tera-data; and publication of TPC numbers.

### WITH EIGHT DOWN, PLATINUM INVESTS IN MEMCO FOR SECURITY SOFTWARE

With mesh fine as the nets on a Galician fishing trawler, Platinum Technology Inc is hoovering up all the fish, great and small, it believes it may need for its Open Enterprise Environment strategy. However, just a week after netting its eighth catch, Locus Computing Corp (UX No 534), Platinum has been unable to land five-year-old Tel Aviv-based security software house Memco Software Inc with one strike. It's had to take an undisclosed stake and settle for first right of refusal to acquire the remainder of Memco's business. Until last week Memco was owned by Israel's largest bank Hapoalim and some private Swiss and Israeli investors. Platinum is to release, and enhance, a version of Memco's B1 secure SeOS technology - announced only a couple of weeks back (UX No 532) - as the Platinum Security System. Platinum gets a seat on Memco's board and perpetual rights to SeOS source in addition. Platinum claims the software will integrate mainframe, Unix, DCE and other security systems into an environment that can be administered from a single workstation. SeOS forms part of Platinum's Open Enterprise Management System (POEMS) and is being offered from now as SeOS, from Memco or Platinum at from \$30,000. It supports MVS mainframes with RACF, CA-ACF2 or CA-Top Secret; AIX, Solaris and HP-UX. Memco has a US office in New York City.

#### Plans systems management strategy

Platinum, which has an agreement in principle to acquire Locus for \$33m in new shares, is looking for the Englewood, California company to provide its customers with consulting and distributed computing technologies for tying MVS, Unix and Windows, with VMS, OS/400 and OS/2 within its Open Enterprise Environment. Locus is styled the largest independent provider of open systems software consulting services to the industry, emphasising cross-system implementations. The other seven fish either just bought or in process of being landed by Platinum are Trinzic Corp, Answer Systems Inc, BrownStone Solutions Inc, SQL Software Corp, Viatch Development Inc, Autosystems Corp and RelTech Group Inc. Meantime, for those scratching their heads wondering where all these technologies are going, Platinum is set to unfurl a plan to turn the systems management world on its ear next month with a full-blown integration and product development strategy. Experience tells us it's a story we've heard before from the likes of OpenVision Inc, which went around hoovering up technologies and people a couple of years back before its campaign got bogged down.

### OEC TILTS AT PC-BASED DCE CLIENTS WITH NEW DCE ADAPTER

As expected, Open Environment Corp is making a bid for the DCE client market with a DCE Adapter it claims offers broader support than Gradient Inc's PC-DCE or Transarc Corp's DE-Lite, running on Windows 3.1, Windows for Workgroups, Windows 95, Windows NT, OS/2 Warp and Macintosh System 7.5 (UX No 533). OEC claims DCE Adapter delivers directory, security, naming and encryption services, and support for multithreaded applications to the desktop and that by comparison "Transarc's DE-Lite will offer a stripped-down DCE client without these key DCE services, while Gradient's PC-DCE offers full DCE capabilities, but requires Pentium-level machines with large amounts of memory to handle the huge RAM and processing requirements of the client software". DCE Adapter uses a DCE-compatible agent based on the remote procedure call OEC developed for its application development environment. OEC says Adapter requires 100 to 200Kb RAM compared to 100Kb for DE-Lite and 2,000 to 4,000Kb for PC-DCE, with runtimes from \$20 to \$90 compared to PC-DEC's \$50 to \$100 (DE-Lite isn't shipping yet). OEC is offering 2,750,000 shares at \$15 each in its IPO announced last week.

### APPLIX SPREADSHEET FOR MANUFACTURING

Applix Inc, Westborough, Massachusetts, is offering a version of its real-time spreadsheet for manufacturing which will supposedly access and analyse factory-floor data. Applix has configured a version of its spreadsheet, called Real Time for Industry, to collect information from Teknekron's TIB software bus or Allen-Bradley's Data Highway Plus networks (via Rockwell Software's Interchange) and other proprietary mechanisms. It can do histograms and statistics functions now; other SPC analysis components are due. The spreadsheet uses an Extension Language Facility from the company's once core Applixware software environment to create functions, applications and graphical front-ends for particular kinds of data. The Interchange bridge is \$2,000.

### CRESCENT PLANS NEW VBX TOOL, STINGRAY BASIC-TO-C/C++ TRANSLATOR

Progress Software Corp, which has been selling 4GL tools for Unix-based database and transaction processing application development since 1981, is moving into the Visual Basic market with its own products and those bought from its acquisition of Crescent Software, Ridgefield, Connecticut, for \$3m, in January. Why has Progress moved to Visual Basic? There are nearly 2 million copies of Visual Basic out there and there is no doubt that it is a very lucrative market. IDC for one estimates the aftermarket, which includes the thriving market for VBXs (Visual Basic extensions and OCX 32-bit, OLE extensions), might be worth as much as \$2,000m. The simplicity of Visual Basic and the low cost of the Windows/Intel platform allows anyone to participate, right down to the back bedroom individual who might otherwise be writing shareware. At the same time, it's a hazard to IT departments, which may have to obtain Visual Basic add-ons from multiple vendors - most often small garage shops with incompatible, untested products - in order to complete their development environments. All in all, a lucrative marketplace. Crescent currently sells sets of VBX development tools and is readying Enquiry, a visual database application development tool with SQL query building and automatic forms layout. Further down the line is Stingray, an internal name for a Visual Basic compilation system that'll improve the runtime performance of Visual Basic applications. Not strictly a compiler, Stingray is a translator or pre-compiler, translating Visual Basic code to C and C++ suitable for Microsoft's Visual C++ compiler. It's due later this year. Crescent is based out of Progress' Bedford, Massachusetts, headquarters and lead by Jennifer Bergantino.

### MIPS ABI GROUP INCORPORATES

The four-year-old MIPS ABI Group has incorporated itself as the MIPS ABI Group Inc, to protect some assets and intellectual property (such as logos, specifications, etc) and reflect its growth, it says. The first meeting of its Board of Directors, which includes representatives from each of the member companies, is on April 27 at Concurrent Computer Corp, Concord, Massachusetts. The group's new legal corporate status isn't expected to affect its operation. In structure it expects to be more similar to the SPEC group than 88Open. Its work will be done by the members of the ABI companies, rather than by any central organization. The group is on the third revision of its MIPS ABI specification and now supports about 70 applications from a dozen companies including Oracle, SAS, Informix, Progress, Acucobol, Liant, Uniface and Locus. It's sponsoring a seminar program to tell ISVs about itself and find new recruits.

### ICL UNBUNDLES SECURITY PACKAGE

ICL Plc's Enterprise Technology group is unbundling its AccessManager enterprise security software into a base module with four options. The AccessManager 300 base module provides single sign-on, graphical client, administration tools, remote Windows logon, central administration and WinSock APIs. Options are SSO+, with support for Windows DDE, GUI scripting, sample scripts, password generation, single logout and a logout button. Audit provides a range of auditing functions. Enhanced Security provides inactivity timeouts, password history checking, forbidden password lists, workstation role restriction and lockout, multiple login checks and badge/smart card support for PCs. An Administration Toolkit provides APIs for integrating AccessManager with other tools such as CA-Unicenter. Up on Solaris 2.3 or ICL's own Unix SVR4 servers and on Windows and Sun clients, a 500-user base system is from \$500,000.

### CALDERA'S DESKTOP WILL SHOW IN MAY

Caldera Inc, the San Jose, California-based company backed by former Novell Inc boss Ray Noorda is bringing its Linux-based Corsair Internet desktop to market via a \$40 preview programme which will make phased releases available to subscribers over the course of the year. The first one goes up next month and includes the Caldera Network Desktop for Internet Access, APIs, tools, utilities and support. It comes with the Linux kernel, GUI, built-in networking for Internet and other IP networks, NetWare client, back-up, and the 32-bit Windows API from Willow Software Inc, the Saratoga, California company formerly known as Multiport (UX No 531). Modifications and additions to the Linux kernel will be returned to the net.



### SUN CONTINUES TO REAP THE BENEFITS OF EMPHASIS ON NETWORK COMPUTING

After a very dull year in 1992-93, Sun Microsystems Inc has been back on a sustained growth tack, and net profits for its fiscal third quarter soared 87% to \$107.5m, an all-time record, on sales up 26% at \$1,505m. Net profits for the nine months jumped 93.0% to \$227.6m on turnover up 24.4% at \$4,253m. Net per share rose 82% to \$1.09 in the quarter, 92% to \$2.32 in the nine months. "Network computing is booming and we are a pure play in this market. The performance we are seeing in all our businesses, including chips, systems, software, service and aftermarketing, is exceeding our expectations," a jubilant Scott McNealy, chief executive, commented. "Sun's R & D machine keeps cranking out new products. In fact, the vast majority of our products shipped in the last quarter are less than one year old. We've leveraged existing Sun strengths to grow into new markets such as personal computer administration, the Internet, and interactive multimedia. Products like Solstice will keep us at the forefront of system and network management, and we're beginning to penetrate new markets, such as interactive services, by our alliance with Thomson Consumer Electronics." Chief financial officer Michael Lehman noted that Sun has now delivered four quarters in a row of outstanding financial and operating results, and that during the quarter, demand was particularly strong for multiprocessing desktops and high-end servers, giving a gross margin percentage significantly higher than in recent quarters and explaining the jump in net profit. The company shipped more than 78,000 computer systems from its Sun Microsystems Computer Corp hardware division during the quarter, representing a 16% jump on the year-ago period, Lehman told *Reuters*. He noted "accelerated demand, or record demand" for Sun's line of Unix workstations, notably Sparcstation-20 and -5.

### DATA GENERAL TO SHED 600

Data General Corp is not there yet, and after an \$11m second quarter loss, it will cut 500 to 600 more jobs taking a \$40m hit this quarter. The loss of \$11.1m, down from a loss last time of \$48.0m, included a restructuring charge of \$35.0m, on turnover that rose 0.3% at \$283.8m. At the mid-term, net profit was \$13.1m against a loss last time of \$69.1m, on turnover that rose 4.0% at \$566.0m. "Revenues for our AViiON server line were flat, both year over year and compared to our first quarter," said Ronald Skates, DG president and CEO. He said the company will be introducing new AViiON products later this year, which will be an opportunity to round up new customers.

### AT&T GROWS COMPUTER BUSINESS, BUT GIS REPORTS LOSS FOR QUARTER

AT&T Corp has reported first quarter net profits up 11.5% at \$1,198m on turnover that rose 6.8% at \$18,262m. Net earnings per share rose 10% to \$0.76. Comparisons are with figures restated to reflect acquisition of McCaw Cellular Communications Inc. AT&T says that Global Information Solutions reported a 28% increase in sales of computer products and systems to \$850m and that its total turnover grew 19% to \$1,820m, but it still managed to make an operating loss of \$143m for the quarter, up from a loss of \$57m a year ago - increased sales of lower-margin products and strong price competition were key factors in the profit decline, and the company expects sales of higher-margin systems to increase later in the year.

### CLARIFY OFFERS WEB-BASED CUSTOMER SERVICE, PLANS REPLICATION

Support service company Clarify Corp, San Jose, California, is offering a package for developing Web-based customer support sites called ClearExpress Web Support. It includes a Web data server and pre-configured HTML forms. It ships in July at from \$15,000 per module plus usage-based licence fees. The module is the first in a set of ClearExpress remote support products planned. Clarify is steeling itself for new releases of its software in the near future supporting data replication, Informix and Windows NT. Hitting back at the latest releases from competitors such as Scopus Technology Inc (UX No 530), Vantive Corp and Legent Corp (UX No 534), Clarify says ClearSupport and its other packages uniquely service both support and quality management via internal and external help desks. They offer local and remote dispatching and can process physical and logical products. Clarify has tested its components on a 1,200-user systems running against Oracle, Sybase and SQL Server, and claims one or two second response times to 6,000 calls an hour. It claims 12,000 users at 65 customer sites.

### HARRIS' REAL-TIME 604 NIGHT-HAWKS; ESCALAS, OTHER SECURE PRODUCTS DUE

Having focused most recently on its security business, and its still unrequited pursuit of Concurrent Computer Corp, Harris Computer Systems Corp last week brought its traditional real-time business back into play with PowerPC 604-based Night Hawk systems running a new cut of its Unix SVR4.2 MP kernel called Real-Time/Power. First model in the new 6000 Series is the 6200, which comes with one or two 100MHz 604s configured as a desktop, desk-side, rackmount, cabinet or ruggedised system with from five to 21 slots. As a uniprocessor with 32Mb RAM and 1Gb disk costs from \$46,000. Ford Motor Company gets one of the first 6200s to design and test engine controllers; Harris says it'll ship the units from May 15th. Existing Night Hawk users can upgrade via processor and memory board swaps at from \$30,400. Software will have to be recompiled. The 6000s will ship alongside Harris' five-year-old 3800 and 1200 real-time systems which use 680x0, the four- and eight-way 4400s and 4800s which use 88100s, and eight-way 5800s introduced in 1993 which are based upon 88110s. Real-Time/Power comes in for the company's CX/UX real-time Unix. The bulk of Harris' business remains in the real-time market area. The company is meanwhile gearing-up for a wide-ranging secure product announcement in a few weeks' time. At that time it's expected to detail how it'll begin selling the Compagnie des Machines Bull SA PowerPC Escalas it's OEMing configured with B2 Secure/Power Unix, which uses the same Unix kernel as the real-time variant (UX No 516). The security announcement is also expected to flesh out the work Harris is doing with Novell Inc on the Enhanced Security version of Unix SVR4.1 and its effort selling Secure/Power on IBM RS/6000s. Harris, which already ships PowerPC-based Secure/Power systems is working on software that'll layer on top of both operating system releases to provide PowerOpen ABI compliance (UX No 518). Harris Computer Systems reported second quarter net profits down 84.4% to \$200,000, on turnover that fell 14.3% at \$14.5m last week. Mid-term net profits fell 92.8% to \$215,000 on turnover that rose 18.6% at \$27.8m.

### 64-BIT HP FUD FACTOR CONTINUES

Industry sources confirm that there are problems porting to DEC Alpha systems but suggest that Hewlett-Packard Co has got the wrong end of the stick (UX No 434). Problem one: when porting from 32-bit Unix to DEC Alpha (Digital Unix), DEC makes pointers different sizes; Int being 32-bit, Long being 64-bit. (On a VAX and every other "normal" machine an Int and a Long are both 32 bits). This tends to cause lots of problems that are straightforward but tedious to fix. Problem two: With Int and Long being different, typical C compilers will silently convert back and forth from "Int" to "Long", even though to do so might produce wrong answers. This mostly arises through function calls in "C", because the language is so loose about this. For example, a function declared:

```
void myfunc(long x)
```

that's called elsewhere like this:

```
myfunc(27);
```

might not work (depending on how the declaration was made in the calling environment). It's likely that the "27" will be passed as a 32-bit value, which will screw up the function because it expects a complete 64-bit value. Apparently there was an effort during Alpha development to get DEC C++ people to make the compiler issue more warnings about Int->Long and Long->Int conversions. Problem 3 concerns Alpha's lack of byte-oriented instructions. Code written to do byte-by-byte string processing can suffer on Alpha. Regarding standards for floating point, the feeling is that de facto standards are adequate, and that HP is making a mountain out of a non-existent molehill.

### IDT CREATES CENTAUR MIPS UNIT

Integrated Device Technology Inc is setting up a Texas subsidiary to develop future generations of Mips Orion chips for NT and the embedded market. It'll be called Centaur Technologies and based in Austin, built around the nucleus of the Mips Technologies development team that's been working on new Mips processors for the past year under erstwhile IBMer Glenn Henry. Henry and his team leave Mips to sign on at IDT, with Henry serving as president of Centaur. The technology they were working at Mips will be licensed by IDT. Orion co-backer NKK will join the project. Henry said that over the past five years most of IDT's Mips revenues derived from chips that went into Unix workstations.

## IBM POISED TO WIN ITS REWARD AS NEW LAW PUTS BLOCK ON STATE BODIES BUYING ANYTHING BUT RUSSIAN-MADE EQUIPMENT

Last December Russian President Boris Yeltsin signed the law on the Delivery of Products for Federal Governmental Needs, which received little publicity at the time but is now beginning to make computer vendors a little uneasy. The law seems to make it obligatory for state enterprises to buy from companies assembling in Russia. "Seems", because it has yet to be interpreted in practice. Over the last six months there has been a steady growth in the imported computer market in Russia. A vicious price war in Europe and the US has made brand-name computers considerably more competitive with Russian assembled personal computers and cheaper non-brand machines made in the Far East. Several very large contracts - including the Central Bank of Russia, the Savings Bank of Russia and the State Duma - were awarded last year and vendors say federal bodies are now very sensitive to the fact that they should make sensible and longer-term purchases. To date, few Western computer companies have decided that it is worthwhile to assemble boxes in Russia. Most reckon the logistical hassles and relatively low volumes would make it unworkable. This has been with the exception of IBM Corp, which in 1993 began assembling personal computers at the Kvant plant in Zelenograd and has now switched the majority of its production there. Around 70% of IBM personal computers sold in Russia in 1994 were assembled at Kvant and now RS/6000 workstations will also be assembled there.

The new law may have provided IBM with a golden reward for its 1993 decision to commit to Russian assembly. It appears to ban all state bodies from purchasing imported goods. According to the decree, state bodies can only purchase imported goods if the goods needed are not, or cannot, be made in Russia. The needs of all state bodies across the country are to be centrally defined. All purchases by the state are to be made through "State Contracts" and one of the stipulations in these contracts is that "...it is not permitted to buy foreign products. With the exception of those cases where the production of analogous products is impossible or economically not viable in the Russian Federation." At this stage it is impossible to say how this law will be enforced or whether it will be enforced at all. It may turn out to be yet another ruse designed to collect "licences" from companies selling to state structures. Moreover, how "analogous" will be defined is anybody's guess. But if the apparent spirit of this law is enforced then it will change the entire complexion of the personal computer market. Major foreign players may have to decide whether to assemble their computers in Russia, or hand over large sections of the market to IBM and the Russian assembly companies. Alternatively, they may have to give Russian partners rights to do a degree of assembly work on their computers in order for them to satisfy this new requirement.

### Industry lobbying

It is also a little odd that the State Duma, which has just bought itself several hundred thousand dollars' worth of Compaq Computer Corp boxes, was at the same time voting to prevent anyone else so doing. This kind of inconsistency suggests that the law could be a well-executed piece of industry lobbying by a small number of well-connected Russian companies. In November the Association of Russian Computer Producers of Computer Systems and Software protested against a World Bank tender that restricted participation to those companies that could provide huge financial securities and credit, that is to say foreign ones. The association wanted to open the tender to more companies, including Russian ones, and sent a letter to Yeltsin. According to the World Bank, the association managed to exert considerable, although unsuccessful, pressure to get the loan either changed or abandoned. Most Moscow vendors believe the law could well be the result of continuing efforts by Moscow-based assembly company IVK to tilt the balance in its favour in bids for large state contracts. IVK specialises in large state contracts and has been running an aggressive campaign against foreign vendors in recent months.

### SGI DOES VIRTUAL SETS FOR TELEVISION

For its latest engaging trick, Silicon Graphics Inc and its Silicon Studio arm have come up with a system to enable television companies to create virtual environments - have the weatherman reporting from the heart of the jungle, put the weathergirl atop Mount Everest. The three-dimensional Virtual Set technology uses Silicon Graphics' Onyx RealityEngine2 graphics supercomputers and custom hardware and software from Silicon Studio partners to create computer-generated three-dimensional environments in which live announcers and on-camera personalities can be placed. The set is created in real time in three dimensions in the television studio so it can be instantly changed, and broadcasters can input live video into the three-dimensional graphics background. They use a combination of traditional blue screen backgrounds to capture the image of the on-camera personality, and the computer-generated graphics. Virtual Sets are already used by the British Broadcasting Corp in London, and on the SAT.1 sports network in Germany and Antenna 3 in Madrid. The technology also can be used for post-production, film making and interactive game development. Companies contributing to the system include Accom, Brainstorm Multimedia, ElectroGIG, Innovative Medientechnik und Planungs GmbH, ORAD and RT-SET. ElectroGIG, based in San Francisco, is providing some pre-designed or packaged sets for broadcasters so they can start using the system without training, and also plans to train news producers and set engineers in how to produce environments. Onyx computers starts at \$350,000.

### MOTOROLA TAKES 10% OF BULL

NEC Corp, Motorola Inc and France Telecom have been retained as the leading shareholders in a newly privatised Compagnie des Machines Bull SA. NEC will up its stake to 17%, while Motorola will take "initially at least 10%, with the option to increase it to 17% between now and mid-1997." France Telecom will maintain its 17%. Dai Nippon Printing Co and IPC Corp Ltd have each offered to take between 3% and 4%, in line with the co-operative agreements they have signed with the company, and the Ministry is considering the offers. IBM will maintain its stake at 1.78%, which means it will contribute a token \$4m for new shares. The association of Bull employees expects to take about 10%, and the transactions should net Bull some \$200m between now and September 1, and should cut the state's share to about 40% from the current 79.6%.

### EMASS BUYS RIGHTS TO CREO'S OPTICAL TAPE STORAGE TECHNOLOGY

E-Systems Inc's Denver, Colorado mass storage systems specialist Emass Inc has acquired manufacturing and marketing rights to Creo Products Inc optical tape technology, on undisclosed terms, and says the move gives it control of a technology that has changed the economics of image and document storage. Emass will sell the Creo Optical Tape Recorder under its own name and will use the base Creo technology as the basis for new generations of optical tape-based storage systems. The Optical Tape Recorder is claimed to be capable of 1Tb of data on a tape; the recorder uses reels of write-once optical tape, making it appropriate for archival applications. The optical tape has a life expectancy of 20 years in normal conditions, "more than 100 years" in controlled environments. The recorder uses a high-power laser read-write head to burn microscopic pits in the active layer of the medium. A low power laser pulse is used for reading. The drive supports a sustained data rate of 3M-bytes per second, and is claimed to access any file on the 1Tb reel in an average of 65 seconds. It emulates an IBM Corp 3480 tape drive and has a SCSI interface. Drivers are available for HP-UX, Solaris and AIX.

### EXCALIBUR ENHANCES RETRIEVAL SYSTEM

San Diego, California-based Excalibur Technologies Corp has added version 3.6 of its document management and retrieval system. 3.6 has a new module to connect with Kofax's Ascent Capture document capture system; colour image support and tighter database integration has been added to the client API; and there's new support for Solaris 2.4 and Digital Unix. Prices are from \$51,000 for 10 concurrent users. Excalibur has also added support for Silicon Graphics Inc and NT boxes in version 2.0 of its TRS text retrieval server, which supports simultaneous indexing and retrieval by multiple users across a range of databases. TRS 2.0 will also work with any Web server via an optional development kit. TRS 2.0 is from \$625 for a 100-user licence. Excalibur, which counts IBM Corp and Informix Software Inc amongst its licencees, is now going through integrators, resellers and OEMs. The basis of the company's audio, video and text retrieval software is its Adaptive Pattern Recognition Processing technology.

### LUSSIER HEADS SNI AMERICAS

Sweeping a new brush through the ranks, Siemens Nixdorf Informationssysteme AG's new president and CEO, Gerhard Schlumeyer, has installed Richard Lussier, founder and chairman of its recent Pyramid Technology Corp acquisition, to head-up Siemens Nixdorf Americas. The \$500m unit now operates across the US, Canada and Mexico. At the same time Siemens has dumped its Mips-based RM servers and the 50-strong enterprise systems division run by Joe MacGuire into Pyramid's 800-strong operation, which is now being run by president and CEO John Chen. The RM line will be carried by Pyramid in the US, UK and Australia where Pyramid has established strong presences. Pyramid VP Boyd Pearce will be in charge of RM marketing. Former SNI US president Adrian Peters remains an employee to assist with the transition.

### IBM HAS RECORD FIRST QUARTER, BUT DON'T GET CARRIED AWAY SAYS GERSTNER

While not in the Sun Microsystems Inc, Intel Corp or Hewlett-Packard Co class, IBM Corp's first quarter figures were stunningly ~~better than expected, with turnover up a striking 17.7% at~~ \$15,735m, representing something more than currency windfalls, profits up 283.6% at \$1,289m, and earnings per share of \$2.12 where the mean estimate on Wall Street had been for only \$1.35. The shares responded immediately, jumping \$2.625 to \$89.75 before the market opened. And chairman Louis Gerstner left the gainsayers with little to add, pointing out that "Although the signs are encouraging, it's important to put our first quarter results into perspective: the first quarter of last year was relatively weak, which makes this year's first quarter performance look especially strong," Gerstner said, adding "Our results also benefited from the strength of some currencies."

#### Best guess

IBM made encouraging progress on the road to recovery with its figures, and the headline news is all extremely positive, with turnover up a sharp 17.7% at \$15,700m compared with a weak first quarter a year ago, and earnings per share of \$2.12, far more than anyone on Wall Street dared dream of - the best guess had been revised upwards to \$1.53 after the company's meeting with analysts last month. Turnover, the \$1,289m net profit and earnings per share were all, a little surprisingly, an all-time record for the first quarter at IBM. The company says earnings benefitted from revenue growth across all key product areas and geographies, including personal computers, workstations and mainframes. "We had a strong quarter," said chairman and chief executive Louis Gerstner: "cost reductions have benefited us for more than a year, but now our revenue growth indicates that our technology and marketing strategies are taking hold and beginning to produce fundamental gains." The personal computer, RS/6000, AS/400, mainframe and storage systems businesses all grew, with the personal computer business making substantial progress in the quarter, although the company acknowledges that lot of work remains to be done before it can be satisfied with its performance. Distributed software also saw strong growth, with very strong growth in shipments of OS/2 Warp. Service revenues grew more than 30%. The currency effect was good for six percentage points of the growth, but the company points out that these revenue gains were largely offset by corresponding increases in costs and expenses associated with the fadeaway dollar - or the soaraway yen and mark. In North America, revenues rose 16.6% to \$6,700m. In the Europe/Middle East/Africa segment, growth was 15.8% to \$5,400m, but Asia Pacific saw the strongest surge, with growth of 26.4% to \$2,900m. Latin America was weakest, up only 8.4% at \$657m. Total hardware sales rose by 23.3% to \$7,700m, while software rose 11.2% to \$2,900m. The white hope services business grew 33.2% to \$2,400m but maintenance grew just 3% to \$1,800m and rentals and financing fell 5.4% to \$869m.

#### Cookie company

OEM sales "continued to grow," although the figures were not specified, and the storage side is still failing dismally to pull its weight here because most of the growth was in semiconductors. Total expenses declined 3.4% in the quarter, or 7.9% on a constant currency basis and from year-end 1992 to March 1995, expenses have been cut by a total of \$6,500m; its goal is \$8,000m. Old-style IBMers will feel uncomfortable that research and development was slashed 17% and is now just 5.8% of turnover, down from 8.2%, and mutter that this is a level more appropriate for a cookie company. Gross profit on hardware was 37.9%, up from 30.1% a year ago, on software, it was 65%, up from 62.7%, but on services it was still only 19.3%, up from 15.3%. It fell to 54.5% on rentals. Overall gross margin improved to 42.4% of turnover compared to 39.2% in the first quarter 1994, after adjusting for \$296m in software accounting charges. The company ended the quarter with \$10,500m in cash, about flat with the fourth quarter of 1994, despite spending \$1,400m for common and preferred stock buybacks and \$900m in restructuring costs. Core debt in support of operations and excluding customer financing, remained virtually flat at \$2,900m, all of which will leave shareholders wondering about the dividend and others wondering whether a big acquisition is in the plan.

### DEC BEATS FORECASTS WITH \$74m IN THE QUARTER, BUT TURNOVER RISES ONLY 6%

Digital Equipment Corp reported third quarter net profits of \$73.7m against a loss last time of \$183.3m on turnover that rose ~~6.4% at \$3,467.5m last week. At the nine-month mark, the loss was~~ \$37.9m, down from a loss last time of \$409.7m, on turnover up 5.6% at \$10,063.2m. Net per share was \$0.44 in the quarter. DEC got one half of the equation right with its figures, showing net profit of 44 cents a share, right at the top of Wall Street estimates and way ahead of the consensus figure of 28 cents for the quarter. But the other half of the equation still looks sunk in the mire - turnover was up a mere 6.4%, and given the withering of the dollar and the fact that DEC does well over half its business outside the US these days, 6.4% looks as if it can all be accounted for and more by the decline in the dollar over the past 12 months. That means that all the profit is being squeezed out of cost-cutting - the company cut operating expenses to \$1,029m from \$1,272m a year ago, and the jury will remain out on the company's future until it starts to show real growth again: 6.4% is hardly impressive when competitors like Sun Microsystems Inc grew at 28% in the same period. The company says the third quarter profits were driven by strong demand for its Alpha workstations and servers, and growth in its personal computer products. On the dollar, DEC says that the weakness in some countries created a slightly positive impact on revenues in the quarter, but non-dollar denominated expenses offset the impact. Gross margins continue to fall, hitting 32.2% of turnover last quarter, compared with 33.8% a year ago. The company completed the quarter with some 63,100 employees, a reduction of 22,600 jobs, or 26%, against the same period last year. Cash at \$1,460m was up 16% from a year ago. Product revenues were up 12% in the quarter at \$1,961m, the fourth consecutive quarter of product revenue growth, but the supposed white hope, service revenues, were about flat, down a smidgen at \$1,506m compared with \$1,509m a year ago. The company says it shipped its 100,000th Alpha system, with total Alpha revenues surpassing \$3,000m since the line was introduced. Alpha revenues were up 66% on the same period last year. Product gross margins fell to 28.7% of turnover, down from 30.5% of turnover in the second quarter, because of a change in the product mix.

### INFORMIX GROWS 54% YEAR-ON-YEAR, PROMISES HIGH-END INFORMIX 8 THIS YEAR

Menlo Park, California-based Informix Corp has reported first quarter net profits up 52.5% to \$19.1m, on turnover 53.8% ahead at \$147.8m. Net earnings per share rose 47% to \$0.28, less in relation to the rise in profits, more because of the increase in the number of Informix shares, 67m to about 68.5m, that resulted from a share issue made last year to cover stock option purchase plans. Informix says the database market is maturing and shaking down to a few long-term players. But it says it still has to work on changing the perception about itself, especially in the Japanese market, that it provides a great database for small machines. Informix reckons the next release of its database, expected this summer at the users' conference in San Jose, will lay to rest that myth. Informix 8.0 will be able to scale from a uniprocessor up to parallel systems; tests for MCI Communications Corp using IBM Corp's SP2 machine with 48 nodes produced performance unsurpassed by any other combination of technologies, the company claims. And its NewEra development tool, with its object repository courtesy of Versant Object Technology Corp, the ability to partition applications across a client-server environment, and the class libraries, is what major corporations want in a second generation, enterprise-wide tool, it claims. But do not expect Informix to come out with a stand-alone object-oriented database: it says the market does not want this. Instead, Informix will provide object-oriented extensions to its relational database. Other new technologies likely to be announced at San Jose include the ability to support 1Tb of data on an AT&T Global 3600, data warehousing, imaging and workflow applications. Informix senior VP Europe, Ken Coulter, said that in Europe the change in emphasis from channel sales to direct sales was beginning to work. Direct sales it reckons, are the only way in which it can grow at the 30% to 40% level it desires. From around 20 sales people in 1993, it'll have more than 200 in Europe by year-end.

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People Can't Memorise Computer Industry Acronyms - how very true: striking a blow against the ugly collections of letters, the association that mnemonic represents, the **Personal Computer Memory Card International Association**, has, with the third release of its mobile computing technology, rechristened it the PC Card standard. Unfortunately for plain English, the Association lost heart there, and retained its full name.

The incredible shrinking **Control Data Systems Inc** is to shed 1,000 of its 2,800 employees and \$200m of its \$525m annual volume for a mere \$34m cash: Control Data is selling product integration and maintenance operations in Canada, Mexico, Europe and Asia to **Ameridata Inc**, but the two companies may work together; AmeriData will combine the operations it buys to form a new unit, to be called **InterData Inc**.

As we assumed at the time, patents that **Wang** was protecting in its 1993 suit against **Microsoft** did relate to OLE, which left Microsoft little alternative but to reach a settlement with Wang; according to IDC, Microsoft has had to agree to display Wang's name on the screen of every copy of Windows.

**Sybase Inc** saw first quarter net losses of \$17.4m, including a charge of \$21m, against profits last time of \$13.9m, on turnover up 32.5% to \$216.3m.

**Intel Corp** reports that revenue from Pentium sales surpassed that from the 80486 family for the first time, in the quarter just ended, fuelling profits to a 44% rise at \$889m on turnover up 34% to \$3,560m.

**Microsoft** and its allies are reportedly going to follow the OMG process - our front page story not withstanding - until or unless it finds it either faulty or non-functional (for which read **Sun Microsystems** playing games and trying to undermine the Distributed OLE Part B of the RFP). If that happens, there could be hell to pay, with one player saying they would "blow OMG apart" by dividing it into belligerent camps ready to use their considerable marketing might.

**Oracle Corp** is gearing-up to distribute reusable Power Objects objects built by third parties through an ObjectStore on its Web server, reports *InfoWorld*. The Power Objects cross-platform rapid-application development tool, based on a language derived from Visual Basic, is nearing its final beta and will compete with PowerSoft PowerBuilder, Borland Delphi and Microsoft Visual Basic.

European Internet provider **EUnet**, Amsterdam, has appointed former X/Open staffer Wim Vink as managing director.

Menlo Park, California-based **Firepower Systems** (nee **Powerhouse Systems**), the Canon-backed PowerPC start-up says that if customers really want Unix it sure as heck ain't gonna sell them AIX. It finds Solaris more to its tastes and notices more demand. Firepower is fielding dual-604-based systems as well as 603s and 603Es. It says the cost of deploying AIX is exorbitantly high and has the notion Solaris was built to be more portable.

Atlanta, Georgia-based **Software Development Systems** is offering a SingleStep Unix-based debugging system for all embedded PowerPC and Motorola ColdFire, and 68000 applications on Sun and HP workstations at from \$2,000.

The **Object Management Group** has finally adopted a Smalltalk Language Mapping from IBM and HP for its IDL and an Interface Repository Specification from DEC, HP and SunSoft for runtime access to IDL information. OMG has also added an Object Query Service, its eleventh service, which provides selection, insertion, deletion, querying and returning data, derived from a spec submitted by IBM, Itasca, Objectivity, Ontos, O2, Servio, SunSoft, Sybase and Taligent.

**Hewlett-Packard Co** has signed to distribute Banyan ENS and Vines on HP-UX, SCO and Solaris.

The Conference Group's Unix Open '95 runs at the World Trade Center Mexico City July 10 - 13, alongside Database Client/Server '95.

**WRQ Inc**, Seattle, Washington, is adding version 5 of its Reflection network PC-to-Unix connectivity software, claiming it'll be the first Windows NFS client with OLE support. WRQ has added data cacheing and FTP directory caching for wireless users, and Mosaic and WinVN newsreader Internet applications. The software is out in June at from \$250.

**Visual Edge Software Ltd** is adding version 2.9 of its UIM/X GUI builder for Sun in May and HP-UX in June at from \$5,000. 2.9 includes a novice mode allowing non-programmers and new UIM/X users to build Motif interfaces.

**General Automation Inc**, Anaheim, California, is readying the SMP PowerPC Escalas it's OEMing from **Compagnie des Machines Bull SA** as Power Advantage servers for the US market that'll go from \$16,000 to \$63,000 as two-to-eight way 75MHz 601 units.

**IBM Corp's** supposed to break out its new systems management strategy, including Karat, on May 3rd in New York.

Although it pulled back from what it saw as the shambles that the **Bull** sell-off was becoming, **Sequent Computer Systems Inc** says it's still negotiating with the firm for its ISM integrated system management environment.

**Scott McNealy** finally went inside the company for Ed Zander's replacement, appointing former VP and general manager of software developer products, John Kannegaard, to president of SunSoft Inc. Kannegaard joined Sun Microsystems Inc in 1987 and was responsible for the creation of Sun's graphical user environment, OpenWindows. A replacement for Kannegaard is now being sought. Acting president Patrick Deagman will continue as SunSoft VP and CFO.

**Stanford University** researchers are working with IBM engineers to extend the Stanford-developed Pisces microprocessor simulator for three dimensions. Stanford is helping IBM parallelise its 3-D Fielday simulation code.

MITI's San Bruno, California-based **Eventus Software Inc** is offering Adhawk Spacer, a tool it says improves Oracle performance by providing detailed information on tablespaces and database objects. It monitors database objects, identifies those that need reorganising and generates a script on-line that does it. Users can invoke Adhawk's analyser or Oracle Analyse command. Prices go from \$1,000 on PCs with Oracle SQL\*Net hooked to Unix, NetWare, MVS or VAX Oracle.

**Novadyne Computer Systems Inc** is to be responsible for supporting and servicing Axil Computer Inc Sparc-compatibles across the US.

**Novell Inc** database technology spin-out **Btrieve Technologies Inc**, Austin, Texas, is looking at ways of getting its software up onto Unix and has SCO Unix (rather than UnixWare) in its sights (UX No 472). It doesn't want to get crushed by what's already on the market but is currently promoting its technology as the solution for NT users which Informix is to Unix.

Carlo de Benedetti's son Marco is running the Olivetti spin-off **Olivetti Telemedia**, which is carrying the company's multimedia destiny.

Now that it's been swallowed by **CompuWare Corp**, **Uniface Corp's** president Mike Wilson has run off to join **Dynasty Technologies Inc** as COO and executive VP.

Assessing the likely impact of DEC's 21164 Alpha, *Microprocessor Report* argues the company is justified charging a high price for the performance but that lack of a more reasonably priced server will keep 21164 volumes low (although it doesn't mention that NT implementations will be cheaper than Digital Unix variants). It adds that DEC has opened an "unprecedented" performance gap against the competition, but that few will be able to afford the leap and that by the time DEC reduces the gap other vendors will have comparable price/performance solutions.

**Hyundai's** Digital Media division has a new MPEG-2 decoder for set-top boxes and video-on-demand applications based upon **Sun's** microSparc. Hyundai licensed microSparc's Synopsys database from Sun to build the part.

Former **AT&T GIS** boss, now **Legent Corp** CEO Jerre Stead keeps tapping staff from his former company, now installing former AT&T platforms and system software division VP Mark Campbell as senior VP in charge of Legent's core Systems Management Group technologies. Former VP business transformation at AT&T Glenn Hazard is now CIO, replacing Franchon Smithson. Brendan Dawson is now executive VP and chairman of Legent global operations, Suzanne Nicastro heads human resources with the resignation of Arthur Pumo, and Rob Luscombe gets the VP North America job.

Just when everyone was catching up with our May 23rd PowerPC debut story (UX No 529), it looks like **IBM Corp** has gone and missed the boat again. The announcement's apparently on the move once more, just like we said it might be, to around the time of PC Expo in New York, which runs June 20 to 22.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

KBN - 1 MAJ 1995

# unigram·X

The weekly information newsletter for the UNIX™ community worldwide

London, May 1-5 1995

Number 536

## UNISYS' CALL FOR HIGH-END UNIX GETS INTEL'S NOD

With Intel Corp boss Andy Grove offering support for what he believes is a high-end "Unixification" process, Unisys Corp last week issued a clarion call for the industry to rally round its effort to create a standard commercial Unix for large-scale systems. Unisys has rolled out Unix SVR4.0 components implemented on top of the Chorus Systemes SA microkernel as Opus for its Open Parallel Unisys Servers, which are based upon Intel's Scalable Parallel Processors, *see below*. As well as offering the initial Opus release OEM, Unisys is also implementing the work on its Pentium-based U6000 Series SMP servers, which at the high-end are re-badged Sequent Symmetry 5000s, and its own architecture lower down. There are no takers yet, except Intel, which will resell the Opus package, and Unisys hasn't decided whether to retain the Opus name for the SMP units. AT&T, Pyramid, Sequent and Tandem have each, at one time or another, called for a standard approach to high-end commercial Unix, to redress Novell's lack of appetite for large-scale Unix requirements (UX Nos 522, 521, 509, 481). The gist of what we heard goes something like this: right now Opus is a componentised Unix SVR4.0 on top of Chorus MK, splitting functions such as process management, file management and streams - which can be distributed across nodes - under a single system image. Add to that Novell's Unix SVR4.2 MP and Chorus' telco work - development already underway with at least two other partners who have chosen to remain anonymous (AT&T and Sequent swore to us it isn't them). Throw NetWare into the pot, again cloaked in a single image, and run the result across mixed parallel, SMP and workstation environments. That brings us to ground where, at least in theory, SuperNOS, should be growing. Meanwhile, Chorus and Unisys, who have been working together on Unix SVR4.0 since at least 1991 (UX No 335), are also both involved in the Esprit III-funded Overture project (UX No 440), which is apparently feeding core microkernel technology into SuperNOS. Chorus expects to be talking about the results of the Overture work over the next few weeks. *Opus details page 5.*

## ...AS UNISYS DEBUTS OPUS PARALLEL SYSTEMS USING INTEL SPP

Unisys Corp duly threw its hat into the MPP ring last week, debuting Opus, its Open Parallel Unisys Server, which teams Intel Corp's Pentium-based scalable parallel processing (SPP) system with a new blend of Unix SVR4.0 and the Chorus microkernel wrapped in a single system image, targeted at decision support and data warehousing for business and government users. Opus is the second commercial string in Intel's bow after Sequent. It claims two other OEMs under negotiation. It honed its 'shared nothing' parallel technology in the technical world with the i860-based Paragon, running OSF/1. Opus makes good an August 1993 pact between the two firms (UX No 448); Unisys reckons the solution - described as its most important product since the company was formed nine years ago - will net it \$100m business in 1995, its plan calls for winning a 30% market share by 2000. The MPP market, estimated at \$1,000m now, rising to \$5,000m by 1998, is dominated by AT&T's Teradata and to a lesser extent IBM's SP2 which Unisys is targeting. Officials wouldn't say how much the firm has ploughed into the effort, but development costs certainly won't be re-couped in anticipated first year returns. Opus uses a 175Mbps mesh interconnect with a copy of the microkernel on each node. Up to four 16 node domains can be housed in each cabinet. Each node comes with up to 64Mb RAM, SCSI 2 interfaces and Ethernet. Unisys says it's got a P6 version up and running, which, using P6's Orion bus and an uprated interconnect provides four times the Pentium-system's bandwidth. Intel's also testing a Distributed Shared Memory Protocol for SPP and is working on other clustering technology. Unisys says its single system image allows all resources, memory, storage, printers, users and communications devices to be viewed as if they were part of a single system. It has Oracle7 Parallel Server and the Red Brick data warehouse up on Opus. There's little else parallelised for it, but Unisys plans other middleware and services later in the year to address this requirement, plus high-availability, OLTP technologies and inducements to get its mainframers up on the things. \$685,000 buys an eight-way system with 40Gb memory, which sounds pricey given that IBM charges about \$400,000 for eight-way SP2s. Unisys will sell them as part of a consulting service that will help customers use them, from May 15th.

## AT&T LACKS SYSTEM FOR BYNET BUS

AT&T Co would not comment on the notion that it is one of Intel Corp's two other potential OEMs for the parallel SPP line - *see above* - but suggested it is always interested in the possibility of sourcing technology rather than building it, and pointed to the rich heritage of Intel technology and culture it has amassed. The key differentiator for AT&T is its highly-tested Unix SVR4 MP-RAS environment set against the untried, untested Opus. Its second concern is that Intel, IBM and other parallel architectures are built upon generic bus topologies not tailored for decision support and data warehousing like its Ynet system honed for the Teradata back-end database on MPP. However, AT&T has slipped up badly with a much-delayed BYnet bus successor and non-existent Intel-based System 3700 MPP machine it was supposed to roll in to. Of late, AT&T has positioned its aspirations for the next-generation bus as separate from system concerns. It says it has the bus up and running internally, details of which are slated for this summer. System implementation details have been pushed far out from the bus itself (UX Nos 511, 527). "We underestimated what it would take to develop the bus to the next generation architecture," AT&T says, claiming to have a "fully functional" technology in testing. AT&T, which denies having turned down offers to buy the Teradata technology, will unveil a promised Unix version of the Teradata database running on its 3500 SMP systems at DB/Expo this week.

## EVEREST COMES TO MARKET AS SCO OPENSER 5.0

Santa Cruz Operation Inc will debut its next-generation Everest operating system as OpenServer 5.0 on May 9, touting the thing as a business critical environment for one person and their dog shops to enterprise concerns. SCO says OpenServer 5.0 offers new performance, reliability, availability and easy-to-use systems management on top of three file systems. The first is an enhanced version of its SVR3.2 fast file system, with an SVR4 development environment and APIs. Second is a new desktop file system with journaling and compression for users that need to run the thing in workstation environments (Stacker for Unix, as it puts it). Third is a new high throughput file system designed to support database and server platforms. SCO has implemented six management modules, some old, some new and others re-worked, accessed from a single Motif administration GUI or a Charm - character implementation of Motif - both supporting its Visual TCL scripting language implementation (UX No 499). It'll rework the stuff to support whatever specifications X/Open Co Ltd eventually comes up within that area if it's out of synch. As well as RAID levels 0, 1 and 5, hot sparring and UPS monitoring, the file systems support new caching, disk writing functionality and terabyte file sizes. It says 5.0 runs typically 30% or more faster than previous OpenServer releases on the same system. Customers get all three file systems and can chose to use one, two or all three, depending on requirement. Old OpenServer file systems will be hosted, user-level threads is optional it says, and the new release ships with all host-based components of its IXI and VisionWare Windows-to-Unix technologies. It claims to have "simplified" rather than retreated from multiple client, server and lite OpenServer implementations with a server and a client configuration, plus optimised point-of-sale and secure workstation variations. Pricing is due May 9, but customers will pay no more than existing tags, SCO says, across user band sizes that will extend both above and below where they are today.

## MICROSOFT-INTUIT MERGE BLOCKED BY DOJ

Glee filled many a corner of the computer industry on Thursday April 27 when news started filtering down that the US Justice Department had filed suit in district court seeking to enjoin Microsoft from completing the Intuit merger. Anti-Microsoft foes like Sun CEO Scott McNealy started polishing up their rhetoric about how they're in favour of "choice for the consumer" despite the fact that within hours of the setback Microsoft and Intuit, on their own rhetorical bent, were vowing to forge ahead with the merger, take the case to trial and be vindicated by the courts. The DOJ complaint charges the merger will be anti-competitive and create higher prices. *(continued on page 5)*

## MOTOROLA LEADS SEMANTIC COMPOSITION AND COMPONENT SOFTWARE GROUP

The US Department of Commerce's National Institute of Standards & Technology has awarded a \$19.4m five-year grant to a group of computer companies and universities that are working to create software **development approaches in semantic composition and component-based software**. The grant has been made under the Advanced Technology Program, and it has been one of the largest the institute has awarded so far during fiscal 1995; the programme, however, has just lost \$90m from its \$431m budget. The money was rescinded by the US government and this has meant that certain competitions for research funds have had to be delayed until the next financial year, which starts in October. But the institute does not believe that the cuts will adversely affect the component-based software programme; it wants the group to develop software components that people could buy off the shelf and configure into their own customised applications. IBM Corp, Hewlett-Packard Co, Apple Computer Inc, Motorola Inc, Baxter International Inc, Taligent Inc, Kestrel Development Corp, Stanford University, SRI International and the University of Southern California are all members of the joint venture. Dr David Fisher, manager of the Advanced Technology Program, said the idea is to create a commerce in components, a move seen as crucial by the institute to the US's continued dominance of the world's software markets.

### Commerce in components

Companies and organisations receiving the money will develop and market small, broadly useful software components described by formal specifications that characterise the logical and functional requirements and characteristics of components. Fisher describes the notion of commerce in components as akin to the trade in something like screws: people know what they look like, know they can come in different sizes and can produce them without needing to know to what purpose they will be put. "There is no software assembly business because there is no component sales business," he said, "but any other market has this and the ensuing benefits. The barrier in the software business is purely technical." The institute reckons that off-the-shelf software for personal computers makes up about 15% of the market. The remaining 85% is large custom-made programs often costing millions of dollars to create. This is a situation the institute believes is unwieldy and which eventually has to be challenged. It wants to ensure that the US is at the forefront of any technical advances in this direction. But components should not be confused with object technology: objects are system-specific technology, whereas the components to be developed would work on any system and are much more fine-grained: each component describes one particular function within an application whereas each object could be made up of numerous components. And the institute would like the joint venture to design development tools that could automate the 'weaving of the components' into applications. This is the semantic composition part of the programme. Fisher said the group is being asked to develop formal methods or, as it is known in Europe, non-procedural language methods, that would automatically synthesise programs as required.

### Off the shelf

The theory is that if both components and development tools were available then users could buy all they needed to, off the shelf and automatically configure an application that did everything the user wanted. Software companies could then concentrate on meeting application needs, rather than the mechanics of the software development process. "We would then have a viable marketplace for software," Fisher said, adding that the advent of such a system would revolutionise the world of software manufacturing. The joint venture has attracted some big names but not the biggest, Microsoft Corp, which, of course, might be reluctant to see users buying components to build their own applications. But Fisher says that Microsoft would probably not have qualified for funding as the programme will not support projects that companies could fund through free market sources. Those taking part had to define an approach to develop scalable, automated semantic-based software, focusing on testing, automatic generation of code to link software components together, and the creation of custom languages that automatically generate software components. Motorola, not known for its software technologies but keen to get into the field, will provide the strategic direction to ensure that efforts support commercialisation of the software technologies and to develop proof-of-concepts or demonstrations of the technologies.

## BULL, MOTOROLA TO FORM JOINT POWERPC SUBSIDIARY

Further details have emerged of the planned privatisation of Compagnie des Machines Bull SA after the announcement that NEC Corp, Motorola Inc and France Telecom will be the three major shareholders in a more **fully privatised Bull. The shareholding arrangement of 17% for NEC, 17% for France Telecom, 10% for Motorola, and about 4% each for Dai Nippon Printing Co and IPC Corp Ltd, 1.78% for IBM Corp and between 5% and 10% for Bull employees**, marks only an initial phase, bringing the state's direct stake down to about 40%, if you forget that France Telecom is state-owned. In the ideal situation, a second phase will occur early next year, Bull chief executive Jean-Marie Descarpentries told *Les Echos*. At that time, Bull will have reported an end to its losses, Motorola will up its stake by 7%, reducing the state's stake to between 30% and 32%, he said. Then the company's capital would be opened up again to investors and industrial partners, at which time the state's share could drop to between 8% and 10%. "But," he warned, "the partners that come later will not have the same conditions that were granted to those that have signed up now." Bull employees will have another chance to invest in the second phase. Descarpentries confirmed that Motorola conditioned a greater-than-10% participation on Bull's financial results and that the two companies will create a joint subsidiary "into which I believe they will bring other interested PowerPC partners". A strategic committee will be formed on which the three principal partners will be represented. "We have worked a lot with all of them. They are all compatible and they haven't come to dismember Bull," he remarked.

### Complete gamut

He disavowed any conflict of interest for NEC, given that it has chosen Hewlett-Packard Co's Unix servers. "NEC wants to have MIPS, Intel and PowerPC. It wants the complete gamut," he said. No other spin-off plans are currently in the works, the chief said, even though "it wouldn't shock me to put our mainframes into a common NEC-Bull subsidiary". As far as lay-offs are concerned, Descarpentries remarked that the \$200m or so that the privatisation brings him will reduce his debt service costs by some \$20m, which will relieve him of the obligation to seek out job cuts. "We will also save from synergies in purchasing. All of that reduces the need for restructuring. There will not be a worldwide job reduction plan. There will be projects by unit, if there is a need," he said. For this year, he looks for break-even as quickly as possible. "Despite everything, the beginning of the year was difficult, but I'm still aiming for break-even after restructuring costs. In 1995, all activities at the end of the year should be breaking even. And, in 1996-97, under my plan, each division will be among the three best in the world. Without a partner, that would not have been possible," he said. As for his own position, it "depends on the shareholders," he said, adding that he does not expect they would want to change presidents in mid-stream. "Today, what appeared one and a half years ago as a mission impossible seems less impossible, but the bet is not yet won," he said.

## IBM ANNOUNCES NEW EMBEDDED PART, SKETCHES OUT HIGH & LOW-END FUTURE

Stand by for the first PowerPC part that costs less than \$10. Late this year, IBM will launch an embedded chip aimed at lowly devices such as inkjets. In the meantime, IBM last week announced its second embedded PowerPC part - the PPC 403GB, a cut-down version of its existing PPC 403GA part. The company also released pricing information for the first time: each 33MHz 403GA costs \$53 in quantities of 1,000; the 25MHz version is \$49. The new, 28MHz 403GB undercuts both of these at \$45, and is designed, the company says, for printers, digital scanners, set-top boxes, X terminals and the like. The processor is apparently the result of an as-yet-unnamed customer for the 403GA which decided that the chip was too complex, and hence expensive, for its requirements. To make a GB, take a GA and strip out its in-built serial port, halve the number of DMA controllers to two and change the packaging. The core of the chip remains exactly the same, and IBM says we should expect further parts based on the 403 core this summer. However, the company is working on variants of the core and the company plans to unveil a new '401' core at the end of the year. The 401 will be even lower powered, aimed at the inkjet market. Chips based around this core will sell for under \$10, said Tami Spaulding, marketing engineer with IBM's embedded processor division. She added that the company intended to follow the 401 with a more powerful '405' family. This will have processing capabilities in excess of the 403 - closer, in fact, to the recently announced PowerPC 602. *Embedded ABI standard for PowerPC - page 4.*

### CONVEX REVS EXEMPLAR SCALABLE LINE WITH PA-7200; CANS GaAs

Bar a few last gasps in the Gallium Arsenide world, the re-incarnation of Convex Computer Corp as a Precision Architecture RISC shop is almost complete. This week at Hewlett-Packard Co's facility in Milan - later in the quarter in the US - the Richardson, Texas company will unwrap a new series of Exemplar SPP1000 scalable parallel processor servers for the technical compute market using the latest PA-7200, and will sketch a route up through PA-8000 (SPP2000) to the nether world of PA-9000 (SPP3000) where HP's architecture becomes Intel Corp P7 baggage. There are to be no further iterations of Convex's GaAs C series vector superminis, bar I/O and other peripheral upgrades to the latest four-way C4; "there is no future for point vector products," Convex believes. It'll continue to service its C2, C3 and C4 series customers but will later this year unfurl a package of measures to encourage still undecided C series customers to migrate to Exemplar, including new code generators for recompiling ConvexOS application code to run on PA-RISC. Convex will leverage supposed vector-processing techniques in HP's 64-bit PA-8000 and targets a 1996 SPP2000 system as the embodiment of what would otherwise have been a C5 machine. Convex, which has an ABI layer running atop its OSF/1 Mach implementation that can run standard HP-UX applications and middleware, is working with HP on a new cut (and a name) tailored for the 64-bit PA-8000. The new SPP1200 models preserve Convex's Global Shared Memory (GSM) parallel programming model which presents a single shared view of system memory, but includes a new I/O channel to take advantage of HP's runway bus, basically an uprated version of the existing Convex Toroidal Interconnect. Convex claims the channel will deliver four times the I/O throughput and twice the I/O scalability of the existing SPP1000 system, designed in conjunction with its partner, Japanese steelmaker NKK Corp which runs at 4Gbps. Convex, due to present dismal first quarter figures as we went to press, shipped eight C4 systems worth a total of \$8m in total in its fourth quarter, described then as a strong set of figures. At the time it had 1,340 C systems installed at 660 customer sites. It shipped a total of 62 Exemplars in 1994 - 23 to non-C series customers - 27 of them in the final quarter. It's largest installation to date is configured with 64 CPUs. The SPP1000/CD compact version of Exemplar has an average selling price of \$350,000, the full-blown SPP1000/XA has averaged \$700,000 per install. HP now price lists the SPP and holds 5% of Convex.

### HEWLETT CHIP-MAKING SNAG MAY AFFECT 20,000 WORKSTATIONS

An embarrassed Hewlett-Packard Co confesses that it has discovered and corrected a flaw in the manufacturing process that may affect up to 20,000 workstations currently in use by customers. The company said it will bear the costs associated with repairs or replacements and it does not expect a "significant" financial impact from the repair programme - clarifying that by saying it should not impact its quarterly results. The problem affects some machines using PA-7100 and PA-7150 processors, HP 9000 Model 735/125 and 755/125 workstations, including cluster configurations, and HP 9000 735/99, 755/99, 747i/100 and 745i/100 workstations shipped or CPU boards replaced since November 1994; HP 9000 G/H/I model 50, 60 and 70 servers or boards shipped since October 1994; HP 3000 987/RX/SX, 987/150/RX/SX and 987/200/RX/SX servers or boards shipped since October could also be affected, although there have been no reports. The fault can result in inconsistent system behaviour by corrupting data or showing a "system machine check" message on a user's screen. The company will make tests available so customers can test these machines. It says it is the first flaw to have been found in its workstations or its servers.

### ...AS HP DECLARES TRADE-IN WAR ON SUN

Hewlett-Packard Co has long offered special trade-in terms to Digital Equipment Corp users prepared to convert to Hewlett-Packard systems, and it is now turning its attention on the Sun Microsystems Inc base in the US. The company's Workstation Systems division is offering Sun users an extra 5% discount over standard discounts ranging up to 15% when they trade in Sun or Sun-compatible workstations or servers, meaning that they can receive up to 20% credit before any other purchase agreement discounts are applied. Sun itself has been offering discounts of at least 20% to users of Hewlett, IBM Corp and Silicon Graphics Inc machines.

### ADOBE ADDS DOCUMENT SCANNING CAPABILITY TO ADOBE

Adobe Systems Inc has added a scanning capability to its Acrobat system for preserving the appearance of documents as they are passed between incompatible systems. Acrobat Capture uses optical character recognition technology to convert documents into PostScript text, matching fonts with the closest of 41 built-in Adobe Type Manager fonts and providing gray-scale replication of graphics and charts. For applications requiring an exact duplicate of the original document, Acrobat Capture software can produce a bitmapped image of the entire document in Portable Document Format, placing the recognised text behind that image so the document is still fully searchable. First release is for Windows but other versions are planned. It is claimed to support a wide variety of scanners and can also convert TIFF and PCX images into the Acrobat Portable Document Format. The \$3,000 Acrobat Capture is due to ship next month; it requires an 80486 machine with Windows 3.1 and up and includes Adobe Acrobat 2.0, Acrobat Readers for Macintosh, MS-DOS, Windows, and Unix, and Acrobat Capture Reviewer.

### SYBASE TOUTS "INTELLIGENT" HIGH- PERFORMANCE SOLUTION

Sybase Inc believes the combination of its forthcoming Intelligent Query (IQ) Accelerator and System 11 RDBMS will prove a more elegant and cost-effective way of boosting the performance of database solutions than by brute force (and expensive RAM) proposed by the recent DEC/Oracle coupling (UX No 534). The company claims to have some internal applications running at up to 4,000s time faster using IQ Accelerator. The accelerator indexes every query against data which is represented as bits in a bit-map, eliminating table scans and therefore up to 90% of input/output transactions, the company says. IQ, claimed to work with any supported SQL tool - and across a variety of databases - goes to beta at the end of the quarter and will ship sometime in the third. At Sybase, it's been integrated with System 10 and will go forward into System 11, then back down to previous implementations of the database. Sybase expects other database vendors to follow suit with optimised indexing technologies. Although not developing strictly hand-in-hand with IQ Accelerator, System 11 will include other performance-enhancing techniques, such as support for multiple named caches which can address more than 2Gb memory where it is available, such as on DEC's Turbo Lasers that accommodate up to 12Gb RAM. Although it says it's got 64-bit projects underway with DEC engineers and may be investigating technologies that can wring performance gains out of 64-bit platforms - as Oracle VLM does - Sybase isn't about to run off and re-write its kernel in 64-bits even though the major platform vendors are all likely to touting their 64-bit wares by this time next year. In the first instance it isn't sure exactly who or what would benefit from such a move given that the majority of the data accessed by applications is typically stored in packets less than 64-bits in size.

### IS "UNIQUE" SINGLE SYSTEM IMAGE AS UNIQUE AS ALL THAT?

Although Unisys Corp claims to have originated its "unique" Single System Image software featured on the Opus boxes - *see front page* - we couldn't help noticing that Intel Corp's Scalable Systems Division included something of exactly the same name and providing pretty much the same functionality when it launched its latest i860-based Paragon, the XP/S MP system, in October 1994. Intel's version allows its machine "to appear as a single system with a single process ID space and file system" and "transforms a network of independent Unix processors with no shared memory into a unified Unix environment. Application programmers and system programmers are freed from the details of locating critical resources such as remote files, system processes and I/O ports". The Unisys version, on the other hand, "makes all processors on the system visible to each other", and has the ability "to view and manage all system resources - such as memory, storage, printers, users and communications devices - as though they were part of a single system". Unisys maintains that the two are completely unrelated, and an Intel spokesman said that Unisys had separately "invented" their version (ie he wrote the code). Admittedly the Unisys system also includes automated load balancing, though applications must be tweaked for the load balancing to be fully optimised.

### ALTAI BUY, FOR \$23m, TAKES PLATINUM TALLY TO NINE...

For its ninth acquisition agreement in six months, Oakbrook Terrace, Illinois-based Platinum Technology Inc went for for Altai Inc, Arlington, Texas developer of integrated automated operations software for open computing. Platinum has definitive agreement to pay about \$23m in shares for Altai, with any adjustments that may be needed to ensure a price of \$8.50 a share at closing, provided Platinum's share price remains in the \$13.16 and \$20.16 range. Altai will become a wholly owned unit of Platinum. Altai's Z/Team of products provide job scheduling, tape management, systems management and automation for multiple types of mainframes and open system. ~~The company sees Altai, coupled with its Autosystems acquisition, giving it a strong position in the market for enterprise-wide scheduling and automation software, and it also likes Altai's tape management line.~~

### ...ADVANCED SOFTWARE MAKES IT 10

Acquisition number 10 for Platinum is a company that has put itself about so little that we could find only one reference to it. Advanced Software Concepts Inc is a privately-held Escondido, California company that provides the NetArchive distributed network storage management software. In early 1993 it was one of the 33 companies announcing formation of the Data Management Interfaces Group, declaring that it was committed to providing next generation data management products and that it work would be made a lot simpler if Unix designers adopted a common set of useful and effective operating system interfaces. Terms of the agreement in principle for acquisition were not given.

### CADRE OUTLINES ITS PLANS FOLLOWING ITS COMBINATION WITH WESTMOUNT

The acquisition by privately-held Providence, Rhode Island-based Cadre Technologies Inc of Westmount Technology BV of Delft in The Netherlands has now been completed. There will be no job losses as a result, the two companies said. Westmount is looking to gain US exposure for its integrated software engineering tools, while Cadre wants to increase its European presence. Cadre considered a number of potential partners and chose Westmount because it had a strong European presence to build on. Westmount has 300 customers worldwide and more than 2,000 users. It refused to admit that this was effectively a takeover of Westmount by Cadre, although Cadre is acquiring the assets of Westmount and the Westmount name will fade out over the next 12 to 18 months. Cadre said that financially it could look as if it was taking over Westmount because Cadre's turnover is \$40m compared with just \$5m for Westmount, but the two claim to have merged because their market share and products complement each other. They believe they can now offer a complete product suite - they have separated the market into technical and information systems, the latter being the real time-based mission critical systems. Westmount's strengths lie in the information systems market and Cadre's are in the technology systems market. In terms of future strategy, Westmount's president and chief executive Weil van de Berg said if Windows95 is out in August the company will release a native Windows95 client in combination with Unix or OpenVMS server. In the first quarter of next year it will also use Windows NT on the server if it considers NT to be stable. "We are not confident that NT is stable now. We will wait until it is more stable to protect ourselves," he said. At the moment it recognises instabilities on certain applications programming interfaces within the Windows environment itself, it said. But it said it will wait until customers are using it before it makes products to work under other operating systems. Cadre employs 300 people worldwide and Westmount has a total of 75 staff.

### LOGIC WORKS HAS NEW SQL MODELLING RELEASE

Logic Works Inc, the software tools company based in Princeton, New Jersey, has launched version 2.0 of its ERwin/ERX SQL modelling tool. ERwin/ERX entity relationship diagrams capture business rules, and define entities, attributes, relationships, primary and foreign keys and index indicators from Windows clients. The software will run against any SQL database and includes server forward and reverse engineering connections which link it to database tables. It costs from \$3,300. A multiuser ERwin/CRX implementation will be around in the third quarter. The privately-held company claims revenues of \$13.5m and plans a UK subsidiary this quarter.

### HIGH-AVAILABILITY INFINITY R/T 300 JOINS THE ENCORE LINE

Encore Computer Corp has added the Infinity R/T 300HA high-availability model to its Alpha RISC-based real-time systems. The Infinity R/T 300HA is a dual node real-time computer offering high-availability via Encore's tightly-coupled Reflective Memory link between redundant processors. It runs under Digital Equipment Corp's Digital Unix and uses the Encore Alpha Cluster Software to give high-speed shared disk access to the disk storage arrays of the Infinity R/T 300HA system. No prices.

### SNI LOOKS TO EASTERN PROMISE

Siemens Nixdorf Informationssysteme AG plans to shift its focus from Europe to Asia and is aiming for 20% annual growth in the region, executive vice-president Axel Hass told *Reuters*. The Asia Pacific region currently accounts for just 2% to 3% of Siemens Nixdorf's global revenues, or \$250m, but plans to boost regional revenues by 20% annually over the next five years, raising its share of global sales to about 10%. It plans to increase staff to 2,500 in 10 production and development facilities in Asia by the year 2000; its parent, Siemens AG, plans to invest \$3,500m in Asia by the year 2000, and Siemens Nixdorf will get its share of that; it has a personal computer plant in China, a point-of-sale plant in Singapore, and a software development facility in India, and will open a personal computer assembly plant in India soon, and plans to make mid-range systems in India and personal computers in Indonesia.

### SYBASE'S POWERSOFT BUYS SDP IN FRANCE FOR MODELLING TOOLS

Sybase Inc's Concord, Massachusetts-based Powersoft Corp acquisition has an acquisition of its own, that of SDP SA, Suresnes, France. Powersoft expects completion next month, but refuses to disclose terms, apart from the fact that the acquisition is for cash. SDP develops and markets S-Designor data modelling tools designed to enable users to design, maintain and reverse-engineer more than 40 databases, and integrate with major client-server applications generation tools and languages. Databases supported include Access, DB2, Informix, Watcom, Oracle, Paradox, Rdb, SQL Server and Sybase System 10. Initially bundled with PowerBuilder at an introductory price - PowerBuilder Enterprise 4.0 for Windows/S-Designor Professional is available now at \$5,500. S-Designor Professional lists for \$3,000.

### CRAY SUFFERS GUT-WRENCHING PLUNGE

Cray Research Inc has reported a first quarter net loss of \$48.3m after an after-tax restructuring charge of \$28.4m, against a profit last time of \$21.9m, on turnover that plunged 47.3% at \$131.1m. Cray expects total turnover will decline about 10% in 1995, with breakeven results before to restructuring and one-time charges: "as we indicated last quarter, the first half of 1995 in particular will be difficult as we go through several transitions, including delivering higher unit volumes at lower average selling prices and managing two major product transitions," Larry Betterley, chief financial officer, said. The company blames the big plunge in first quarter sales on the transition to the new top-end Triton T90 machine; the first quarter order value was \$110m, up from \$59m a year ago, but the backlog at the end of the quarter was only \$282m, up from \$271m a year ago.

### MERGENT TO JOIN BULL'S INTEGRATED SYSTEMS SCHEME

Rocky Hill, Connecticut-based personal computer and Unix client security house Mergent International Inc says it expects to join Compagnie des Machines Bull SA's Integrated Systems Management partner programme soon. The privately-held \$10m-a-year company claims to have some 1.5m users of its personal computer and Single SignOn Data Access Control System software packages, which secures personal computers and Unix clients operating in network environments, without eliminating all floppy drive access. The company has opened a London office and plans AIX, HP-UX and Solaris implementations.

### EMBEDDED ABI STANDARD FOR POWERPC

IBM Corp and Motorola Inc have announced version 1.0 of the Embedded Application Binary Interface standard for PowerPC and is offering the standard free of charge. The binary interface was designed to ensure that development tools from different manufacturers will work together and is meant to provide standards for fast parameter passing, standardised register conventions and data addressability. The Embedded Interface was developed by an informal group of chip manufacturers, tool builders and end users, that included included people from Absoft, Cygnus Support, Diab Data, Embedded Systems Products, Ford Motor Co, Green Hills Software, MetaWare, Microtech Research, Motorola, SunSoft, and Wind River Systems.



### NOVELL "CAN COMPETE WITH INTUIT"

(From page one) Microsoft chief counsel Bill Neucomb indicated his case would be based on proving that Novell will be more than enough competition for the Microsoft-Intuit combine after it acquires Money, the software that couldn't compete against Intuit before, and ~~that Microsoft is unloading to do the merger. How he will do this~~ given Intuit's estimated 70-85% market share should prove good sport. Both Microsoft and Intuit flatly refused to discuss the negotiations they had with the Justice Department prior to the suit being filed, or what concessions they might have been asked to make. They also refused to discuss the DOJ's motivations in bringing the suit now given the fact that the Consent Decree it negotiated with Microsoft was badly received by the courts. The matter is now being appealed and oral arguments in the case were heard last week. A decision by the three-judge panel is expected in the coming weeks. Meanwhile, Intuit and Microsoft let it be known they were in this for the long haul. (see also page six)

### UNISYS OPUS ROUNDUP

Of course Unisys Corp already has a decision support box - the Data Central enterprise database server, launched back in March 1994. Based on proprietary 2200 Series mainframe technology, the strength of DataCentral is that it combines decision support with high volume transaction processing, something the new Opus box is rather weak on. While DataCentral appears to have little future beyond Unisys' dwindling 2200 Series mainframe user base, some of the expertise is very likely to filter down to the Opus development in order to improve OLTP performance there.

Both DEC and Sequent Computer Systems Inc favour the clustering together of SMP systems over SPP or MPP machines. DEC says it can cluster up to 96 8400 AlphaServers together, each with up to 12, 550 SPECfp Alpha chips inside, giving more flexible system offerings at a fraction of the price. They offer a common data view, and with the recently announced VLM facility (UX No 534) can access up to 12Gb of an Oracle database directly from main memory. Decision support is not about number of processors, it says, it's about how fast you can get information in and out, and memory is much faster than disk. Sequent says that while an MPP system might be balanced as an entry-level system, adding new nodes in the future means that you are forced to upgrade input/output, CPU and memory together, which can make it a very expensive option if all you need is more I/O.

As we reported (UX No 534), Sequent's collaboration with Intel will result in a "Video Pump", a specialist SPP Media Server for the video-on-demand market that will always be sold in conjunction with a Sequent SMP applications server acting as a front-end, along with ATM switching technology. Sequent is working direct with Intel's Scalable Systems Division, its neighbour in Beaverton, Oregon: it is not taking any of the Unisys-developed Opus stuff, but is using the same underlying two-dimensional mesh technology for its P6-based machine.

Unnoticed (at least by us), Intel Corp's Scalable Systems Division discontinued work on its hypercube based supercomputers using the iAPX-86 line of processors some time ago, saying that two-dimensional technology used in the i860-based Paragons turned out to be the more efficient approach. When asked how soon an iAPX-86 Paragon line will emerge, the company now says that it's "a reasonable assumption" that one is on the way.

Unisys Corp spoke - rather optimistically, we think - of having Windows NT up on Opus within a year. It claims Intel has done a whole bunch of work and "made good progress" parallelising NT. Unisys folk say their company "needs a firmer business relationship with Microsoft" before NT could appear on Opus.

Ed Masi, VP and general manager of Intel's Scalable Systems Division, formerly the Supercomputer operation, is resigned to replacing the OSF/1 kernel that's been running on its Paragon technical SPP engine as OSF/1 slips away. Intel has already re-written the problematic Mach-based inter-process communications technology found in OSF/1 for its own purposes. It doesn't believe the Unisys Unix SVR4/MK comms and node-linking stuff is robust enough for its requirements, although it quips "OSF/1 for show, Opus for dough."

### GRADIENT REFUTES OEC CLAIMS, READIES DCE-FOR-NT

Gradient Technologies Inc, Marlborough, Massachusetts, takes umbrage at Open Environment Corp's comments about its PC-DCE client software, to which OEC has been comparing its new DCE Adapter client (UX No 534). ~~For starters, OEC is still selling PC-DCE to its customers, Gradient claims.~~ Second PC-DCE requires from 600Kb to 3,000Kb on a 386 with 8Mb or better (not the 2,000Kb to 4,000Kb OEC claims); third, PC-DCE is not more costly than DCE Adapter; and fourth it will have the same platform coverage as OEC when it ships its full client/server implementation of its DCE suite for Windows NT in 30 days, and the Mac client it promises by year-end. Gradient's DCE for NT starts at \$3,000 per server, \$109 per client. The Gradient directory, naming, security threads, RPC and timing services for NT are ports of its UnixWare implementation. It doesn't use Microsoft's more lightweight, re-architected version (for which Microsoft doesn't have to pay OSF any royalties). The Gradient software will support Transarc Corp's DCE/NT work when it arrives; Encina is promised in client and server versions in the third quarter; the Distributed File System client by year-end, followed by DFS for NT server. Gradient views Transarc's DE-Lite DCE client as an extension cord allowing small footprint clients to access DCE services, engineered for DCE users with slow communications facilities.

### SOFTWARE AG's ESPERANT 3.0 CAN QUERY MULTIPLE DATABASES

Software AG is offering version 3.0 of its Esperant graphical SQL database query and reporting tool. SAG says 3.0 allows users to transparently query and join data from two heterogeneous databases, comes with faster and easier report formatting, integrated charting and graphing, a batch scheduler and the ability to create and store queries as icons. Esperant 3.0 can be used to write queries that address say Oracle and DB2 mainframe database data via a decomposition mechanism that creates multiple SQL Select statements to address the underlying databases, off-loading the processing to the remote servers. Results are joined back at the desktop. 3.0 can also read custom-written SQL queries, including those generated by IBM Corp's QMF for DB2. 3.0 ships on Windows from June 1st at \$600 each for up to eight copies. LAN Block pricing is \$3,750 for one-to-eight user LANs to \$80,000 for 130 to 256 users. Esperant supports virtually all relational databases.

### PLATFORM REVS ITS LOAD SHARING SOFTWARE, BAGS LARGE UK USER

Toronto company Platform Computing Corp is introducing its LSF 2.1 Load Sharing Facility (UX No 458) in the UK, claiming to have snared one user which has ditched its Cray Y-MP to replace it with its LSF software running on Silicon Graphics boxes. It says the Atomic Energy Agency is running LSF on two sites, after finding the Cray machine expensive to maintain. LSF 2.1 is based on a transparent distributed system which it says turns a network of multi-platform Unix systems into a 'virtual supercomputer'. It consists of Load Information Manager (LIM), a configuration management agent; Remote Execution Server (RES), a remote execution agent; distributed operating systems services, which ensure reliable execution and manage the distribution of jobs or applications and application programming interfaces supported by LSF enabling ISV's and user applications. LSF is up against the likes of Minnesota-based Aggregate Computing's NetShare (UX No 486), but claims it carries more utilities and appeals to a wider set of users selling itself as a developer's toolkit and a set of distributed Unix utilities. Available on most of the major Unix boxes, Platform plans to develop LSF for Windows NT by the end of the year. Platform recorded \$1.5m profit last year, has 20 employees and has sales, support and integration partners in Japan, Australia, Germany and France. DEC incorporates LSF with its Alpha DEC OSF/1 workstation farms, Convex has the stuff up on its Exemplars and SGI is co-marketing the stuff. LSF starts at \$1,000 per workstation, \$200 per client.

### UNISYS SHOWS NET PROFIT SLUMP

Unisys Corp reported first quarter net profit down 25.7% at \$44.6m after profit from discontinued operations of \$12.5m this time, \$33.1m last, and against a period that included an extraordinary charge of \$7.7m, on turnover up 7.7% at \$1,407.1m. The figures show the defence business as discontinued operations, although the money they make still go through its profit and loss account. Worldwide orders rose in the quarter with strong growth in software, departmental servers and desktop systems; services revenue grew 33% in the quarter, and represented over 30% of total turnover.

# unigram·x

The weekly information newsletter for the UNIX™ community worldwide

The press conference that **Microsoft** and **Intuit** hurriedly arranged because they were so deluged with calls after the Department of Justice moved against their merger (*see front and page 5*) was about 15 minutes getting started at 5pm East Coast time (2 o'clock out where they were). We figure they were late because they were thumbing through the dictionary picking out every glowing adjective they could find to call **Novell**. According to Microsoft, Novell is "redoubtable...well-managed...financially impressive...with strong relationships with OEMs and banks...the owner of a consummate suite of tax products Microsoft doesn't have as well as an operating system and fine business productivity tools...the quintessential well qualified company...stout competition" etc etc. Unfortunately Novell CEO Bob Frankenberg was on a plane when all this was happening, but, hey, Bob, they made a tape. It'd be a nice contrast to the DOJ suit which paints a bleak portrait of Novell as a weak sister and quotes a Microsoft executive as once writing "...who would be willing to buy us out and be a serious competitor...I can't imagine anyone would be stupid enough too [sic]..."

According to the DOJ suit, **Intuit** used to call **Microsoft** "Godzilla" and Microsoft used to call Intuit "Slade".

The DOJ suit says that to persuade **Intuit** to do the merger, a Microsoft executive VP - whom we take to be Mike Maples - told Bill Gates that "I tried to tell him [Intuit chairman Scott Cook] how much we could do with \$1 billion [to increase the competition against him]. I tried to be non-threatening, but let him know we would do something aggressively."

The Justice Department suit says that according to **Novell's** deal with **Microsoft** Novell gets Money for nothing. Novell would pay Microsoft 10% of its first year net sales which, by the DOJ's reckoning, would be less than \$1m even if Novell were as successful as Microsoft expected to be in 1995. As a further inducement, Microsoft "has given Novell certain other guarantees that could require Microsoft to pay millions of dollars to Novell if it does not succeed with Money". The government's implicit point is that Money is not a competitive product.

This Monday, May 1, **Silicon Graphics** and its silicon offshoot **Mips Technologies** are going to gather with a bunch of new partners and launch the new Mips R4300i chip on a Magic Carpet that takes them all to the land of set-top boxes and associated wonders.

**Oracle Corp** signalled that it is now firmly in acquisitions mode by naming its senior vice-president in charge of acquisitions, direct investment and licensing David Roux to its executive management committee: he was added to the executive committee "because the area he is covering is strategically really important to the company," it said.

**Microsoft Corp** has rallied existing partner **Computer Associates International Inc** to help it give Windows NT a new boost. The two are to combine products to create a bundle that includes CA-Uni-center, NT Server and SQL Server run-time. The integrated product will be duplicated and packaged by Microsoft and marketed worldwide by CA via its direct sales force and reseller partners.

For the Japanese market only, **Hitachi Ltd** and **Fujitsu Ltd** are exchanging APIs and teaming on software which will link their IBMulators and connect them up to Unix, Windows, NT and NetWare clients and servers.

00000ps! A 100-user implementation of **ICL Plc's** AccessManager would be \$50,000, not \$500,000 (UX No 535).

**Open Software Foundation** chief scientist Ira Goldstein's Research Institute is offering a bunch of WWW technologies at <http://www.osf.org/> Ariadne is a prototype browser with a back channel for remote control through TCP/IP and a graphical history tree; WebMail; DCE Web for document distribution (which requires a DCE licence); OreO for building Web-based transactions; and Group Server, a prototype Web server.

TED/CDE house **TriTeal Corp** has put its hand in its pocket for the technical buy out option over at **X/Open Co**. It gets a vote on X/Open's technical manager's committee. TriTeal has hired **IBM** CDE architect Jon Werner as TED product manager; he'll liaise with the X/Open committee.

To back the mainframe performance claims for its hottest (and air-cooled) 8400 AlphaServer, a uniprocessor, **DEC** has drawn up a price/performance comparison with **IBM Corp's** largest uniprocessor, the water-cooled ES/9021-711. It rates the AlphaServer's performance at 116 IBM Mips, the ES/9021 at 65, or \$404 per Mips against \$12,631. I/O is 1,200Mbps versus 1,088Mbps. Power for the Alpha box is estimated at \$10,200 against \$109,000, maintenance at \$34,000 compared to \$660,000, floor space at \$2,700 versus \$52,000 and cost of five-year ownership at \$47,000 against \$820,000.

As expected, **DEC's** expanded its AdvantageCluster range. The 5004/275 and 5004/233 come with two 275MHz or 233MHz AlphaServer 2100s with up to four CPUs each, housed in one cabinet with 8Gb memory, tape backup and DECsafe Available Server software, PolyCenter and Logical Storage Manager. The 233MHz version is from \$102,000, the 275MHz unit from \$127,000. Up to four quad-processor nodes can be hooked together.

**Oracle** spent \$1m to have four consultants come up with 40 suggestions about how to get its applications business on to the fast-track, claims *Information Week*. CEO Larry Ellison reportedly rejected hiving-off a separate applications business, but we all could have told it to go hire a chief of application marketing and strike-up new alliances.

**Tivoli Systems Inc** is offering-up a set of Applications Management Specification APIs for integrating applications for use with its TME distributed management environment. Tivoli will deliver an AMS module later in the year for SAP which will cost \$9,000 per R3 server. An AMS implementation of PowerBuilder is also slated. Initial AMS specs are due in 60 days.

**Sybase Inc** had its back against the wall at Comdex last week, defending its System 10 against charges that it can't scale beyond six-ways, compared with Oracle and Informix's 32-way implementations. Sybase says it can, and that any scalability concerns will be fixed by System 11.

**DEC** claims it has sold its new implementation of CICS/6000, ported by **IBM** to the Alpha architecture and announced as part of the recent Turbo-Laser product launch (UX No 534), to at least ten customers, including financial institutions and for an airline reservation system in the US. CICS is about re-hosting applications from the mainframe onto lower cost platforms, says DEC, and so it won't affect DEC's other TP offerings, which include its own ACMS proprietary system alongside Tuxedo and Encina. Anyway, says DEC, much of the functionality traditionally handled by transaction processing monitors is now finding its way into the databases themselves.

**Intel Corp's** chart shows P6 at 0.6 microns initially, going to 0.35 and 0.25. Pentium at 0.6 and 0.35 processes and the 486 stopping at 0.6.

**Silicon Graphics Inc** weighs in with its own high-end overhaul in the shape of new Mips-based 'supercomputers' next week.

**Texas Instruments Inc** is readying Arranger tools for use with Composer, the client/server implementation of its IEF development environment from August: it's the first fruit of TI's alliance with Microsoft Corp.

Dublin firm **Iona Technologies Ltd**, which closed its San Francisco office some time ago, is mustering a new US presence at the offices of Stratus Computer Inc subsidiary ISIS Distributed Systems Inc in Boston, with which it already has an alliance.

**AT&T** has hired Hewlett-Packard Co director of corporate development Thomas Uhlman as its VP corporate development to replace Blaine Davis who is retiring.

**SunSoft Inc's** now shipping version 1.0 of its Solstice AutoClient for remote configuration of Solaris desktops - it hasn't mastered booting and control well enough on other Unixes to offer third party client support yet. In addition, DiskSuite 4.0 storage volume management software with new GUI administration is available for Solaris 2.4. AutoClient 1.0 is \$2,500 for a server and 10 clients - DiskSuite 4.0 is out in June at from \$1,300.

Observers who say **IBM Corp** has too many platforms and operating systems suggest it create a single, scalable server environment, offer a choice of operating systems - or one with layered personalities if possible - attached to Macintosh clients.

**Open Software Foundation** was apparently "appalled" at the behaviour of some vendors during **OMG's** recent Cambridge, UK, meet. We wonder what it means, and why OSF had such big guns at the technical meet in any case.

**DEC** has tweaked its low-end AlphaServer 1000 line with the addition of 233MHz EV4 Alpha RISC parts. The Model 4/233 comes with up to 512Mb RAM and 440Gb disk, one EISA/PCI, seven EISA and 2 PCI slots. \$18,000 buys a Digital Unix or OpenVMS version with 64Mb RAM and 2Gb disk; the Windows NT model goes from \$16,000.

The concerned have called us fretting that **IBM Corp** may not even be able ready its Power Personals in time for PC Expo.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Allison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: [info@unigram.globalnews.com](mailto:info@unigram.globalnews.com)

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Registered at the Post Office as a Newspaper

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Number 537

**SUN PEPS WORKSTATION LINES WITH SMP HYPERSPARCS,  
110MHz MICROSPARC II, TURBOZX GRAPHICS**

Sun Microsystems Inc this week refreshes its workstations lines with new high-end desktops using up to four HyperSparc RISCs, a TurboZX 3-D graphics engine and the introduction of the 110MHz microSparc II into its volume SparcStation 5 platform. Still missing is the 90MHz cut of SuperSparc II - now expected in systems sometime after mid-year - the design Sun maintains is still its workhorse processor. At the high-end Sun is expanding its Ross Technology HyperSparc-based offerings with new one-, two- and four-way SparcStation 20 models that outpace similarly-configured systems based upon its own SuperSparc II design by about 20%, claiming the Ross RISC "plugs the hole," for the moment. On top of Sun's performance pile now sits the HS14MP with four 100MHz HyperSparcs, rated at 8,124 SPECrate\_int92 and 8,906 SPECrate\_fp92, with 8Kb cache and 256Kb external cache per CPU. With from 64Mb to 512Mb RAM, 1Gb to 338Gb disk, two SBus slots, TurboGX graphics and 20" screen, it starts from \$33,500. The HS22MP comes with two of the new 125MHz clocked HyperSparcs and is rated at 5,600 SPECrate\_int92 and 6,399 SPECrate\_fp92. With the same options as the HS14MP - plus two additional slots - it starts at \$30,500. Replacing Sun's first HS11 100MHz HyperSparc offering is a 125MHz uniprocessor HS21, rated at 131.2 SPECint92 and 153 SPECfp92. With 32Mb to 512Mb RAM and 1Gb to 338Gb disk, it starts at \$19,200 with TurboGX graphics and a 17" screen. Fujitsu Ltd's Ross has 150MHz HyperSparcs underway.

**Critical mass**

Sun now offers six SMP workstation models, and with 27 third-party applications now fully multi-threaded it claims to have gained critical mass for SMP desktops, with no rivals yet in sight. To go with the new units, Sun has parallelised its high-end 600 MFLOPS ZX graphics accelerator as TurboZX, now an eight-way architecture capable of 1.2 GFLOPS. It's aiming the combination of high-performance desktops and TurboZX at Silicon Graphics Inc and Hewlett-Packard Co offerings, claiming a 53% performance, 18% price advantage over SGI's Indigo2 Extreme. TurboZX, apparently tuned for displaying smaller, shaded, lighted polygons will perform 950,000 3-D vectors per second, 616,000 3-D triangles per second and 230,000 3-D quadrilaterals per second. It comes with built-in NTSC or PAL video support. Sun's graphics offerings are topped-off with Evans & Sutherland's Freedom series. TurboZX is available for the SparcStation 20 Models 71, 712MP, HS21 and HS22MP. Using 3-D quadrilateral performance as a mean - claiming it's the only indicator comparable across vendors' lines - Sun pitches its \$34,000 SparcStation 20 TurboZX Model HS21 and \$32,800 Model 20 TurboZX 71 - both at 230,000 3-D quad/sec with 64Mb RAM, 1Gb disk and 20" screen - against SGI's 200MHz R4400 Indigo2 Extreme which does 155,000 3-D quads/sec at \$40,000 with 64Mb RAM and 2Gb disk; and HP's 100MHz PA-7100 715/100 CRX-48Z at 140,000 3-D Quads/sec and \$37,700 with 64Mb RAM and 1Gb disk. Sun is positioning the new workstation/graphics combos at the 3-D CAD market where preliminary Dataquest numbers for 1994 show Sun shipped 33.5% of the 109,902 mechanical CAD Unix workstations installed last year (up 3% on 1993's numbers), against HP's 21.7% share (down 1%), IBM's 15.5% (up almost 4%), SGI's 12.3% (down 0.2%), DEC's 11.4% (down 0.4%), Intergraph's 1.5% (down 0.5%) and 4% others. Even so, 30,000-odd units is fairly small slice of Sun's overall workstation volumes. Graphics products manager Niraj Swarup says the company has no statement yet on whether it'll move to support the SGI-based OpenGL graphics library natively (UX No 533). It's sticking with its SunPhigs XGL for now. Sun says when it last asked, SGI told it there are just 12 applications currently up on OpenGL. Although Template Graphics and Portable Graphics offer an OpenGL option for SparcStation users, Sun's problem is that swathes of the industry, including the oil exploration companies, are driving on to the OpenGL road, which leads observers to believe Sun's conversion inevitable. Meanwhile, Sun is introducing the 110MHz microSparc on to the mid-range, high-volume SparcStation 5, rating the unit at 78.6 SPECint92 and 65.2 SPECfp92. With 32Mb to 256Mb RAM, 535Mb to 42Gb disk it starts at \$9,600 with a 17" screen and 1Gb disk. Servers are from \$10,600. Sun has moved the 85MHz microSparc II down into its new low-end offering, the SparcStation 4, which is rated at 65.2 SPECint92 and 53.1 SPECfp92 and costs \$4,000 with 16Mb RAM, 535Mb disk and a 15" colour screen or \$4,700 as a server.

**IBM TAKES OFF AFTER CA WITH SYSTEMVIEW**

IBM's SystemView - code-named Karat (UX No 532) - is now a product and is available on two CD-ROMs. It enables system management software to be launched from the GUI on AIX, and consists of 22 products - including NetView - in a single package. It seems to be an attempt by IBM to get its foot into the door before Computer Associates International Inc takes the entire market with CA-Unicenter. Not all the components are IBM's, but it would not reveal the third party developers, although Candle has been heavily involved. A third disk will have non-IBM components. The drag and drop interface makes for easy install and a "doggone simple world" according to Don Haile, general manager of the network software division. SystemView is IBM's first concerted attempt to make client-server computing a success - chairman Louis Gerstner's top priority for the software division, says Haile. Users can pick and choose from the 22 separately priced components. *Details, page 4.*

**NOVELL "SIGNED FOR UNISYS  
SINGLE SYSTEM IMAGE"**

According to Unisys Corp sources, Novell Inc has signed a contract with Unisys to take the Single System Image facility used as part of its distributed Unix operating system running on its recently launched Opus scalable parallel processing system. The Single System Image (SSI), somewhat similar in functionality to Locus Computing's Transparent Computing Facility - one of those interesting technologies that never really caught on (UX No 398) - is the most significant feature that differentiates the Unisys offering from IBM Corp's SP2 MPP system (UX No 536). Although IBM mentions a single system image capability in its marketing brochures, it hasn't yet implemented one, says Unisys. SSI allows users to login one time and to allocate access to individual areas at one time. On an IBM SP2, claims Unisys, such tasks as allocating a password to a new user can mean doing the same thing individually on every single node. SSI works by using virtual memory to store information about all the activities on each of the nodes, and keeping the inode and fnode look-up tables updated. Performance overhead is not a problem, says the company, due to the high speed 175Mbps mesh technology it bought in from Intel Corp. There are two ways of partitioning an Opus system; software partitioning, which allows the option of a breakthrough; and hardware partitioning, where you're not allowed to break the barrier. In this case, SSI will present a single system image on one partition, and communicate with other partitions by standard means, such as NFS. Along with SSI, Unisys also implements automatic load balancing at the system level, which works in a similar way to symmetrical multi-processing systems, allowing large tasks to be switched between processors automatically. It has also "modularised" Unix by breaking down the processes within Unix itself - so you can have a process manager, object manager, streams manager and IPC manager distributed across various nodes. Unisys began its development of distributed Unix back in 1989 in San Jose, and has been working closely with Chorus Systemes SA during that time on the Chorus/Mix SVR4 implementation. Three years ago it began joint development work with Novell and Chorus on the Amadeus project, designed to look into the modularisation of Unix and integration with microkernels. Unisys says it also helped with the development of the multiprocessor extensions to SVR4. None of this means that Novell will end up taking the Unisys code as part of its projected SuperNOS project, despite all the similarities - although it well might. All that Novell would say is that some of the Unisys work might not be appropriate to achieve its primary aim with SuperNOS - the full integration of UnixWare and NetWare technologies.

## OBJECT DESIGN DELIVERS VERSION 4.0 OF ITS OBJECT-ORIENTED DATABASE...

Burlington, Massachusetts-based Object Design Inc unveiled version 4.0 of its object-oriented database ObjectStore 4.0 at DB Expo in San Francisco. The latest version of the database has been enhanced for scalability, security and reliability, and designed to support large numbers of concurrent users. It is also at the heart of ObjectStore Component Architecture, also announced at the Expo and described as a comprehensive open framework of products, tools and technologies to enable end-users to develop object-oriented applications while retaining access and use of legacy systems and applications. Object Design says specific improvements to ObjectStore include Multi-Version Concurrency Control, which provides data access for large numbers of concurrent users; symmetric multiprocessing/asynchronous input-output that takes advantage of modern operating systems' threading capabilities by increasing the overall throughput of the database system, enabling it to scale to multi-user configurations; enhancements to collections and query facility that enable users to store large numbers of objects and perform complex queries on collections of objects; and additional thread support that automatically performs the inter-thread locking needed to serialise client interactions with the server, making development of multi-threaded applications easier. Increased reliability and security capabilities include archive logging, which automatically archives new data added to the database between back-ups; distributed back-up to enable complete transaction-consistent back-ups across multiple ObjectStore servers; and the ability to customise database access by asserting access privileges for higher granularities of control over the data. And the company says that the 4.0 release also has compiler heterogeneity that enables interoperability among clients using different compilers. ObjectStore 4.0 will be available in July under Solaris and HP-UX Unixes, and Windows NT, and the company plans versions for all major Unix systems as well as for OS/2 and Windows. Packages start at \$3,800, depending on configuration, and run-time licence pricing is also available for independent software vendors and development organisations.

### ...INCLUDES OBJECTSTORE COMPONENT ARCHITECTURE

Object Design Inc says its ObjectStore Component Architecture will strengthen the ability of ObjectStore to support applications used by large numbers of concurrent users across the enterprise. It will also enable users to use existing legacy data, applications and relational tools, while also benefiting from object technology in areas such as code re-use, high performance, data interoperability and support for data-intensive applications. Along with ObjectStore 4.0 the architecture is made up of ObjectStore Smalltalk Client; ObjectStore SQL Client; ObjectStore C++ Client; and ObjectStore Gateway. Smalltalk Client is a new version of ObjectStore that includes an interface to ParcPlace Systems Inc's VisualWorks application development environment and has been developed in cooperation with ParcPlace Systems. It provides direct support for native Smalltalk objects and offers database support for managing Smalltalk objects in a distributed, multi-user environment. C++ Client is an interface between the database server and C++ that manages the logical modelling view, including collections, queries, versions, transaction and memory management and relationships among objects. The C++ Client enables database processing to be spread across clients and servers. SQL Client provides access to ObjectStore C++ data from SQL-based tools and applications. Object data stored in ObjectStore can be translated and presented in a SQL table format. And Gateway offers interoperability between ObjectStore and relational databases, including proprietary ones, thus enabling developers to access relational databases residing on Unix and personal computers transparently. The Smalltalk Client, SQL Client and Gateway will be available in the second half of 1995 and will not be priced until then.

### INFORMIX STRENGTHENS ITS RELATIONSHIP WITH STERIA

Informix France SA and French systems house Steria SA say they intend to reinforce their existing relationship with a systems integration partnership agreement. While several products developed by Steria already figure in the Informix catalogue, under the new contract, Steria will develop further products and convert other software for Informix, and will also market Informix products. Steria reported 1994 turnover equivalent to \$240m, and it is one of the country's leading information systems specialists.

## OMNISCIENCE'S OBJECT-RELATIONAL DATABASE, OFFERS SQL-TO-OBJECT ACCESS

Santa Clara, California-based Omniscience Object Technology Inc has announced Omniscience Object-Relational Database Management System, an object and relational database that is said to offer the ability to handle interoperability across different language interfaces, notably between SQL and object databases in a single Windows program. The system is said to combine the robustness and reliability of relational databases with the productivity and performance enhancements of object databases. Omniscience, which was founded in 1992 by engineers from Sybase Inc, Ingres Corp and Versant Object Technology Corp, says that developers will find it easy to make C/C++ objects persistent with functionality that supports caching, rollback and crash recovery, query capability, intelligent database compaction, b-tree and hash indexes, and enhanced performance. And because it is based on an object kernel that is a lightweight database management system in itself, with a "very small" footprint, it can run on small configurations, such as notebook computers. The Omniscience Object-Relational Database Management System is said to support both relational and object database models, enabling the transfer of existing applications to object environments. This interoperability supports objects across data models and languages which means the system can serve as a common repository for virtually all applications. Omniscience ORDBMS Standard Edition 2.0 is available now on Windows 3.1, Windows NT and Solaris. A promotional price of \$100 is available until August 1. A Macintosh version of the standard edition will be available within 90 days, and a Power Mac version will be available later this year.

### AMERITECH USES VERSANT'S ARGOS FOR ENTERPRISE-WIDE APPLICATIONS

Menlo Park, California-based Versant Object Technology Corp says Ameritech Corp's Ameritech Advanced Data Services has deployed the first phase of an enterprise-wide application infrastructure for all business systems using Versant's object database management system and Argos Smalltalk Application Development Environment. The Argos Smalltalk Application development Environment is courtesy of Sunnyvale, California-based ParcPlace Systems Inc's, with which Versant signed a deal last year to take ParcPlace's VisualWorks Smalltalk environment. Versant says Ameritech Advanced Data Services' initial deployment comprises more than 60 business operations applications, created in less than nine months. The company's application infrastructure is called AADS Enterprise Systems and includes applications for service creation, personnel, financial accounting, sales and marketing, and many administrative applications. Versant's object database management system serves as the repository and engine for Enterprise Systems. Versant says Ameritech Advanced Data Services chose Argos Smalltalk Application Development Environment because it can provide model-driven object development. It creates applications in a graphical, object-oriented manner, and automatically builds the Smalltalk classes and database calls that comprise the application code. Changes made to the code during prototyping and development are reflected back to the object models automatically. Phase two of this deployment is expected in July and Phase three is slated for September 1995.

### WESTMINSTER CABLE OPTS FOR DEC SERVER FOR VIDEO-ON-DEMAND TRIAL

Westminster Cable Ltd, the British Telecommunications Plc-owned cable television operator for the London Borough of Westminster franchise, is to implement Digital Equipment Corp's media server to provide a video-on-demand service to its cable customers. Westminster Cable said it will be able to offer a more advanced service because part of the network is constructed from switched star technology, which was developed by British Telecom 12 years ago for a video jukebox and home shopping service tested in the mid-1980s. That trial failed because the technology at either end was not reliable enough - windscreen wiper motors from cars were used to pull laser disks out of a rack. Unlike traditional tree-and-branch cable, switched star has a built-in return path so the server can more easily receive a signal back from the customers. The drawback with switched star is that it wasn't designed with the massive channel capacity of tree-and-branch, carrying only 27 channels at the moment, rising to 36 by year-end. The beta trial will run from November until March next year, involving 100 cable customers, who will be able to choose from a regularly-updated video library of about 200 titles. Westminster Cable said the trial will complement British Telecom's interactive multimedia services trial because it will be testing reactions of seasoned multi-channel viewers.

## SUNSOFT BUNDLES IST X DESIGNER IN VISUAL WORKSHOP C++

London firm Imperial Software Technology Ltd has won a large fillip for its X Designer Motif and Windows interface GUI builder in the form of SunSoft Inc, which is bundling the IST software with a new cut of its C++ development environment called Visual WorkShop for C++. It replaces the existing WorkShop C++ and customers will get the \$3,500 X Designer bundled with Visual WorkShop C++, which starts at \$3,000 for a single user licence. Separately it's \$2,000 as Sparcworks/Visual. SunSoft management, which had originally plumped for a GUI-builder from one of IST's rivals, cut a deal with the UK company after it found that the majority of its engineers doing Motif work were already using X Designer. IST competes with Integrated Computer Solutions Builder Xcessory and Thomson Software Products' (Alsys)

## XVT HEADS FOR LUCRATIVE DB2 DEVELOPMENT WORLD

Boulder, Colorado-based house XVT Inc is pushing on from its traditional GUI development business into the client/server database application development world. It's offering new tools and connectivity software for building portable applications that provide direct access to DB2, IMS, Unix and NT databases without the need for gateways or transaction systems. For the connectivity part of the equation XVT has followed UK middleware company OpenWare Ltd to Shadow/Direct, an ODBC-based technology from Houston, Texas-based MVS house Neon Systems, which provides transparent access over LU 6.2 or TCP/IP to mainframe DB2 or IMS data from desktop applications (UX No 516). Shadow/Direct resides on the server and is interesting because it does not require the use of an intermediate database gateway or transaction system (such as CICS) to get at data. Other 'direct' solutions such as the Netwise Inc technology still rely on having CICS on the host (and therefore act as a CICS front-end), XVT claims. At the front-end, XVT has fashioned its existing C-based PowerObjects GUI tools for database application development, calling them DBAware client tools. Although Shadow/Direct actually shows up as an ODBC client on the desktop and can, therefore, host a variety of desktop tools such as PowerBuilder (which OpenWare is doing), XVT is leveraging its own C application building on top. DBAware Client Tools can also be connected to Unix and NT relational databases and over third party ODBC drivers. The tools provide data control tables and editing, and objects for building database connection, channel links and SQL queries. Both technologies are part of XVT's Development Solution For C; it's migrating the tools to its C++ environment but says organisations are proving more leery of moving to the language than the industry had anticipated. Its own business is now split evenly between C and C++ sales. Shadow/Direct costs \$15,000 per mainframe host and supports Motif, Windows, NT and OS/2 clients. DBAware Client Tools are up on Motif, Mac, Windows, NT and OS/2 clients and costs \$4,500 per seat on PCs, \$9,850 on workstations. Upgrades from XVT's existing C development environment are available.

### Steering a course

Although Shadow/Direct supports a range of databases, XVT is steering a course away from the busy Unix client/server relational world - where competitors like Neuron Data Inc are already some way ahead of it in any case. It reckons DB2 could provide up to 20% of its business by this time next year. It's offering the technology in the US only for now. Privately-held XVT did some \$12m last year, it's heading for the mid-teens this year. It says it had hoped the infrastructure for the next technology wave, distributed object application development, would be much closer on the horizon by now than it actually is. It says it's disappointed that Object Management Group's CORBA paradigm hasn't advanced further and into products and sees Microsoft Corp likely to take a clear lead once OLE/COM is distributed. It's still got development solutions for IBM Corp's System Object Model in its sights. XVT says its main competitors, Visix Software Inc and Neuron Data, are still emulating Motif and Windows front-ends.

## DAZEL OFFERS SUN ONC VERSION OF OUTPUT MANAGEMENT SYSTEM

Austin, Texas-based Dazel Corp has a new version of its OSF/DCE-based client/server print, fax, e-mail and page management system tailored for Sun ONC/NIS networks. Dazel for Unix loads on the server and maintains a central repository of output devices, performing output, conversion, logging and accounting services. The software can be accessed by Dazel Express Windows and Motif GUIs, from the Unix command line, via Dazel Gateway for users that run Unix lpr as their output mechanism and from Dazel SDK, which has an API that can be embedded in C or PowerBuilder applications which automatically handles output to devices. Dazel for Unix is up on Sun, HP and IBM Unixes and is priced at from \$100 per client. Dazel has signed King of Prussia, Pennsylvania-based PDC as its first VAR.

TeleUse in a market led by Visual Edge Software Ltd's UIM/X. Initially SunSoft is offering version 3.2 of X Designer for developing Motif 1.2 applications in C and C++, not the latest X Designer 4.0, which will also generate Windows-compliant interfaces. The company plans an additional Sparcworks/Visual release for 4.0, saying the software also provides an upgrade path for applications built under existing Motif GUI builders or its Devguide Open Look builder. As well as the GUI builder and Sparcworks compile/edit/debug tools, Visual WorkShop for C++ comes with the Sparc compiler C++, Sparc compiler C, Sparcworks/Impact multi-threaded development tools and Sparcworks/TeamWare code management tools. WorkShop now includes an incremental linker, claimed to cut link time by up to 90%, and support for multithreaded runtime error detection. Like previous releases, Visual WorkShop C++ will also go up on HP-UX (now in alpha release) and UnixWare. SunSoft plans further WorkShop releases to support Common Desktop Environment and NextStep/OpenStep application development, it already offers tools for the early adopter Distributed Objects Everywhere implementation. Meantime, IST is working on technology for object-oriented front-end development but isn't ready to show its hand yet.

### Fortran

SunSoft has also revved its Fortran development system with Performance Workshop for Fortran 90 which is based on Cray Research Inc's CF90 Fortran compiler, Performance Library, a library of algorithms and the same linker as in Visual WorkShop. The suite also includes the existing Sparc compiler Fortran 77 compiler SunSoft also gets from Cray, Sparcworks development tools, Sparc compiler C, Sparcworks/Impact code paralleliser and Sparcworks/Teamware code management tools. Performance Workshop for Fortran 90 is from \$4,500, Sparc compiler Fortran 90 starts at \$1,300 and the performance library is \$1,000. Upgrades are from \$300. All require Solaris 2.x. Fully-functional evaluation systems will be up on Sun's Web page.

## SOFTWARE ONE EXPECTING IBM'S CALL

Software One Ltd, the six year-old UK firm based in Marlow, Buckinghamshire, which specialises in CASE data format translation and which already has Bull, Oracle, LBMS and others under its belt, expects IBM to sign for its Exchange software bridge on OS/2, and has Amdahl and DEC deals in the wind. Exchange now offers interfaces for around 20 CASE tools, including Texas Instruments' IEF, KnowledgeWare IEW and ADW, Intersolv Accelerator, LBMS System Engineer and Unisys Linc, repositories and data dictionaries such as Reltech DB/Excel, Softlab Maestro II and Oracle Exchange, and generators like Paclan/X, CA-Telon and Amdahl Huron. The company is still working on a bridge to support the CASE Data Interchange Format (CDIF) standard (UX No 472).

## UNIDATA AND O2 TEAM ON OBJECT-RELATIONAL CORBA SYSTEM

Denver, Colorado-based Unidata Inc and French object house O2 Technology, Paris, are mind-melding to develop object-relational technology based upon their existing code. The resulting framework will be available for new application development and support existing software via schema and data migration/mapping, the two say. Unidata's release 3.x nested relational transaction and storage techniques will be integrated with the O2 Engine, OQL query language interpreter and reporting tools such as O2DBAccess around a CORBA-compliant object request broker over the next 18 months. The product will be delivered as component-based object services. They'll target legacy application migration, manufacturing resource planning and data warehousing with the result. A full object model will sit atop Unidata's nested architecture, which supports relational-valued and multi-valued attributes.

## TWO YEARS ON, IBM'S DB2 IS FIT TO FIGHT THE OPEN SYSTEMS RELATIONAL BATTLE

It may seem desperately late to the open systems database game, but IBM Corp is investing heavily in its DB2 family of products in a determined effort to make life a lot tougher for the likes of Oracle Corp and Informix Corp. Two years on since its first release of DB2 for OS/2, and 18 months since the first AIX version, IBM last week launched DB2 Version 2 for both platforms, which will be available on July 28. Beta versions for HP-UX, Solaris and Windows NT will be out on the same day, with a Sinix beta ready by September. IBM has also moved closer towards a common code base between versions, introduced DB2 Parallel Edition for the SP2, added relational extenders to DB2 for multimedia support, introduced the Starburst SQL optimiser, initially for Unix and OS/2, and at the low-end launched the Visualiser Query tool for Windows and promised Ultralight DB2 "very soon". Gartner Group figures set IBM's 1994 revenues from Unix RDBMS sales at \$19.4m, less than a 2% share of all Unix RDBMS revenues, but predicted that IBM will be level with Informix and Sybase on Unix and NT by the year 2000. Including mainframe and AS/400 relational database revenues with Unix gives IBM a 29% share compared with Oracle's 24%.

### DB2 Version for OS/2 and AIX

The main enhancements introduced with DB2 Version 2 for OS/2 and AIX include extended relational capabilities for multimedia, improved performance, increased access from other platforms via DRDA, data replication services and large database support. Multimedia applications require support for a wider variety of data, and DB2 now has added support for Large Objects (up to 2Gb), and has enhanced SQL functionality such as user-defined types and functions, triggers, and support for constraints and recursive SQL queries. With user-defined types and functions it is possible to create function libraries outside of the database which can then be added, extending database functionality. IBM has developed five such relational extenders, handling text, audio, video, image and fingerprint, which are now entering beta test. For large database support, DB2 has features to better control data placement, perform operations online, operate on smaller subsets of data, operate in parallel, and load data more quickly. To speed up performance, IBM has added greater parallelism and support for symmetrical multiprocessing hardware architectures, and more advanced optimiser technology, including query-rewrite, to better support 4GL and GUI builders currently on the market. It says it has achieved industry-leading TPC-C benchmark results on the AIX version, though doesn't go into details. Through IBM's Distributed Relational Database Access standard (which also supports ODBC) and IBM's Distributed Database Connectivity Tools, which sit on top of DRDA, there is greater access to other databases and tools (22 vendors currently support it) and to other versions of DB2, including multi-site reads and updates within a single transaction. Data replication to DB2 on AIX and OS/2 is now possible from multiple sources, including DB2 on MVS and OS/400, IMS and VSAM. The OS/2 and Unix cuts of DB2 now use the same code base and are pretty much synchronised. The kernel deals with operating system differences, such as the different methods of threading between OS/2 and Unix. Price for the AIX version is \$1,000 single user, the server version is \$3,750. Distributed Database Connection is \$3,750.

### DB2 Parallel Edition version 1

While IBM's SP2 may not be the most sophisticated of parallel processing implementations, IBM is claiming a technology lead over Oracle Corp in the parallel database field with DB2 Parallel Edition Version 1, generally available on September 29. Although IBM marketing literature makes great play of the fact that Parallel Edition has been designed and optimised for the SP2, IBM technicians insist it has a high degree of platform independence, and say they have already had approaches from other vendors asking about running it on non-IBM platforms. Unlike some other parallel database products - and here IBM means Oracle's Parallel Server - all functions are performed in parallel including data and index scans, index creation, backup and restore, joins, inserts, updates and deletes. IBM's Starburst SQL optimiser technology again comes into play here. DB2 Parallel Edition appears to users as a single database server.

### Visualizer Query for Windows

IBM also announced its DB2 entry into the low-end database query market with Visualizer Query for Windows, which it launched because those customers who saw the AIX and OS/2 versions were more interested in running it on Windows. IBM positions it against such tools as Intelligent Query, Business Objects and Access, but it is more comparable to Forest and Trees. The price, not yet finalised, should be around \$200. IBM hopes that users of the tool - such as the UK's Inland Revenue, currently an Informix customer - will be drawn into the DB2 world through using it.

## KARAT DEBUTS AS SYSTEMVIEW FOR AIX...

IBM Corp duly unveiled its SystemView for AIX last week - see front page - the first cut of what it's touting as its next generation, integrated network and system management environment (UX No 532). Previously codenamed Karat, the environment is intended to consolidate the company's existing systems and network management products into a single set of disciplines that encompass operations, problem, change and configuration management. Different activities will be fired-up and integrated via a common drag and drop Launch Pad the company's been demonstrating for some time. SystemView for AIX is effectively a GUI overlay for the NetView for AIX network management system that includes job scheduling, workload balancing, print management, storage management, software distribution and system administration. An OS/2 implementation is due in September, with an MVS version expected by year-end and OS/400 early 1996. The notion is to have users download SystemView components tailored for their particular operating system and network requirements from a common CD-ROM, all of which will run under a common interface. They'll pay for only those elements they download. Documentation and third party products will feature on other CDs. When SystemView for AIX is installed, a Launch Panel with six folders is displayed corresponding to the six SystemView disciplines plus applications associated with them; IBM software initially, then third party applications too. First rev of the software is positioned as the operational groundwork for a second phase, which IBM will put in place by the end of the year, that'll begin to accommodate the promised object-oriented components alongside existing procedural mechanisms, including an integrated performance manager and administrative console. There will be integrated asset management, console automation, security, licence, database management and help desk functions too. IBM says it'll ship a common object infrastructure for AIX and OS/2 platforms by late 1996, including a managed resource repository framework, topology display framework, and end-user frameworks and applications for common network management services. By 1997 it plans to have the whole kit and kaboodle there, including applications built upon a common underlying framework and not specific OS services. HP-UX, Solaris and NT implementations are promised next year. IBM says HP's Tornado and Sun's Solstice lack SystemView's ability to mix and match management processes under a single framework.

## ...AS CA CALLS SYSTEMVIEW "LITTLE AND LATE"

Computer Associates Inc, which is famed for its systems management software, yawned and indicated how unimpressed it was with what IBM Corp had wrought in the space of five years. Senior VP, product strategy Yogesh Gupta said he was surprised by how "little it is as late as it is." He also couldn't figure out why IBM's new software VP John Thompson would choose to "stand up and express excitement." Gupta pointed out that Karat is still pretty IBM-centric and noted that after five years of effort it was still only on one of IBM's four platforms, the others still being promises. "All they had done," he said, "is to have created a new launch pad for NetView within AIX."

## SYBASE ADDS TO DATA WAREHOUSE STORY

Sybase Inc was fleshing out its data warehousing story at DB/Expo last week. First it's getting Informatica Inc's OpenBridge data extraction and 'scrubbing' software up under its Warehouse Works framework, which transforms legacy data for use in a Sybase database accessed from a graphical interface. OpenBridge is \$6,500 per server. Sybase has gone to Austin, Texas-based Evolutionary Technologies Inc for its Extract tools which suck SAP AS and other mainframe data into Sybase. The two are working to put ETI's Data System Library up on the database. Meantime, Carleton Corp is putting the APIs to its Passport data warehouse development and maintenance software up on Sybase. Sybase SQL Server 10 is now in beta on UnixWare 2.0.

### BENTLEY READIES OBJECT MICROSTATION

Bentley Systems Inc, Exton, Pennsylvania, is working on a new object-oriented version of its MicroStation CAD software called Objective MicroStation, written in Objective C. It'll form the core of all MicroStation products once it's ready, a project that's expected to take more than a year. Developers will get to see initial betas late this year, users get betas early in 1996 and final release is scheduled for near the end of next year. Objective MicroStation will take the characteristics and behaviour of components designed using MicroStation and store them as reusable objects. Users will be able to mix-and-match MicroStation and Objective MicroStation components, the company says. It's adding an overlay schema that'll provide access to version 5 of MicroStation's DGN design file format database from Objective MicroStation, and in subsequent releases will transition the file system format to an object architecture. It plans to support the major object databases.

#### Developers

The major advantage for developers, Bentley says, is that objects can encapsulate all of the information associated with a CAD component, including all changes and histories. Bentley is adding an Objective C extension to its own MicroStation C compiler and, although users can choose to configure other third-party compilers instead, both inheritance and class structure/hierarchy must be defined in Objective MDL, the object version of the MicroStation MDL modelling language. Users will be able to construct CAD software in MicroStation MDL, Objective MDL or Visual Basic, C++ and Objective C. Objective MicroStation will be OLE/COM-enabled and Corba-compliant, handling processes via external APIs; a version with default interfaces for OLE/COM will be available initially. With Autodesk Inc and Intergraph Corp betting on OLE/COM, Bentley reckons the Corba play will keep its Unix ahead of the pack; it claims one third of its 180,000 seats are Unix - around 45,000 of them Intergraph users. Objective MicroStation will be up on all currently supported platforms, including Unix, NT and Mac.

#### Unit sales triple

Bentley says sales have tripled since it took over the marketing of MicroStation from Intergraph, compared to the first three months of 1994 and its unit sales of MicroStation have surged by more than 50%. The privately held company, in which Intergraph still has a 50% stake, didn't reveal exact numbers for the first quarter of 1995 and noted only that in 1994, with Intergraph handling sales, company revenue approached the \$100 million mark. Intergraph turned MicroStation sales and marketing over to Bentley, which previously just developed the thing, on January 1. Bentley said sales to Intergraph, the largest of its 500 MicroStation distributors, doubled compared to a year earlier.

### UNISYS USES VERSANT OBJECT DATABASE FOR REPOSITORY ENGINE

Now that the word "repository" is becoming fashionable again, Unisys Corp has made its Universal Repository, which uses the Versant Object Technology Corp object database as its underlying engine, available in the general marketplace - initially on Sun Microsystems Inc hardware. The Universal Repository has been in beta test at a dozen or so internal Unisys sites for some time, and one customer - the UK's National and Provincial Building Society, currently the subject of a takeover bid from the Abbey National - is implementing the repository as part of its Organisational Design Facility. Unisys claims to have the first object-oriented repository available. It includes built-in workgroup capabilities, client/server support, and APIs which support around 20 Unisys and third party CASE tools via Software One Ltd's Exchange bridge (see page three). An NT port should be ready by July, with HP-UX and AIX versions due by year-end. The repository is up on Opus initially. What's not clear is how the repository will fit alongside the TopSystems development environment of Unisys' recently acquired USoft unit.

### BANYAN GETS VINES 6.0 AWAY

Banyan Systems Inc, Westborough, Massachusetts has announced its anticipated Vines 6.0 network operating system. With all the attention Banyan's stripped-out ENS service package has been getting of late - ENS 6.0 debuts at the same time - ~~the company has lately been under fire about its future commitment to the NOS.~~ Additions to Vines and ENS for NetWare include: Distributed Enterprise Management Architecture (DeMarc), a Windows implementation of Hewlett-Packard's OpenView network management system; and enhancements to the Intelligent Messaging III and StreetTalk III Global Directory. StreetTalk III includes Guaranteed Login, whereby StreetTalk groups on a 'home server' can have up to two 'shadows', so that should the ENS server where the StreetTalk database is resident go down, it can be mirrored to another server in the network. The shadow databases are 'read only' but Banyan provides a utility to convert these to read/write functionality if the home server database gets destroyed. Banyan has doubled the number of groups and organisations available in StreetTalk from 25 to 50. Unlike previous versions of Vines and ENS for NetWare, versions 6.0 will have Intelligent Messaging rolled in. Also bundled with Vines 6.0 is Enterprise Backup and Restore 1.0 (EBR), which allows automated backup from a Windows PC on a network which has EBR agent software, though the service resides on a server with attached tape drive. Vines and ENS 6.0 support SCO, HP-UX, AIX, Solaris and NetWare; server prices go from \$3,000 for 10 users, \$50,000 for 1,000 users. ENS for NT is coming (UX No 532).

### PRISM SHIPS DIRECTORY MANAGER, UPDATES WAREHOUSE MANAGER

Cupertino, California-based Prism Solutions Inc has updated its Prism Warehouse Manager and is now shipping the Directory Manager (UX No 520). Prism Warehouse Manager 4.2 is said to automate the extraction and transformation ("scrubbing") of data from legacy applications into target databases. Prism reckons it's added thirty new features in the release, including reusable objects such as table layouts, mappings, business rules and global parameters used in other Prism Cobol programs. Capture variable definitions now import storage definitions and user exit parameters as meta data and there's a new DB2 Direct Read element. Additional target databases supported are Informix, Rdb and Teradata; Informix can also be used as a source database. The Prism Directory Manager manipulates meta data into an information directory which manages relationships between entities, provides tools for customising views and exports selected meta data to those tools. Its directory navigator provides point and click navigation of the meta data. The Directory Manager is up on Sybase, with Oracle support planned for June and DB2 by the end of the summer. Informix, Tandem and Teradata support is promised later in the year. Directory manager is from \$35,000; the Warehouse Manager from \$130,000.

### PROTOSOFT USES OBJECT DESIGN FOR REPOSITORY

Protosoft Inc, the Houston, Texas, based object software house has released version 3.0 of its Paradigm Plus engineering tool for PCs and Unix, integrated with the Object Design Inc database which it's using as a repository. 3.0 comes with new reverse engineering, team development and automatic synchronisation features. Also new is an Enterprise Component Modelling programme to help companies identify requirements. Paradigm Plus 3.0 is up on Windows and Windows NT from July, with Unix implementations due in the third quarter. Prices go from \$4,000.

### BMC ADDS DATATOOLS' BACKUP SOFTWARE

Houston, Texas-based BMC Software is moving into the backup and recovery market, integrating Californian DataTools Inc's SQL BackTrack into its application and data management products. SQL BackTrack for Sybase and Oracle provides automatic backup and recovery functions. BMC has put money into DataTools in return for exclusive distribution rights. SQL BackTrack for Oracle ships in the third quarter.

## NUMBER 11 BUY FOR PLATINUM IS SOFTWARE INTERFACES

Acquisition number 11 for Oakbrook Terrace, Illinois-based Platinum Technology Inc, which will be unrecognisable by the end of this year from the company that began the year, is Software Interfaces Inc of Houston, Texas. Platinum has agreement in principle to acquire the provider of data access, reporting and data conversion utilities for relational and non-relational database management systems, and Platinum reckons that with this one under its belt, its data warehousing initiative will be complete. Platinum has provisionally agreed to pay over shares worth about \$20m for the firm.

### ...UPDATES UNIVISION PERFORMANCE MONITORING SYSTEM

Meantime, Platinum is offering version 2.1 of its UniVision performance monitoring and management system for distributed Unix servers and relational databases. UniVision collects data for administrators and release 2.1 includes new intelligent agents, 'drill down' information layers, an extended retrieval option that provides data on everything from statistics on object size, to the structured query language (SQL) statements associated with an object. UniVision is a component of Platinum's plan to provide integrated management solutions using technology from its slew of acquisitions for MVS, Unix and Windows systems, with support for VMS, AS/400 and OS/2. UniVision 2.1 is up on AT&T GIS, HP 9000, IBM RS/6000, Sequent and Sun boxes with support for Oracle now - Sybase this quarter, Informix next half - prices go from \$8,000 for each console, \$3,500 per agent.

### MAJOR COUP FOR NEXGEN AS IT HIRES INTEL'S MR PENTIUM, VINOD DHAM

NexGen Inc, Milpitas, California has made its biggest coup since it brought Compaq Computer Corp aboard as a major investor, hiring Vinod Dham, general manager of the Pentium Processor Division at Intel Corp to be its executive vice-president and chief operating officer. As chief operating officer of NexGen, Dham will oversee all day-to-day operations at the company, which is exploiting its RISC86 architecture in the Nx586 family of iAPX-86-compatible microprocessors. Dham said he was attracted by both NexGen's technology and the chance to work at a small company. Disconcertingly, "after Pentium, I was looking for something equally exciting, and to be honest I didn't find it inside of Intel," he told Dow Jones & Co. "My job at Intel was finished." Intel said it was sorry to see him go, but wasn't worried that he was joining Nexgen; it was not aware of any legal restrictions on him from joining Nexgen, as long as he does not disclose any proprietary secrets.

### SUN USERS CAN NOW ACCESS NBC DESKTOP VIDEO SERVICES

Building on the fact that the systems are already widely used by the financial community, networked Sparcsystems from Sun Microsystems Inc running Solaris and Sun.Tuner will be the first Unix system for delivering NBC Desktop Video services to subscribers for the General Electric Co Inc broadcasting unit. Sun.Tuner is designed to provide access to broadcast and cable channels from Sun workstations as part of an overall desktop multimedia system, and the initial system is being aimed at Sun users in the financial community, who will be able to access NBC Desktop Video's coverage of breaking business news, live or on-demand, from their workstations. Sun's Interactive Services Group and NBC Desktop Video are also working together on application programming interfaces and interactive video technologies. NBC Desktop Video offers NBC Professional live coverage of market-moving events, breaking national and international news that affect markets and key corporate and government news conferences. NBC Private Financial Network has coverage of chief executive interviews, meetings, industry conferences and exclusive sessions from the New York Society of Security Analysts. And NBC Desktop Video on Demand is a multimedia tool for storage and retrieval of the other two services.

### ICL WRAPS UP DATASERV RETAIL BUYS

ICL Plc's ICL Retail Systems Inc in Dallas has now wrapped up its agreement with the Dataserv Inc subsidiary of BellSouth Corp and has completed acquisition of two of the Dataserv Retail Applications division businesses, taking assets of the Specialty and the Department-Discount Store Solutions units. The agreement enables ICL to enhance its primary retail ISS30 software architecture to provide retailers with customised, fully integrated point-of-sale software. ICL claims to be the first retail systems integrator to deliver a fully-functional open architecture globally. ICL is taking on about 30 Dataserv employees.

### SILICON GRAPHICS MAGIC CARPET FOR SET-TOP BOXES

Silicon Graphics Inc and its MIPS Technologies Inc last week announced its anticipated Magic Carpet, a chip set that combines Silicon Graphics' multimedia technology with the MIPS RISC to create a much cheaper set of building blocks for interactive television set-top boxes (UX No 536). Silicon Graphics reports that Magic Carpet has already received endorsements from AT&T Corp's AT&T Network Systems, Philips Electronics NV and Samsung Electronics Co, all of which say they will use the technology in their communications and interactive consumer product lines, while Time Warner Inc's Time Warner Cable supports the use of Magic Carpet for interactive applications. Magic Carpet combines the 64-bit R4300i with a Media Accelerator designed to provide two full-screen broadcast-quality MPEG-2 video streams simultaneously and offers three-dimensional audio and video using less bandwidth at lower costs than other technologies being tested, and could lead to the creation of virtual reality applications such as a home walk-through or a travel fly-through. The partners reckon the set will bring the cost of set-top boxes down below \$500. The chip set costs about \$100 in volume, and even if the end price of boxes is over \$500, it should be a lot better than the \$3,000 that the boxes used in the Orlando, Florida trial being run by Time Warner. Magic Carpet could also cut the price of setting up an interactive network because of the lower bandwidth required by virtue of the intelligence in the chips, since some of the video, graphics and audio can be generated locally so that all of it does not have to be sent over the network. Magic Carpet is claimed to be programmable to read any video, audio or graphics standard and is not confined to MPEG-2, the companies say.

### NCUBE FORMS NEW ALLIANCES FOR WEB, VIDEO-ON-DEMAND

Larry Ellison's Foster City, California-based massively parallel systems builder nCube Corp is joining forces with object-oriented software developer IT Solutions Inc to develop corporate World Wide Web information servers intended to enable cost-effective retrieval of database information and transaction services on the Web. IT Solutions, Chicago, Illinois will design its suite of World Wide Web application development tools for the nCube family of scalable digital-media servers, and they will enable users to interface to relational databases across the Internet and take advantage of the high-bandwidth parallel capabilities of the nCube system. nCube has a similar agreement with PowerShift Inc, Austin, Texas developer of software for the interactive multimedia industry. PowerShift's Integrated Interactive Multimedia Software will be combined with nCube's machines to create a scalable system for both the near and full video-on-demand markets. The PowerShift software incorporates technology for subscriber scheduling, and application and content reservation.

### MICRO FOCUS CUTS 10% OF WORKFORCE IN FACE OF FIRST QUARTER LOSS

The glory days look to be well and truly over for Micro Focus Plc, and the Newbury, Berkshire company's shares went into a tailspin last week after it announced that it made a net loss of \$6.8m after charges on first quarter turnover down 4%. The \$3.4m of charges are to cover the expense of cutting 75 jobs to reduce costs. It looks for annualised savings of \$8m as a result. Brian Reynolds, previously joint chief executive, has become chairman of the group overseeing research and development, and Paul O'Grady, who was chairman and joint chief executive, becomes chief executive. In March Micro Focus reported a slump in profits for the year to January 31 to £8.7m from £21.8m the previous year. It says the purpose of the restructuring is to align the company's operations with the areas of mainframe offloading, rehosting and enterprise client-server systems that its products address. A number of separate research and development projects are being brought under one umbrella with a view to unifying them into a product set for new applications. The job cuts are in all areas of the company and there will be no salary increases for the remaining staff until profit levels are once again satisfactory.



## HP AUTORAID CAPABILITY TACKLES CONFIGURATION AND MANAGEMENT

Hewlett-Packard Co has announced HP AutoRAID, a product that's said to automate the configuration of Redundant Array of Inexpensive Disks storage systems. The company says HP AutoRAID automates the selection of RAID levels, optimises disk storage capacity and performance; it has the ability to migrate data, supports an active hot-spare disk, and on-line capacity can be expanded. The performance and cost of usage of RAID subsystems varies with the RAID level and system workload. For example, RAID 0/1 has the best overall performance but is more expensive than RAID 5 or RAID 3. Hewlett-Packard claims that HP AutoRAID "understands" these differences and can dynamically adapt its algorithms so as best to meet the demands of the host system.

The key component of the technology is what Hewlett calls the dynamic data migration, the ability to convert data between RAID levels automatically, based on data usage, for the best combination of performance and cost of storage. Write data, which is normally the most active, is stored in high-performance RAID 0/1. As data ages, it is automatically migrated to RAID 5. A new set of algorithms manage data block-address translations, giving the system the ability to translate intelligently, or map, any host block address to any disk address with a dynamic algorithm and to change the translation while the system is operating. This makes it possible to move data, stored within a subsystem, to any location, on any disk, without affecting the data or how the host addresses the data, according to Hewlett-Packard. HP AutoRAID technology also offers the ability to add capacity on-line without data reload or additional redundancy groups. The company claims systems can be expanded in seconds. HP AutoRAID technology also supports an active hot spare; by reserving rebuild space across all disks the hot-spare disk can also be used to improve subsystem performance. Hewlett-Packard has not released launch dates or prices but says it is considering building the technology for other companies, as well as selling it OEM and building it for itself.

## CAMBEX ADDS CENTURION TO RAID DISK ARRAY OFFERINGS

Waltham, Massachusetts-based Cambex Corp has added the Centurion to its RAID disk array offerings for Unix systems. The array stores up to 700Gb. Cambex says that with the Centurion system it costs approximately \$1 to store 1Mb in large configurations. The system starts at 22.5Gb, a small desk-side unit, and can be expanded to 700Gb, a single- or dual-rackmount configuration, in 22.5GB increments, using desk-side and rackmount cabinets. Cambex says that the 700Gb product occupies only nine square feet of floor space. A single drawer, with up to five disk drive canisters, stores up to 22.5Gb. The system uses Hyundai America Electronics Inc's Symbios Logic Inc, formerly NCR Corp's controllers with 4.5Gb 3.5" disk drives that rotate at 7,200 rpm. There are two controllers per 30 drives, with up to 128Mb of partitionable Read and Non Volatile Storage Write cache memory; Cambex says that in an active-to-active controller mode this partitionable cache, which enables mirroring of data, can improve data rates up to 1.7 times in some applications. Centurion supports RAID Levels 0, 1, 3, 5 or concurrent usage of more than one RAID level.

### Motif-based

The Centurion has a Motif-based graphical Storage Manager for the scheduling of batch jobs, storage monitoring, fault indication, and initiation of dual simultaneous controller paths, known as active-to-active controller mode. Cambex says the array has a greater than 1,500 input-output transactions per second rate, in some modes; so it can support on-line bulk storage applications, as well as data warehousing, data mining and on-line analytical processing functions. It is attachable to RS/6000, Solaris, DPX/20, Escala and Powerstack MP computers. In releases due out later this year, Centurion Arrays will also operate with HP 9000, Novell Inc NetWare networks and the Windows NT operating system. In addition, the product is designed to function with a variety of network management systems that include IBM's NetView/6000, SunNet Manager, HP OpenView and CA-Unicenter. The product will be generally available by the end of the month.

## PEER LOGIC PIPES UP ON AIX, WIN32S

PeerLogic Inc, San Francisco, California, has added a Win32s version of its Pipes Platform asynchronous middleware messaging software - for Pipes-based NT and Windows 95 applications in Windows 3.1 - and added enhancements for full support of Windows NT 3.5, NetWare 4.x and OS/2 Warp. It also now supports AIX on IBM Corp's PowerPC RS/6000s. Pipes Access for CICS, effectively a Cobol implementation of the Pipes API within CICS, means Pipes implementations can now access MVS/CICS mainframes directly. PeerLogic has added support for MVS C/370 and LE370 compilers in addition to SAS/C. Bob Scher, director of the company's strategic alliances has been elected president of the Message Oriented Middleware Association.

## WALL DATA RUMBA OFFICE 2 ADDS AS/400 SUPPORT, BETTER 390 LINKS

Kirkland, Washington-headquartered Wall Data Inc has announced a \$500 Version 2.0 of Rumba Office, its software communications package first launched two years ago, with re-worked TCP/IP, mainframe and new AS/400 connectivity. There's a common EHLAPI interface to all hosts, including Rumba for Unix and Rumba for HP "Windows95-style" There are a bunch of Windows-style GUI enhancements and a 32-bit WinSock TCP/IP stack. TCP/IP applications include a Rumba File Manager and a dialler for remote access using the Serial Line Internet Protocol and Point-to-Point Protocol. For mainframe communications, 2.0 supports NetWare for SAA Version 2.0; File Transfer Compression FTX to increase mainframe-to-desktop file transfer speed; and a Quick Assist data entry system which automatically performs repeated tasks. Rumba for Database Access and Crystal Report offer access to and report writing from AS/400s without use of gateways. Meantime, Wall Data has acquired Concentric Data Systems Inc, Westborough, Massachusetts provider of Windows and MS-DOS-based data access and reporting tools for desktop and client-service databases. Its R&R Report Writer claims more than 200,000 users worldwide and will be incorporated into Wall Data's Rumba and Salsa software technology base. Financial terms were not disclosed.

## RED BRICK'S WAREHOUSE VPT FOR SP2 IS NOW DUE OUT THIS QUARTER

Red Brick Systems Inc has accelerated availability of its Warehouse VPT client-server database for IBM Corp's parallel processing computer, the SP2. The company says the parallel database product will enable customers to manage system resources better and be more flexible when adding new users. To maintain scalable performance of large data warehouses in multi-user environments, Red Brick Warehouse VPT will automatically invoke unique connect balancing across unlimited SP2 nodes and will offer scalable query throughput as additional users access the data warehouse. The database administrator can perform routine operational data warehouse functions from a single control node, to ease administration demands, says Red Brick. The warehouse can be partitioned with nodes assigned to service specific applications. It's ready this quarter. IBM's own parallel database, DB2 Parallel Edition, is due out in September (*see page four*).

## SOLARIS FOR POWERPC, FIRST CUT

SunSoft Inc will announce Solaris for PowerPC at IBM Corp's Power Personal introduction, which it fully expects to be in June. Solaris for PowerPC won't fall into synch with Solaris on Sparc and Intel as originally thought, being caught between two releases. Not all system software for Solaris Sparc and x86 will be up on Solaris PowerPC with the first cut.

Although under target for the quarter, Sun claims it's shifted tens of thousands of the \$4,000 SparcStation 4s in the couple of months they've been shipping. It won't attempt to go any lower down the pricing scale, believing that under \$4,000 and you are there. It's taking three to four months to ramp up to volume ships after initial delivery dates, Sun says.

Sun is also introducing a new SparcStorage Array Model 102 RAID subsystem for use with SparcServers and SparcCenters that has up to 30 2.1Gb drives at from \$26,200 for 12.6Gb and \$62,600 for 63Gb. It's added an optional second power supply for the 2000E SparcCenter and a redundant cooling fan unit with four blowers in case of failure.

Dan Farmer, the infamous co-author of the Satan Security Administrator Tool for Analysing Networks (the other author was Wietse Venema), who lost his job at Silicon Graphics Inc after releasing the tool over the Internet for free and causing a major security scare (UX No 533), turned up at Sun Microsystems last week, reports the *San Jose Mercury News*. Farmer apparently worked at Sun three years ago, before joining SGI. Sun's own computer network was unaffected by Satan because it took precautions before it was released. According to the *News*, Farmer has agreed not to work on Satan during Sun's time. His title has not yet been decided, but "Iconoclast" is under consideration.

# unigram·X

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**Sybase Inc** plans to ship SQL Server Release 11 by September and in limited, or beta, quantities next month, saying that it will "remove the scalability cloud hanging over us", referring to the slowdown in sales of SQL Server 10 because it didn't scale beyond six processors, while competitors' offerings did. Inadequate sales execution and a vague marketing message were two other problems Sybase identified, and the company has made management changes in sales and is retraining its staff.

**Taligent Inc** said at DB Expo that it now expects to deliver its first software products by the end of September: the key product is its CommonPoint object-oriented development environment, and it will begin shipping it to its three corporate owners in June; it expects the first commercial products to be available in 30 to 60 days after that - CommonPoint is being integrated into IBM Corp's OS/2 and AIX, Hewlett-Packard Co's HP-UX and Apple Computer Inc's planned Copland release of Macintosh System.

**Hitachi Data Systems Ltd** tells us it still hasn't been handed down a PowerPC action plan by its Hitachi Ltd parent.

**Cray Research Inc** has a five-year agreement with the **Numerical Algorithms Group Ltd** of Oxford to bundle NAG libraries with its T3D massively parallel processors and successor systems. All new and existing T3D users get free one-year licences to the new Parallel Virtual Machine and the Fortran 77 libraries.

Joel Moss, who went from **Unix System Labs** to **Legent Corp** as VP, markets development, has left, reportedly after having the usual philosophical differences with Legent's new chief, ex-AT&T GIS boss Jerre Stead. Apparently Legent, concerned about how its mainframe business is faring, couldn't find the money to invest in such things as indirect channels. Moss, feeling no need to rush, will be looking around for a new opportunity.

The ShadowRAM column in *Computer Reseller News* claims **IBM** chief Lou Gerstner was so upset by **DEC's** Oracle-blessed mainframe-killing Turbo Laser, sorry, AlphaServer 8400 offering (UX No 534) that he called an all-day meeting about it.

With UnixWare pretty much spinning its wheels, **Novell** CEO Bob Frankenberg was talking about expanding the SuperNOS concept and putting NetWare on other operating systems. According to *Computer Reseller News*, however, they don't know which ones yet.

**Cray Research Inc** is looking for \$25m investment to pay off debts and get its newest supercomputer out of the door.

**Philips Electronics NV** 20-year veteran Lars Nyberg, chairman and CEO of its communications systems division, is taking the helm at **AT&T GIS**, in the role vacated by Jerre Stead, which has been filled by William O'Shea in the interim.

**Novell Inc** spin-out **Btrieve Technologies Inc** has raised a \$4m warchest from **Austin Ventures** - the VC outfit that helped **Tivoli Systems Inc** get started - **Applied Technology Ventures** and **Triad Ventures**. Btrieve will expand marketing of its line of its embedded databases (UX No 534).

Former PowerPC chief at **IBM Corp** Tom Whiteside has stepped down as president of **Silicon Graphics Inc's** Mips Technologies unit as a result of "a mutual decision resulting from mature discussions" over the last month or so about the demands of heading fast-growing Mips - Mr Whiteside "wasn't forced out, but he and the company agreed that he would be better off "pursuing other interests", the *Wall Street Journal* reported. Ron Bernal, former vice-president and general manager of Silicon Graphics's supercomputer division, will succeed Whiteside.

**Hewlett-Packard Co** has formed the Computer Systems Group within its Computer Systems Organisation, a move that means the demise of the Workstations Systems Group, Systems & Server Group, and Systems Components Group: the HP 9000 workstation and server divisions, the HP 3000 division, the X terminal division and the mass-storage and systems-peripheral operations will be included in the Computer Systems Group. The company is looking for the shake-up to enable it to be more responsive to customers and see greater operations efficiencies. Bernard Guidon, formerly general manager of the Workstation Systems Group, will head the new Group.

**DEC** is putting **Evans & Sutherland Computer Corp's** Freedom Series graphics accelerators up on its Alphastations running OSF/1 and OpenGL.

**Sun** says 15% of all workstations it ships now go out with more than one CPU, or at least 30,000 to date.

**Unisys Corp** was originally talking about implementing **Intel Corp's** Hypercube technology for Opus (UX No 536), still using a loosely coupled approach but with a distributed rather than centralised approach, with up to 5,000 feet possible between individual nodes. It decided in the end on a more centralised approach. It still has that technology, but may never release it. But it is looking in the future to add more processors per node to Opus, maybe using Unix multiprocessing extensions to control them, allowing it to expand the systems' power in a further dimension without adding to the overall number of nodes.

**Informix Software Inc** is readying a new easy-to-use and install, 2-to-32 user cut of its parallel database called Informix-OnLine Workgroup Server for NT in the fourth quarter, and SCO and UnixWare in the first half of next year.

**Microsoft Corp** and the Justice Department have themselves a court date to tilt over the Intuit merger. It's June 26 and the trial should run no longer than two weeks although it could be stretched to four.

Fresh from campaigns at **SunSoft Inc**, new SMCC boss Ed Zander is expected to unveil a more aggressive set of hardware strategies at SunWorld in May.

As expected (UX No 536), **AT&T Co** has put the Teradata database up on its SMP 3500 Unix system. It comes with an ODBC interface for access from Windows and NT, archival storage, an IBM channel interface, Teradata gateway plus utilities such as the Teradata query tool. All software and tools that work with Teradata V1 R5.0 or later are supported. Prices start at \$120,000 on a four-way 3500, rising by \$20,000 per additional CPU.

All of a sudden **Silicon Graphics Inc's** getting very interested in raising its Internet profile.

**Silicon Graphics Inc** is fitting its high-end Power Challenge and Power Onyx graphics systems with 90MHz Mips R8000s delivering up to 6.48 GFLOPS at the high-end, a 1 GFLOPS improvement over its previous best.

Now back in the SMCC fold, **Sun's** printer unit has come up with a new SparcPrinter E line.

**Liant Software Corp**, Austin, Texas, has spun out a separate division, **Relativity**, which will focus on developing products for integrating legacy Cobol data with client/server systems. It's being run by John Bradley as VP and general manager, he was formerly president and COO at Ryan McFarland Corp. The unit has a Relativity SDK and database manager for RM/Cobol, DEC Cobol and Micro Focus Cobol.

Don't panic. The UnixWare and NetWare components used on the new **Boeing 777s**, currently being finalised by **GEC-Marconi**, are running the in-flight shopping system and are nothing to do with flight control.

**Sun Microsystems Inc** believes that its turnover for fiscal 1995 and 1996 could exceed Wall Street analysts' estimates of \$5,900m for 1995 and \$7,000m in 1996, according to CFO Michael Lehman. Last year Sun recorded sales of \$4,700m. Lehman added that international sales will represent around 60% percent of turnover in three to four years' time, from the 50% figure that it currently stands at.

No! is **Sun's** answer to Sparc-compatible builders that want access to its ZX and low-end 24-bit 3-D graphics drivers.

Bob Pearson, director of **Sun Microsystems Inc's** Advanced Desktop Group disputes industry-watcher Andrew Allison's estimates that by this time next year UltraSparc systems will trail Alpha 21164, PA-8000, PowerPC 620 and Mips R10000 systems in performance terms (UX No 533). Calling the roll-call "flat wrong", Pearson says the estimates are based upon "personal bias with no hard data", and argues Allison ignores marketing, channel and total cost of ownership issues, presenting a "one-dimensional" analysis based upon a single performance criteria and "marketing fluff". "Time will tell," Allison responds.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram · X

The weekly information newsletter for the UNIX™ community worldwide

London, May 15-19 1995

Number 538

## DEC WILL SEEK TO MIGRATE VMS USERS TO NT AFTER THEY BALK AT OSF/1 ROUTE

In what looks a bizarre decision that once again suggests that the company's underlying finances are in a much worse state than any outsiders realise, Digital Equipment Corp is to seek to convert its VAX base over time to Microsoft Corp's Windows NT. The company has agreed a major expansion of its alliance with Microsoft under which DEC will sell its OpenVMS operating system for VAXes and Alpha client/server systems bundled with Windows NT. The two are also promising a unified environment by year-end courtesy of Windows-to-Unix house Bristol Technology Inc that will allow developers to write applications once on Windows NT and deploy them on both NT and OpenVMS. Bristol's Wind/U 2.1 cross-platform development product will be made to support OpenVMS as Wind/V with Win32 APIs, OLE 2.0 and the Microsoft Foundation Class Library. The notion is to provide VMS with access to the bulk of new software programs now being written. DEC says that its VMS sales fell off in 1993 because its sales force was selling Unix to replace it. "We didn't have a competitive Unix then, so we lost VMS users to competitors with better Unix products," said Wes Melling, new vice-president for OpenVMS. The idea is to combine OpenVMS's capability for secure enterprise data management with NT's client/server application environment. DEC also plans to convert its All-In-1 office automation suite and the OpenVMS Systems Management tools to NT. DEC's long-term strategy appears to be for NT gradually to replace OpenVMS on its Alpha workstations and servers. The strategy involves building applications on a three-tier client/server model with presentation logic on Windows NT or Macintosh clients, application logic running on OpenVMS or Windows NT servers, and data management logic on OpenVMS-based Alpha servers. Communication across the three-tier architecture will be facilitated on the OpenVMS side by a Common Object Request Broker Architecture-compliant object-management system developed by DEC and on the client side by Microsoft's Object Linking & Embedding Common Object Model. The move has clearly been in the wind for some time and explains why DEC decided to sell its Rdb database to Oracle Corp, but it looks certain to spook VAX users unwilling to move to NT, and it is still not clear that the other option, moving to Digital Unix, is sufficiently attractive compared with moving to Unix with any other vendor that VAX users won't call the competition in for beauty contests, many of which DEC would likely lose.

## WITH A FULL BELLY, PLATINUM STRUGGLES TO TELL ITS STORY

Having either swallowed, or still digesting what it says are now 15 acquisitions since August 1994, Oakbrook Terrace, Illinois-based Platinum Technology Inc has been trying to get its after dinner plans into order, but thus far appears to have only a very limited sense of direction. Data warehousing and systems management seem to be the order of the day, dressed up as Poems, the Platinum Open Enterprise Management System, but how all the various components from its acquisitions will come together remains something of a mystery. At the centre will be a data repository incorporating the merged technologies of RelTech Group Inc's DBExcel and BrownStone Solutions Inc's Data Dictionary/Solution. Until the stuff is integrated - it's talking about the fourth quarter - Platinum will be pushing DBExcel in favour of the BrownStone technology by dint of RelTech's greater installed base. Later it'll offer BrownStone users a migration route up to the merged offering. Platinum president and CEO Andrew Filipowski said one reason it bought both repositories was simply to take technology that could be used by competitors out of the market. The idea is to allow systems management tools from its various shops - and third parties - to access data in a common repository. It says it doesn't plan to integrate the various tools and components at the API level, claiming that's the mistake the likes of OpenVision Inc have made. A communications layer Platinum plans called Oasis will support RPCs and TCP/IP. It will develop its Trinzic Corp's Forest and Trees desktop decision support system for more wide-ranging data warehouse use under the name Burton. Trinzic's already working on an object-based rule server and has an interface to Arbor Software's Essbase analysis server. Integration with Lotus Notes and Microsoft Exchange is planned. An InfoBroker mechanism will connect disparate relational database architectures. Trinzic's Deborah Gosling has been charged with bringing ISVs into the Platinum fold. The company claims HP has already taken its report writing technology, that Sun is after its job scheduler and that DEC will take the whole kit and caboodle after it meets with Platinum next month because "DEC doesn't want to be in the systems management business anymore." Filipowski aims to have between 20% and 30% of the company's revenue coming from consultancy work. 85% of turnover is currently mainframe income, a figure he wants to get down to 50% next year. There are apparently no plans to re-house any of the acquisitions, even its 40 subsidiaries around the world. It's got eleven development teams doing MVS, Unix, Windows and NT work. Its acquisitions have cost it \$300m; it turned over \$120m last year and claims \$80m in the bank.

## HITACHI WORKS ON NEW RISC

Our sister publication, *IBM System User* reports that Hitachi Ltd, which already has a deal to take PowerPC processors for use in its machines, is developing a new RISC processor that will be used in a new generation of Unix servers. Nothing is known for sure about the new chip, other than it will be based on Hitachi's ACE design process, which Hitachi claims as a breakthrough in processor technology. ACE mixes CMOS silicon and bipolar emitter coupled logic on a single chip. Hitachi claims its system produces fast running, cool machines, but on the face of it, the work sounds identical to the kind of BiCMOS technology found in today's Pentium processors. Machines are expected to appear over the next couple of years. One of the more important questions concerning the ACE-based processor is what instruction set it will implement. Analysts continue to predict a shake-out in the RISC market, and for Hitachi to try and introduce yet another seems a little... courageous, shall we say. Since Hitachi already has ties with the PowerPC, PA-RISC and Sparc camps, it makes much more sense for the company to implement one of these existing architectures. HP doesn't license PA and the most compelling reason for expecting it to be a PowerPC is that last April, Hitachi's announcement that it would build Power and PowerPC-based machines was accompanied by the suggestion that it might manufacture PowerPC chips for its own consumption.

## SCO EVALUATES MK OPTIONS, CREATES NEW BUSINESS UNIT

Santa Cruz Operation Inc is currently evaluating both the Chorus Systemes SA and Mach microkernels - and talking to other potential partners - with, at this stage, a view to re-architecting its kernel to coincide with Intel Corp's P7. Meantime it's in the throes of creating a new business unit for real-time and clustering solutions that'll target retail, manufacturing and telecoms. The unit will inherit existing SCO technologies in these areas and host the long-anticipated alliance with Chorus expected to spawn new microkernel-based solutions for these specific markets using the new OpenServer 5.0 release (see page three)

## IONA SETS CORBA 2.0 PLANS

Dublin-based object house Iona Technologies Ltd is setting out its Corba 2.0 stall, saying it'll deliver C++ mapping and interoperability protocol for its Orbix object request broker in the third quarter, Ada mapping by year-end, and an interface repository and SmallTalk mapping in the first quarter of 1996. Iona has cut a final beta of Orbix for OS/2 and says it'll be up on Apple 7.5 in the third quarter. Iona also announced general ships of a multithreaded Orbix for SunSoft Inc's Solaris. Orbix-MT is \$6,500 - upgrades are \$1,500. Orbix-MT implementations are underway for HP-UX, AIX, Digital Unix and NT.

### WANG MAKES BID FOR THE COMPUTER OUTPUT TO LASER DISK MARKET...

Wang Laboratories Inc has entered the Computer Output to Laser Disk software market with the launch of Open/coldplus for client/server environments. Wang says the software brings large volumes of archived data directly to the desktop in seconds. Open/coldplus is designed to enable users to record documents electronically on optical disk and Wang is claiming throughput performances of 200,000 to 500,000 recorded pages an hour. Windows-based search software enables multiple users to independently retrieve, view, print, facsimile, or send via electronic mail documents from a central, on-line repository of archived data. In addition, users can export data from archived documents into a selection of Windows-based applications. Wang reckons Computer Output to Laser Disk (COLD) software is one of the fastest-growing segments of the document imaging marketplace, with spending projections of \$3,000m over the next five years, and is a logical extension of its work management software offerings. But the COLD market has not achieved the growth rates that were projected in the early 1990s, mainly because the systems were not perceived as high-end, high-performance ones. Wang reckons its expertise as a document management company will lend credibility when selling COLD to large organisations requiring enterprise-wide offerings. The system consists of three primary functions: data record, server-based software that automatically indexes, compresses and writes the data to magnetic and/or optical disks; data store, server-based software that manages data stored on a variety of magnetic and optical devices, including stand-alone optical drives and optical jukeboxes; and data retrieve, search and export, client-based software that enables users to search, select, display and output data. Open/coldplus is available now running on HP-UX, AIX, and Solaris Unixes with Windows 3.1 clients. Support for Novell Inc's NetWare will be available this quarter. It is priced at \$41,000 for 15 users.

### ...ENHANCES OPEN/IMAGE AND IMPROVES UNIX SERVER PERFORMANCE...

Wang has enhanced Open/image, its document imaging software. The new capabilities are designed to increase throughput and extend performance, and include upgrades to batch scanning, operation integration, forms processing, and facsimile capabilities, and performance improvements to its Unix server software, says Wang. Batch Scan 2.0 provides support for bar code processing and scanners from suppliers such as Panasonic Communications & Systems Co, Bell & Howell Co, and Ricoh Co Ltd, extending system flexibility. Connect 1.5, says Wang, provides users with the broadest terminal emulation support, enabling them to access and connect to the terminal of their choice, expanding systems options. FormOut enables a reduction in the storage requirements of forms-based documents while improving accuracy of optical character recognition. Open/image for FAX supports automated inbound and outbound facsimile, automated facsimile routing, and Tagged Image File Format 6.0 files. Workstation for Unix 2.0 and X/Motif for Workstation 2.0 provide full-screen viewing functions for Unix workstations and tighter integration with scanning capabilities. Printer Server expands printer support to include Hewlett-Packard Co network printers, increasing print throughput by supporting mid-range printer engines, says the company. And the server software enhancements, says Wang, for AIX, HP-UX and Solaris, include improved file input-output throughput capacity. Licensing is available in user sets ranging from 25 to 250 users for OPEN/image, OPEN/workflow and OPEN/coldplus.

### ...AND WINS NEW PARTNERS IN JAPAN

Meanwhile, Wang reports that Nippon Wang KK has signed partnership deals with two systems integrators and four application software firms to market the OPEN/image software in Japan. Its newest partners in Japan include systems integrators CTC-LS, a unit of the trading company Itochu Corp and Hitachi Information Systems. Application software partners include Axis Software Co, which specialises in Oracle Corp-related applications; Bemac Corp, which focuses on relational database management applications; and Otto Corp, which serves companies affiliated with Yokogawa Electric Corp and NED, which focuses on the transport industry and news media in Japan. It also has co-marketing relations with vendors, such as Yokogawa Hewlett-Packard Co and Nippon Sun Microsystems.

### nCUBE SIGNS WITH PIONEER AND STELLAR ONE...

Foster City, California-based NCube Corp has announced development agreements with Pioneer Electronic Corp and Stellar One Corp. With Pioneer, nCube will couple Pioneer's optical disk technology with its digital media server products to create video-on-demand systems. The two companies are also developing a system that enables users to customise video-server implementations specifically for their application and storage requirements. With Seattle, Washington-based Stellar One the idea is to ensure technical interoperability between the companies' products. Stellar One and nCube systems have already been used together in interactive digital video trials at Bell Atlantic Corp and Telecom Italia SpA. Stellar One makes set-top interactive video terminals while nCube's parallel processors store the video. As the interactive industry has emerged, the introduction of new transmissions media, new communications protocols such as the ATM Adaptation Layers, and industry standards like Digital Storage Media-Control Command, makes it vital that all can be integrated. The two companies plan to focus on joint sales and marketing.

### ...AND HAS VIDEO ON DEMAND TOOL

nCube Corp has also introduced a low-cost turnkey interactive television development system designed to provide the same technology that is already used in the large-scale interactive television trials. The entry-level system, nVision, includes a desktop nCube media server and a set-top box from Apple Computer Inc. NVision is said to be scalable to as many as 200 video streams and provides the technology found in "metro-class" interactive television systems. It is compatible with media server software used at Bell Atlantic and British Telecom.

### SIEMENS SIGNS EMASS TO CONVERT STORAGE SOFTWARE TO UNIX

Siemens Nixdorf Informationssysteme AG and the Denver, Colorado-based Emass Inc vast mass storage subsystems division of E-Systems Inc, have signed an agreement under which Emass will convert its storage management software to run on Siemens Nixdorf's Sinix Unix systems. Emass's software automates the management of large volumes of data, typically in the terabyte range. This type of technology has already been widely adopted in the mainframe sector and its transfer to SNI Unix systems is designed to enhance the use of Unix in enterprise-wide computing. The agreement also covers joint marketing.

### MOTOROLA ADMITS 604 IS IN SHORT SUPPLY

Motorola Inc has admitted for the first time that demand for the PowerPC 604 processor has "exceeded its expectations". A company spokesperson said "we are doing everything we can and are confident that we will meet all of our customer commitments." A quick poll among manufacturers carried out by our sister publication *PowerPC News* suggested that most of the mid-range system manufacturers seemed satisfied by the chip supply, with problems more evident among desktop-system manufacturers. Glen Miranker, VP and technical director at Firepower Systems complained that 604 processors, from either Motorola or IBM were "as scarce as hen's teeth". Meanwhile a spokesman for German parallel computer manufacturer Parsytec said that while general quantities were OK, supply was patchy: "Last month was lousy, but this month has been fine," he said. Parsytec is currently purchasing 100-200 604 processors a month. Miranker, however, said FirePower had been forced into supplying some customers, who would have opted for 604-based boxes, with PowerPC 603-based machines instead. The 604 has apparently been through 13 revisions.

### DRAFT COMMON HARDWARE REFERENCE PLATFORM SPEC

Apple, IBM and Motorola have announced first details of their common hardware reference platform (CHRP) in the form of a white paper that effectively unites PReP, the PowerPC Reference Platform and Apple Macintosh. In fact the draft CHRP is now shrunk to HRP, the hardware reference platform. HRP succeeds PReP essentially adding support for MacOS. Eventually all IBM, Apple and Motorola PowerPC machines are supposed to conform to the spec. First systems aren't expected until mid-1996, though FirePower Systems has already begun designing its own support chip-set in an effort to have CHRP machines available four months after the finished spec is delivered. IBM's forthcoming Power Personal will be PREP-compliant.

## SCO CREATES SIX PRICING BANDS FOR OPENSER 5.0

Santa Cruz Operation Inc duly unveiled its Everest operating system technologies as OpenServer 5.0 last week and no, you didn't miss 4.0, it never happened. SCO says it decided to harmonise its numbering conventions around its new SCO Unix version 5 file systems and ~~has jumped up to OpenServer 5.0 from OpenServer 3.0 and SCO Unix 4.x.~~ With OpenServer 5.0, customers get the various SCO Unix and server configurations by selecting or deselecting particular components at install. It'll continue to ship OpenServer 3.0 for nine months and will support it for a year after that. SCO also overhauled its price bands, offering a new lower entry point (five users) with user packs that can be stacked up to get to the required level. It claims customers won't be paying any more for their OpenServer 5.0 software than they did for previous releases. To encourage CD-ROM distribution it's making tape and disk packaging more expensive. The Enterprise System, targeted at departments, small to medium sized businesses and replicated organisations such as hotels and food franchises for integrating PC LANs and legacy systems, is fitted with all graphics, networking and file system options and costs \$1,300 (£1,100) for up to five users. The Host System - sans networking and designed to support character terminals and point-of-sale configurations - is priced at \$700 (£600) for up to five users. SCO has six further pricing bands for adding more users to both environments. Adding up to ten users costs another \$500 (£430), up to 25 more users is \$1,000 (£870), up to 100 other users costs \$3,000 (£2,600), up to 500 more users will cost \$7,000 (£5,870), 1,000 users \$10,000 (£8,665) and 5,000 users \$25,000 (£21,665). To get to a 128-user license a customer would start with a basic five-user system and add the 25-user and 100-user options. The single user desktop system is \$800 (£670). On top, the OpenServer Development System is \$800 (£670); Virtual Disk Manager, providing RAID 0, 1 and 5 is \$1,000 (£865); SMP Licenses are \$1,000 (£865) per CPU; and SCO (Locus) Merge and Wabi are \$400 (£335) each for desktops, \$1,000 (£865) on servers. The development system includes a compiler switch for creating OpenServer or SVR4 code. Other layered products priced separately include Microsoft LAN Manager for SCO, Visionware PC-Connect, XVision and SQL Retriever (Windows services). Distributed services are Security, X.500, Administration, Cell Directory and DCE Executive. There's also a DCE development kit, OpenServer configuration toolkit and an advanced hardware developer kit. More than a third of SCO's business now comes from replicated site installations. SMP configurations account for around 5% of business, it hopes to double that share by this time next year. It claims to have shipped 170,000 SCO servers last year and is looking to top 200,000 this year.

### 125MHz HYPERSPARC DONE IN 0.4 MICRONS

Using an 0.4 micron process design, Fujitsu Ltd's Ross Technology Inc unit has improved clock speed on its HyperSparc to 125MHz - 25% better than the 100MHz version done in 0.5 micron technology with the same die size. Sun has put the three-layer metal CMOS device into its hottest workstations (UX No 537). The new process can accommodate 512Kb and 1Mb caches. *Microprocessor Report* notes Fujitsu's 0.4 micron process is now one of the most advanced in the industry, shaded only by Intel Corp and NEC 0.35 micron processes. Fujitsu's HaL Computer Sparc64 is also built in the 0.4 micron process. The 125MHz HyperSparc does 183 SPECfp92 and 159 SPECint92 - Sun's touting its third quarter, 64-bit UltraSparc as something near double even HyperSparc's integer performance. Sun will likely phase out its HyperSparc products over time as UltraSparc is delivered in systems. Ross' plans don't feature UltraSparc performance in the same timeframe.

### HITACHI SYNCs EMAIL SYSTEMS

Hitachi Computer Products America Inc is offering a Universal Agent for its SyncWare software it says can synchronise the directories of one email system with those of any other email application, including Microsoft Mail, Lotus Notes, Novell GroupWise, HP OpenMail, Banyan StreetTalk, host-based and custom systems. SyncWare agents run on each email system collecting address information which is passed up to the SyncWare server sitting on a Unix workstation. Universal Agent is from \$3,000. LAN-based agents are from \$2,000, the SyncWare server starts at \$5,000.

## MICROSOFT BACKTRACKS ON CORBA COMPATIBILITY PROMISE

Looks like Microsoft Corp is backpeddling on its public pledge to be "100% compatible" with CORBA standards at its OLE briefing the week before last in Redmond. DEC executives in the audience were certainly taken by surprise when senior OLE strategist Jeff Alger publicly promised 100% COM-CORBA compatibility, and it looks like he opened Microsoft's kimono a bit more than he intended. DEC's director of corporate standards Robert Bismuth, who had been sitting in the audience, privately confronted Alger to ask him if his statement constituted an iron-clad pledge. Alger insisted that he didn't mean exactly what he said, but only intended to pledge compatibility with all currently accepted CORBA specs, itself a major step. As far as future standards go, he said, Microsoft wants to be compatible but can't make promises. He mumbled something about how Redmond isn't going to "write [the Object Management Group] a blank check" and made a pivotal point about how Microsoft wants to gauge "customer demand" for any future spec before committing to it. Last week, in the wake of Alger's public remarks, the Object Management Group also sought to plumb the depth of Redmond's intentions. OMG chief Chris Stone said he was told by Microsoft's OMG liaison Mark Ryland that nothing had changed, that the APIs would not be brought in synch and that Microsoft would merely seek to address the OMG's COM-CORBA interoperability RFP and provide a gateway between the two technologies.

## MOTOROLA RECASTS LOW-END SERVER STORY WITH SERIES I, HAS PCI PROTOTYPES

Motorola Computer Group has re-jigged the low-end SMP offering it sources from PowerPC partner Compagnie des Machines Bull SA, introducing a one-to-four way 601 machine as the PowerStack Series I. Although Motorola is already selling Bull's one-to-eight way Escalas as the Series MP, it says customers requiring one or two CPUs typically find the Escala box comes with far more expandability than they'll ever need or use. Consequently the two firms have stripped out some slots and reduced the chassis size to come up with a low-end departmental system supporting 40 to 250 users. The Micro Channel Architecture AIX unit comes with up to 512Mb RAM, 13.4Gb disk and costs from \$19,000. Series I comes in above Motorola's own PCI bus PowerStack Series E and below the Series MP. The company claims it's now got working prototypes of the PCI bus technology that it and Bull are migrating Escala to and which will host other operating systems (UX No 530).

## UNIDATA SHIPS COBOL GATEWAY

Denver, Colorado-based Unidata Inc is now offering production versions of its Cobol Direct/Connect migration technology for getting Cobol application data structures into its 'nested' or multidimensional UniData relational database. The technology is a key component of UniData's march to embrace Cobol users - and their wallets - with versions of its database tailored for getting legacy code into relational structures (UX No 487). A first cut of Direct/Connect was heavily touted at that time but never actually shipped in production quantities. UniData hired itself a bunch of Cobol experts who have been enhancing and refining the migration tool over the last 12 months. Cobol code has to be re-written for other relational databases such as Oracle and Sybase, which cannot accommodate Cobol's multidimensional aspects such as 'occurs' statements. Direct/Connect starts at around £2,000.

## OLIVETTI ADDS P6-READY SERVERS

Ing C Olivetti & Co SpA is adding three new server models to its Unix, NT, OS/2 and NetWare PCI/EISA Systema line using one, two or four 90MHz and 100MHz Pentiums. The SNX160RS comes with one or two 90MHz Pentiums and up to 512Mb RAM, replacing the existing 66MHz SNX160RS. The SNX160e has one or two 100MHz Pentiums. The SNX200RS, in a different cabinet and with more expansion options comes with one or two 100MHz Pentiums. The SNX400RS has up to four 100MHz Pentiums. All the models use the Corollary Inc C-Bus-II for P6 upgradability. The company says there's not a lot of interest in the DEC Alpha RISC products it's still nominally touting.

### **SAP SHARES DO DANCE OF DELIGHT AS 1994 PROFITS JUMP 93% ON SALES UP 66%**

SAP AG shares were buoyant last week as the Walldorf software giant reported better than expected figures. But chairman Dieter Hopp warned that the success could not continue at such a rate, despite a very strong start to the year. Net profits for the group soared 93% to the equivalent of \$204.9m in 1994, as turnover rose 66% to \$1,335.3m. Hopp cited the strength of the mark against the dollar as one of the reasons why he felt that the growth rate could not be maintained. This did not prevent a buying spree, fuelled in part by speculation that the shares will be added to the elite DAX-30 index in the autumn. "This stock is unbelievable. It's hard to predict a top," a Frankfurt trader told *Reuters*. The jump in revenues was largely due to the R/3 client-server system, where sales rose 218% to \$711m, and customers rose to 1,500. The company said that sales were up 72% in first quarter trading, outstripping any rise in costs and the strong mark, which on its own resulted in "considerable losses". It further warned that its 1995 profits would be reduced by DM30m if currency levels remained unchanged from their current positions. The board is seeking permission for a 10-for-one stock split, reducing the shares' nominal value to five marks - pre-split, the shares are trading at 1,479 marks. Hopp said the company would be placing American Depositary Receipts with institutions in New York, but would not be seeking an exchange listing. The preference shares belonging to Hopp and the other three founders will be used as the basis for the placing in New York.

### **ESCOM WILL USE 68060 IN NEW AMIGAs UNTIL A POWERPC VERSION IS READY**

Escom AG, Heppenheim, which bought the intellectual property rights, patents and brand names of Commodore International Ltd last month, will relaunch the Amiga line soon and will develop a PowerPC version probably within a year. The relaunch will feature the Amiga 1200 and 4000 made in China by Tianjin Family-Used Multimedia Co with Motorola Inc 68060 chips. The PowerPC version will be marketed as both a serious RISC-based machine and a 32-bit games computer, sold with either Windows NT, IBM Corp OS/2 or Apple Computer Inc Mac OS. A 64-bit machine will follow.

### **SUN EXPANDS ISRAELI PRESENCE**

Sun Microsystems Inc plans to open an office in Israel within the next few months, said vice-president for intercontinental operations Timothy Dwyer. Sun is also interested in software applications being developed in Israel, especially in relation to systems integration. Several possibilities will be scouted over the next six months. Sun is also creating a Sun Software Information & Technology Exchange centre at the Hebrew University in Jerusalem - the Sun SITE system comprises a series of Internet servers located at major universities around the world where users can access data free.

### **COMPUTER SCIENCES SIGNS WITH CA WORLDWIDE**

Computer Sciences Corp has signed a 10-year agreement with Computer Associates International Inc under which it will standardise on the Islandia, New York company's products in its facilities management operations throughout the world and also make the software available for use throughout its other business groups. El Segundo, California-based Computer Sciences also becomes an authorised reseller for up to \$50m of CA-Unicenter and CA-OpenIngres.

### **EDS AND HP TO SUPPLY 1998 WORLD CUP FINALS**

Electronic Data Systems Corp and Hewlett-Packard Co have been chosen as the information technology suppliers for the 1998 World Cup in France - as it is in Europe there should be no need to add the prefix 'soccer' to the name. Last year Sun Microsystems Inc was the exclusive supplier in its largest-ever sponsorship, but decided not to bother bidding this time, preferring instead to concentrate on the America's Cup, Formula One and Indy Car racing. The General Motors Corp unit was brought in for systems integration by Sun last time, and newcomer Hewlett, which runs its personal computer business from France will supply hardware from its numerous locations in and around the World Cup sites throughout France.

### **VIDEO GAME GIANTS CHOOSE THEIR WEAPONS; NINTENDO ULTRA-64 MISSES SANTA'S SLEIGH**

In a big setback for its efforts to claw back some of the ground it has lost to Sega Enterprises Ltd, Nintendo Co says that the launch of its new Ultra-64 video game system, planned for this year's Christmas season, will be delayed until next April, despite the unveiling of the R4300i RISC developed by Mips Technologies Inc and NEC Corp that, according to *Microprocessor Report*, will form the guts of the thing (UX No 537). Nintendo says it plans to concentrate for this year's holiday season on new games for its 16-bit Super Nintendo Entertainment System, and for its hand-held Gameboy device. It will also launch its Virtual Boy three-dimensional system this summer. "After 19 months of intense development, we have attained our two main goals for Nintendo Ultra 64 - to develop a chip set capable of delivering the world's best video game experience, and to do it at a price that can deliver a hardware set below \$250 retail," Nintendo of America said. The R4300i (i for interactive) was derived directly from the 4200, the design of which was funded entirely by NEC. The other video game giant, Sega, uses two Hitachi SH7604 chips in each Genesis 32X game adapter; the Sega Saturn (available in Japan only at the moment) includes an additional SH-1 part. Nintendo's Ultra-64 will use one R4300 with custom logic. Sega and Nintendo control almost half each of the \$5,000m US video-game market, according to reports, into which 40 million units have been delivered. Of the other players, Sony Corp uses a 32-bit Mips core integrated with proprietary graphics engine, the complex chip put together for it by LSI Logic Corp to create what it calls the PlayStation CPU. The 3DO Co Interactive Multiplayer specification uses an Advanced RISC Machines Ltd ARM 600, and will move to the PowerPC 602 - a 32-bit part with a 64-bit bus but no double-precision floating point, something the Mips R4300i does have; Atari Corp's said-to-be-64-bit RISC, used in the Jaguar, remains a mystery.

### **SILICON GRAPHICS TO TAP BOMBAY MOVIE-MAKING SKILLS**

No-one knows more about the process of churning out entertainment in enormous quantities at low cost than India's vast film production industry in Bombay, and Silicon Graphics Inc is planning to tap the local talent. According to *Reuters*, the company is planning to set up digital studios in India to make high-quality special-effect clips for export and also for use in local films. Ashok Desai, Silicon Graphics Inc's managing director for South Asia, told the news wire that several Indian film producers were keen to invest in digital studios to get a technological edge currently lacking in the Indian industry. "It's very cheap to create special effects here compared with other countries. Once a base of trained people is available, India could become a big supplier," Desai said. "This industry could be bigger than India's computer software industry," he said. Silicon Graphics will help producers to set up the studios, each expected to cost \$1.6m, by providing hardware and expertise. It will not take equity in any of the proposed studios, but would help by training people to do special effects. Silicon Graphics Systems India Pvt Ltd is to start testing and manufacturing boards for the the Mountain View-based parent company's machines by October.

### **DBSTAR INTRODUCES LEGACY-TO-RELATIONAL TOOLS**

San Francisco, California-based DBStar Inc is offering release 3.5 of its DBStar Data Migration Architect for transforming legacy data structures into relational database designs. Migration Architect analyses Cobol and automatically converts data designs for use in relational databases. It supports Oracle, Sybase, Informix, Rdb and DB2. Release 3.5 is claimed to deliver a four-fold increase in performance, includes SQL and log browsing facilities, a new GUI, plus a CASE Data Interchange Format export facility. It can be used in conjunction with Cadre Technologies Teamwork and KnowledgeWare ADW development tools and provides a bi-directional link between the two. DBStar is a 20-person, privately-held 1993 management buyout from Cadre Technologies Inc. Migration Architect supports Sun OS and Solaris. Prices go from \$200,000 in July.

## BGS MOVES PERFORMANCE TOOLS TO DIGITAL UNIX, NT

Boston, Massachusetts-based performance and capacity management company BGS Systems Inc, which is best known for its AS/400 monitoring software, will add support for Digital Unix in ~~release 5 of its Best/1 Performance Assurance for Unix tools in the~~ second half. It's also working on a port of its software to Windows NT, migrating AS/400 tools to the impending OS/400 for PowerPC release, and is readying additional network tools, also for later in the year. Best/1 for Unix includes real-time monitoring, a graphical database to record and compare application performance across nodes, and what-if modelling and management of mixed environments. Best/1 for Unix is already up on AIX, HP-UX and Solaris; it supports applications and user details from Oracle, Sybase and other databases; and has interfaces to PolyCenter, NetView, OpenView Tivoli and other management frameworks. Best/1 for Unix comes as a single configurable agent and three packages that can be used standalone or in mixed Unix environments - Best/1-Monitor, -Visualizer and -Predict. BGS wrote the Best/1-Monitor specifically for its Unix implementations - the company leverages native monitors on AS/400, OpenVMS and other proprietary platforms. The monitor comes with real-time alert and display subagents for problem detection, analysis and resolution. It issues SNMP traps to network management frameworks. The Best/1-Visualizer provides an integrated database for examining performance and capacity information across distributed systems. The Visualizer, which can be applied across mixed Unix environments, is also part of BGS' proprietary implementations. In September the company will feed new network system and applications tools into Visualiser on all platforms - including a version for Windows NT, which will be its first NT code.

### Improved performance

The tools are intended to provide greater performance and problem analysis and reporting for enterprise-class systems. The third module, Best/1-Predict, models the impact of workload and configuration changes on performance. Best/1-Predict will also go up on NT, although BGS expects to leverage whatever native monitoring is available under NT rather than porting Best/1-Monitor to it. It expects NT revenues to begin to kick in its next financial year which starts at the beginning of 1996. Unix income now accounts for some 20% of its BGS' new business, although more than 30,000 of its 33,000-odd customers are AS/400 sites. Other Unix plans include a Best/1 port to ICL Plc's Unix, and the company says it sees growing CMOS mainframe business. BGS touts Best/1 as the most complete performance monitoring solution on the market, especially its drill-down information layers and database integration. On the Unix side it sees Compuware Inc's EcoTools and BMC Software Inc's Patrol as the most equivalent monitors; Legent Corp and Scientific and Engineering Software Inc as rival modelling tools and the DEC, MVS, ICL and UnisysAthene capacity planning system from Taunton, Somerset company Metron Ltd as its closest complete solution supplier. Best/1 console fees begin at around \$50,000, a managed server agent is some \$5,000.

## PIXEL INNOVATIONS HEADS WEST

Pixel Innovations Ltd, Hemel Hempstead, Hertfordshire-based developer of the Termite - a terminal emulator, GUI development tool and communications package has opened an office in Atlanta, Georgia to try and boost its US presence. Launched in 1989, Termite is up to release 6.0 and boasts 30 emulations. It includes a bundled TCP/IP stack, AS/400, IBM and ICL mainframe connectivity and costs \$100. The company claims 100,000 users worldwide. Pixel did £2.2m revenue last year, employs 35 people and plans to have five out in Atlanta. It's also opening offices in Germany, France and Sweden.

## AT&T GIS CLAIMS 3,000 TOP END INSTALLS

AT&T GIS says it's sold 15,000 copies of Top End to date and installed 3,000 so far. It could take three years to get the rest of them in. By comparison, it thinks Novell Inc has only sold 5,000 copies of Tuxedo - 2,000 to 3,000 of which are in AT&T itself. Meanwhile, AT&T has got into 10-terabyte land and is now giving due consideration to invading the petabytes in support of parental schemes as well as its retail outlets.

## MATRA OFFERS CASCADE FOR OBJECT-BASED CAD/CAM DEVELOPMENT

French CAD/CAM company Matra Datavision SA is rolling out a new object-oriented C++ development environment called Cascade - effectively a modelling toolkit - designed specifically for ~~the scientific and engineering CAD/CAM community. Cascade~~ has also been used to develop the next generation of Matra's Euclid CAD/CAM applications which will roll out in September. Cascade, the product of a five year development effort at Matra, comes to market despite the loss of object developers to Ilog SA (UX No 492). It's been out at European test sites since the end of last year and is now heading over the Atlantic. Matra is targeting industrial users who want to create technology-specific applications or extend existing packages with Cascade libraries via the CAD/CAM Step data format. It's working on database adapters that will import data from rival CAD/CAM packages such as Computervision or Catia into its repository. Matra's also pushing the development system at ISVs who could extend for specific modelling tasks. It's all direct selling for now, but Matra is cultivating indirect channels and has already attracted Duluth, Georgia-based component reseller New Renaissance which will sell some of the modelling libraries. Cascade has a development language and a GUI builder and supports Object Design, Objectivity and O2 object databases. It's currently evaluating third-party relational-to-object mechanisms for inclusion. Unix versions are out now, with a Windows NT port due in June.

### Competition

The company claims to have no real competition in the CAD/CAM space as far as overall development solutions go, with the possible exception of Computervision Corp's Pelorus development system, which it describes as a Windows system being pushed on to Unix that isn't 3-D. But then Matra hired Computervision's VP marketing David Brazier at the beginning of the year to head a new San Diego, California-based unit that's pushing Cascade separately from Matra's US operation in Andover, Massachusetts, which peddles the Euclid applications. Brazier reports directly to Paris from his currently one-person effort. Firms such as Spatial Technology and Ricoh have comparable modelling libraries but not an overall development system, Matra claims. Cascade development systems will go from around \$30,000 - runtimes pricing according to volumes, but Matra says its aiming to get pricing down further to attract smaller ISVs. The new raft of Cascade-based Euclid applications due in September include Designer, Analyst, Prototyper; existing users will get free upgrades to the C++ Euclid Designer. Other adapters will integrate third-party environments. The \$150m Matra claims it's number eight in the CAD/CAM rankings. It has two development wings in Paris, one down in Vitrol, home of Cisigraph SA and its Strim environment which Matra acquired late last year.

## ARBOR ADDS UNIX VERSIONS OF OLAP DATABASE; MORE RELATIONAL LINKS

Arbor Software Corp, Sunnyvale, California, a founding member of the on-line analytical processing OLAP Council (UX No 522) is to begin offering Unix versions of its NT and OS/2 Essbase multidimensional database. Release 3.2 of Essbase Analysis also includes broader support for data warehousing. Arbor says it can now link Essbase applications to relational data via new Outline Mapping APIs and an SQL Drill Through module. The 50-odd APIs allow developers to create custom applications that can map data from their relational systems into Essbase's analytical data structure. With SQL Drill Through on Essbase 3.2, Arbor says users can view summary data in Essbase and access its associated detailed relational data. Essbase generates the SQL statement by mapping its multidimensional structure to fields of a relational table. Arbor will have 3.2 up on HP-UX this month, Solaris and AIX by October; Essbase currently supports NT and OS/2. It'll offer Windows, OS/2, Mac and Unix clients. Arbor has extended the Essbase development toolkit with 25 Visual Basic for Applications functions for stuff like zoom-in and calculate for OLAP applications. Prices start at \$43,250 for a five-user licence. The SQL Drill Through module will come in at \$750 for five users from June.

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**Oracle Corp** said growth over the next several years at its software applications business could accelerate over its third-quarter growth rate of 65%. The company said the **Bell Atlantic Corp** video-on-demand trial, which made use of its multimedia software, had finished and 1,000 users were expected by the end of June. Chief financial officer Jeff Henley, who was at a **Hambrecht & Quist** meeting, also told the throng they weren't going to let CEO Larry Ellison buy **Lotus** for any ridiculous amount of money. It would have to be reasonable, a term that is doubtless not in Jim Manzi's vocabulary. Meantime, latest rumour is that Oracle's after **Object Design Inc** to give it an object life. It'd likely have to pay a fair whack - observers reckon as much as \$200m - to relieve IBM Corp of its holding in the company. Oracle didn't deny the claim.

**Apple Computer Inc** and **IBM Corp** announced their OpenDoc plans at the annual Apple Worldwide Developer Conference: they will offer OpenDoc tools under with Mac OS, OS/2, AIX and Windows; the tools will use a Basic similar to Visual Basic and include object-oriented extensions to the Basic language.

The dance reportedly still goes on between **AT&T Co** and **Novell Inc** over whether GIS will partner with Novell on SuperNOS. GIS folks, at least some of them, are said to be still asking what the strategic and monetary rationale is.

The ex-**Mips Technologies Inc** president Tom Whiteside has returned to **IBM Corp** as VP, microprocessor development in the Systems Technology and Architecture Division. We haven't located him yet. Will he please check in.

**Novell Inc** has named Jeff Waxman, who used to run Uniplex Inc in the US before joining ServiceSoft Corp as president and CEO, executive VP and general manager of its Applications Group reporting directly to CEO Bob Frankenberg. The Applications Group, responsible for 30% of Novell's revenues, does WordPerfect *et al*.

**Sun Microsystems Inc** says prototypes of all the machines from desktops to servers that will initially be built using the UltraSparc chip are up and running in the labs. The things still have to be qualified and the software fiddled with. The company's Sparc people say that in 12 months - 18 at the outside-everything Sun has will be based on UltraSparc.

*PC Week*, which prides itself on having declared Unix dead some time ago, claims it's losing one of the last niches where it can go and hide from NT, i.e. life as an Internet server.

Joel Appelbaum, who used to be president and CEO of **Univel Inc** when there was a Univel, is now senior VP and general manager of Conner Storage Systems with overall responsibility for the Lake Mary, Florida division. He moves over from **Micropolis Corp** where he was executive VP and general manager overseeing sales, marketing and storage product development.

Val Rahmani is **IBM UK's** new director of AIX Business, replacing Robert Youngjohns who is now in charge of AIX business throughout Europe. IBM's UK AIX business grew 76% last year, and 100% during the first quarter of this year. Worldwide, IBM says it's now getting over \$3,000m from AIX hardware and software sales.

**Unix Expo** has sewed up Ed McCracken of **Silicon Graphics** as a keynoter. After his tirade against Microsoft at Uniforum, we'll be expecting another sermon with content. Thomas Love, managing director of **Morgan Stanley IT** unit is also keynoting.

**Convex Computer Corp's** new PA-7200-based MPP Exemplar systems start at from \$184,000 for two-to-16 CPUs - the SPP1200/CD compact system - or \$674,250 for the 8-to-128 CPU high-end SPP1200/XA.

Word is that despite fielding an intermediate release of the software on its home ground at CeBit earlier this year - and its record figures, see inside - **SAP AG** will be lucky to begin making revenue ships of its R/3 3.0 manufacturing by the fourth quarter. It was supposed to have had the stuff away by mid-year. Despite the success of R/3, SAP intends to continue to upgrade the mainframe R/2 into the next century, and the next version will be released in the fourth quarter and will also run on **IBM Corp's** "parallel" mainframes and support 24-hour service.

Sorry, we blinked. It is of course **Cray Computer** that's looking for \$25m to pay off debts and get its supercomputer out of the dock, not **Cray Research** as we wrote last week (UX No 537).

*ComputerWorld* hears **Hewlett-Packard Co's** J series SMP desktops, the SkyHawks, will go from \$28,000 as a uniprocessors, with extra CPUs an additional \$10,000.

Nick Donofrio, **IBM Corp** senior VP and head of its amalgamated server business is furious over claims made to one of its large US users by a **Sun Microsystems Inc** SWAT team lead by Scott McNealy which suggested "IBM would decommit on AIX in favour of Solaris." Donofrio fired off a letter to the user in which he said "if Scott McNealy believes that the accommodation of Solaris on our PowerPC-based PCs indicates abandonment of our successful AIX platform, then it would follow that his interest in PowerPC is a signal that Sun is abandoning Sparc. In all seriousness, the only conclusion I draw from Scott McNealy's comments is that these remarks were made in a desperate attempt to slow down AIX's increasing share in the Unix marketplace. He's well aware of the fact that we have no plans of replacing AIX with Solaris or anything else."

**Novell Inc** has got two recruits for its Vertical Industry Partner programme in the form of **Microport Inc** and **VenturCom Inc**. Microport will customise UnixWare for use with certain applications and build device drivers. VenturCom is adding extensions for embedded and real-time applications, and will offer its Venix EDS development tools for building products that incorporate NetWare and UnixWare.

**Sun Microsystems Inc** CEO Scott McNealy has been on a nine-country tour of exotic places like Russia and Saudi Arabia the last couple of weeks and sent back a message from a safari he was on in Africa after finding a pack of buzzards picking over the carcass of a dead rhino. He said the buzzards reminded him of HP, which has no strategy and is simply picking at the carcass of the dead mainframes. The rhino reminded him of DEC.

**Clarify Inc** has launched its promised ClearEnterprise Replication Engine, software it claims is the industry's first "distributed workflow" replication server (UX No 527). It particularly suits distributed support organisations, says the San Jose, California-based company, allowing customer or case information to be available across multiple support groups without consuming network communications bandwidth. It also supports peer-to-peer data replication, allowing staff to collaborate simultaneously on different servers without data clash. Priced at \$20,000 and shipping next month, ClearEnterprise supports Oracle, Sybase and SQL Server databases and runs on Sun, Silicon Graphics, IBM and HP workstations running Unix, and Intel-based systems running Windows NT. Clients supported include Unix/Motif, Windows and Macintosh.

Before **IBM's** promised 4.2 implementation of AIX emerges some time next year (UX No 526) - still the furthest point of AIX futures that IBM is currently prepared to talk about despite "categorical" assurances of its continued development - there are two more releases due this year. AIX 4.1.3 is due any day now, and will take AIX symmetrical processing support beyond the current limit of four processors up to eight. 4.1.4 should be out by the end of this year and will add support for more devices and general fixes, but little else of note. Even 4.2 itself will not be a major step up, says IBM. It will (of course) retain binary compatibility with 4.1, and, as already reported, and 64-bit addressing and PowerPC 620 support.

**IBM's** SP/2, of which some 400 systems have been sold to date, has now been renamed the RS/6000 SP.

London-based parallel processing manufacturer **Parsys Ltd** is working on a new parallel processing system combining the T9000 transputer with DEC's 21066 Alpha chip, says *Electronic News*. The TransAlpha systems come in desktop configurations with up to 12 Alpha chips, up to 800Mb of main memory and a peak performance of 3GFLOPs. There is also a high-end version scaling up to 64 processors, with up to 4Gb main memory and 15GFLOPs performance levels. The design sounds as if it's on the same lines as Aachen, Germany-based Parsytec GmbH's combined PowerPC and Transputer module, launched last year (UX No 493), where the Transputer provides high-speed communications links between nodes.

**Sparc Technology Business'** 100MHz MicroSparc II is rated at 76 SPECint and 65 SPECfp and is \$650 per 1,000-up. The 85MHz cut is now \$415 and the 70MHz version \$380, both in 1,000-up quantities.

Don't panic?...Hans de Lange of **Unipress Europe** in Brussels says we were wrong to doubt the stability of Unixware, now running on the new Boeing 777 (UX No 537), and says that technically, they have now got it right. He's less convinced about the marketing story, though. "They have their heads firmly up their asses". And he's less than encouraged that Novell CEO Bob Frankenberg is said to be looking to expand SuperNOS to other operating systems. "Well isn't that great; he bought the car, discovers he can't drive, and thinks about hitch-hiking. Can anybody tell this geezer that there are driving instructors galore around him?" Nuff said.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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London, May 22-26 1995

Number 539

## SAMPER TO HEAD CRAY RESEARCH, SQUARES UP TO SUN IN MOVE TO COMMERCIALISE CRAY BOXES

J Phillip Samper, former president of Sun Microsystems Computer Corporation who resigned in February (UX No 521), surprised everyone last week by turning up at Cray Research Inc as chairman and chief executive. Samper only signed up for a short hitch at Sun - or so the story goes - and left in time for his successor Ed Zander to put his stamp on the next series of Sun objectives. He might have also had at least a mild case of CEOitis, a bug Samper caught when he headed up Kinder-Care Learning Centers Inc and was foiled from achieving at Sun by the existence of the incumbent, Scott McNealy. Unlike the Sun job, Samper said last week the Cray position was long term. This time his family will be moving to Minnesota, relieving the 60-year-old executive of the need to fly back home to the East Coast every few weeks as he was doing when he was at Sun. As chief of Cray Research, Samper will be able to make use of his relationship with Sun because Cray is building its machines out of Sparc chips and the two have a three-generation product development pact in place. Samper last week voiced a desire to continue on in that vein and maintain good relations. However, he also indicated that Cray might represent more of a competitor to Sun in the future because he fully intended to see Cray's supercomputers moved out of their historic niche among the university, government and laboratory crowd and commercialized. As Sun products move upmarket and Cray's move down - he noted, reminding us of those Thinking Machine people he managed to recruit for Sun - the two partners are bound to lock horns but not to the extent that Sun and HP or IBM do. McNealy of course wished Samper every good luck and trusted that the rapport between their two companies would continue to be close. However, you gotta believe he must be wondering whether Samper intends to raid Sun staff. Samper last week never wholly denied that he would, a situation which, if he acted on it, could have dire consequences. Samper views the challenge at Cray as being different from Sun where it was simply a matter of "getting people to pull in the same direction." Cray, he said, is in for a culture overhaul. Commercialising its high-end boxes will mean making it more sensitive to cost issues, making it react faster and creating a sales infrastructure.

## PARSYS MANOEUVRES VOLTE-FACE FOR TRANSALPHA

London-based MPP house Parsys Ltd has gone and done precisely what managing director Ian Coburn said it wouldn't do last year: turn to a conventional RISC microprocessor architecture à la Parsytec GmbH (UX No 477). As reported briefly (UX No 538), Parsys is hitching Inmos T9000 transputers to DEC's 266MHz Alpha 21066 RISC chip as the TransAlpha parallel processing system. It should be up by September, the company claims. Parsys has followed Parsytec's lead - the German company has a T9000/PowerPC MPP system - because T9000 can not match the performance which RISC chips now offer, "frankly the transputer falls down in the MFLOPS area," Coburn said. The machine has a hybrid processor board, combining Alpha for raw horsepower and T9000s for communication. The architecture presents the system to the software as a 'virtual transputer.' The transputer offers the communications infrastructure, bandwidth which Parsys claims is "effectively four FDDI bandwidth per processor" and a 'virtual channel' processor for message passing claim. It handles up to 16,000 actual channels. The TransAlpha is hosted from Sun or DEC workstations running a Power Virtual Machines (PVM) programming environment Parsys has co-developed with Associated Computer Experts. Desktop configurations go up to 12 nodes with 800Mb of main memory, delivering a peak performance of 2.8GFLOPS and 150Mbps bandwidth. The thing could go to 512 processors. Right now it's got a 128 processor system in a single 19" rack with a bandwidth of 3.8Gbps per second. There are no TransAlpha's in the field yet but four or five possibles. Other Alpha devices can be added as PCI modules. Further down the line, Parsys doesn't rule out doing the same with other chip sets. Its targeting TransAlpha at the video-on-demand and data mining market and says it will flesh out details later next month. The company says it has sold 22 of the T9000-only SN9400s and 8 of the SN9500s launched last year (UX No 479). Coburn admits the company has "paid the price of hibernation," waiting for the delivery of the long delayed T9000. It claims profits of £1.2m for 1994, its first positive numbers since 1991. Parsys has 33 employees. The 12 processor TA9500 version goes from £100,000, a 64 processor version from £600,000.

## BECHTOLSHEIM'S GRANITE REFUSES TO SPLIT ON SUN DEAL

Sun Microsystems Inc co-founder Andy Bechtolsheim is being *very* close-mouthed about that little start-up he's working on (UX No 528) and doesn't even like to discuss what his real relationship with it is. All we know for sure is that it's called Granite Systems and it's located in Mountain View, California, Sun's stomping ground. He's at least got some mind share from a Stanford University professor who's an expert in networking. Granite is apparently working on a deal with Sun and until that's sealed mum's the word.

## TADPOLE IN DISARRAY AFTER £6M LOSS

Cambridge, UK-based notebook manufacturer Tadpole Technology Plc faces a radical restructuring after reporting a £5.94m loss for the six months ending March 31, exacerbated by £2m of exceptional charges to cover inventory provisions and lay-off costs. The full horror that drove its share price down so hard and fast that trading had to be suspended was revealed last week - and the news was sufficiently discouraging that when trading in the shares reopened, they kept right on plunging, hitting 75 pence, off 59 pence from the pre-suspension price. As we went to press they had risen 4 to 116 pence, probably on the assumption that the company might be acquired. Tadpole also faces a London Stock Exchange investigation into trading of its shares prior to their suspension, but the company did not do its credibility any good with its ill-advised statement that it knew of no reason for the plunging share price. Tadpole said it was ending manufacture of its PowerPC 601-based portable computer, sold by IBM Corp as the RS/6000 N40, that Geoff Burr, board director in charge of Tadpole Technology Inc, had resigned, and that it is laying off 30 of its 70 employees in Austin, Texas, which accounts for 70% of Tadpole's sales. Ten other jobs have been axed in the UK, leaving the company with 200 staff in total.

### Power Personal

As IBM's forthcoming Power Personal line is expected to include a PReP-compliant PCI-based PowerPC 604 AIX laptop it has been showing off for some months, and the news that Tadpole will stop selling the N40 in September - presumably when the Power Personal begins to ship in volume - comes as no surprise. We don't know how many IBM actually sold, but even insiders thought its own estimation of "100s" unlikely. Chief executive George Grey, who now also takes charge of the US unit, laid the blame on "internal and external over-confidence," saying the company failed to achieve volume sales required to sustain the infrastructure it had built. Rather euphemistic given that Tadpole managed to shift only 400 of the Pentium-based P1000 notebooks it launched at the end of January when it had forecast sales of 25,000 for them over the year. Grey promises revised sales targets for the year in a couple of weeks. Revenues on Tadpole's SparcBook family are unchanged at this stage on last year, at £6.2m. Focusing on SparcBooks, OEM board business - worth £3.7m in the first six months, up 100% on the same period last year - and a re-vamped P1000 campaign, with prices slashed by £1,000 or 13% in the US to \$6,500 with 8Mb and 340Mb disk, will lead it back into profitability over the next six months, Grey claims. Tadpole's long-promised Alpha AXP RISC laptop for Digital Equipment Corp is now at least another year out if it happens at all. Tadpole's £5.9m loss is up from a loss last time of £1.1m, on turnover that rose 7.3% to £11.4m.

### CONCURRENT PUTS MICROWARE'S DAVID UP ON MAXION/IMS MULTIMEDIA SERVER

Oceanport, New Jersey-based Concurrent Computer Corp has implemented Microware Systems Corp's Digital Audio/Video Interactive Decoder (DAVID) UpLink server communications protocol software on its Maxion/IMS interactive multimedia server. The David UpLink provides an ~~isochronous file service interface for audio and video data to be transmitted to television set-top boxes running the David derivative of the OS/9 real-time embedded operating system~~ so that multimedia applications can be written independently of the server on which they are stored, or from which they retrieve their data. Concurrent reckons that the Maxion/IMS system, based on the Maxion multiprocessor Unix system, is superior to other server systems by virtue of being an open system based on recognised standards (wonder what the likes of Hewlett-Packard Co and Digital Equipment

### SUPERCONDUCTOR TECHNOLOGIES FORMS UNIT FOR CRYOGENIC WORKSTATIONS

Superconductor Technologies Inc, the Santa Barbara, California high-temperature superconductor specialist that has been working on related cryogenic subsystems, told its annual meeting that its cryogenic cooling system has shown the ability to increase workstation speeds by 30%. The company has been working with Sun Microsystems Inc, the Ross Technology unit of Fujitsu Ltd, and privately-held nChip Inc to evaluate high-speed cryocooled workstations using a hyperSparc subassembly under a US Navy contract. The company had been hoping to demonstrate a 40% speed improvement compared with room temperature working, but the 30% is encouraging enough to persuade the company to form a strategic business unit to market the cooling system to the workstation market, starting next year. "There is no doubt that each new generation of computer chips is getting hotter and hotter, and the associated problems from heat dissipation are becoming more challenging," the company says: "We can use our small system, developed for our superconducting products, to cool the high-speed chips and solve the heat problems, and at the same time significantly increase computer speeds." The system itself measures eleven inches in length with external ribbons which plug into the motherboard. Whereas most cryogenic systems use oil, the company says, it handles heat dissipation using helium gas as a lubricant. A piston pushes the gas up and down causing the temperature to fall to as low as -50C, it claims. It expects to be selling the chips for \$1000 a piece, producing 10,000 initially and targeting ramp up for "sometime in 1996". It plans to sub-contract its chip production in Singapore, saving dramatically on labour costs. Initially targeting the Sun retrofit market, the company has plans to move into the new workstation and server market. It reckons that the 30% gain is just the beginning and says it expects to achieve a further increase in speed without redesigning or optimising the chips for higher speeds, and that if the chips are optimised to run at colder temperatures, the speed increase could be as high as 100% to 200%. The firm admits its got a lot of work to do persuading potential customers about its cooling systems, but claims it already has one customer, and sees the market for cryogenic chip cooling systems exceeding \$300m by 1998.

### BAAN AND CA DISPUTE SETTLED

Baan Holding BV has reached a settlement of the acrimonious dispute with Computer Associates International Inc over the latter's ManMan/X, which is based on Baan's Triton product. The Baan-Ask Group licence agreement has been terminated and all pending litigations dismissed with prejudice, and the settlement gives Computer Associates the perpetual right to license, support and enhance Manman/X for current and future clients, using its own technology and the set of Triton Tools 6.0 that Baan delivered to customers as of June 23 1994 for purposes of supporting and enhancing ManMan/X. It can also continue to use Triton 2.2/5.0 code and six Finance modules from the Triton Applications 3.0 code Baan delivered to Ask in May last year - all in connection with supporting or enhancing the Triton-derived components of ManMan/X. Computer Associates will receive no other Triton code or support from Baan, and may not use any licensed Triton code or its underlying technology to modify any product other than the Triton-derived components of Manman/X. It has the right to license Triton Tools to clients in object code, but not source code. All the other aspects of the settlement will remain confidential.

### PEOPLESOFT MANUFACTURING

Personnel and payroll software specialist PeopleSoft Inc has decided to take on Baan Holding BV and Computer Associates International Inc and diversify into the manufacturing software market. The Pleasanton, California company says it is to start delivering PeopleSoft Manufacturing, a suite of client/server manufacturing applications early next year. It is working on Enterprise Resource Planning, with seven new integrated manufacturing applications for discrete manufacturers, and has formed PeopleSoft Manufacturing Inc as an off-balance sheet venture dedicated solely to the development effort. Andersen Consulting is to help with development.

Corp for two would have to say about that?) and "enables services providers to deliver interactive multimedia services at the lowest possible cost." The multi-stream multimedia challenge is to guarantee support at any moment for high levels of throughput while providing instantaneous interactive control, it judges. The Maxion multiprocessor family features a crosspoint switch that provides multiple and independent high-speed point-to-point connections between independent ports of the switch. Via the crosspoint, multiple processors can be connected in a compact system that eliminates performance bottlenecks associated with traditional bus architecture, says the firm.

### SUN-THOMSON CHOOSE BROADVISION'S COMMERCIAL MANAGEMENT SYSTEM

Sun Microsystems Inc and Thomson Multimedia SA will take BroadVision Inc's Interactive Commerce Management System for their Thomson Sun Interactive end-to-end television framework. BroadVision's product will manage and process consumer interactions across interactive networks and deliver a range of marketing services. Los Altos, California-based BroadVision's system is intended to enable the development of a wide variety of transaction-based Open TV interactive services such as near video on demand, interactive advertisements and home shopping. Open TV, introduced in January, is an operating environment for interactive television, and as such is a direct rival to Microware Systems Corp's David, running on Sun servers at the back end but promised to run on a variety of set-top boxes. BroadVision's Interactive Commerce Management software, will be used to integrate interactivity into network operators' back end business systems, and can be interfaced with existing billing and ordering systems. The integrated set of software subsystems for commerce management provides customer information and privacy management, usage data collection and reporting, advertising and marketing programmes, as well as on-line pricing, payment and order processing functions.

### HP INTEGRATES MPEG ENCODER WITH MEDIASTREAM SERVER FOR VIDEO-ON-DEMAND SYSTEM

Hewlett-Packard Co says its new real-time MPEG encoding system, when coupled with its MediaStream Server to create a single digital video system, increases by 10 times the number of channels available to end users, without adding bandwidth. At the National Cable Television Association show in Dallas, Hewlett-Packard and BellSouth announced that BellSouth Corp would be the first HP MediaStream Server customer to install the encoding system, in time for its field trial - as reported, BellSouth is building a broadband network that could serve 12,000 subscribers in greater Atlanta, Georgia. BellSouth will digitise broadcast entertainment at its network's head-end using the MPEG 1 encoding system, and combine them with the video-on-demand output from the HP MediaStream Server, onto a single optical fibre for direct digital broadcast over its Asynchronous Transfer Mode network.

#### Controlled from a single management station

The entire system will be controlled from a single management station. Hewlett-Packard's encoder compresses analogue composite video or Y/C and two audio channels into a digital format that enables service providers to create a video stream that can carry six to 10 times more channels than could be transmitted originally. Several modules can be combined into a system that provides multiple channels of digital, MPEG-compressed video from baseband satellite feeds or other analogue sources. MPEG-2 compression is expected to be available in the near future. Each four-channel module has a SONET OC-3c single-mode fibre interface to the service provider's broadband distribution network. An optional Asynchronous Transfer Mode switch can be configured into the system. Cable '95 is the first public showing of the HP MediaStream Server. Besides BellSouth, Pacific Telesis Video Services, Southern New England Telephone and Singapore Telecom are all using HP MediaStream Server in trials.

## ICS RE-INVENTS ITSELF AS CORPORATE DEVELOPMENT HOUSE WITH SGI C++/MOTIF TOOLKIT

Faced with a rapidly maturing X and Motif market, GUI development house Integrated Computer Solutions Inc - recently beaten to a lucrative SunSoft Inc bundling deal by rival Imperial Software Technology Ltd (UX No 436) - is changing its skin. It's counting on a piece of Silicon Graphics Inc software it'll sell on an exclusive basis to provide up to half of its revenues within a short period of time, cementing, it hopes, a transition to a more general corporate development house from its strictly interface development roots. ICS describes ViewKit ObjectPak as a C++ foundation for Motif application development that also eases the overall transition from C to C++ environments. It puts wrappers round collections of OSF/Motif utilities and widgets and other non-interface components written in C, for use as C++ class libraries. It doesn't wrap each individual Motif widget up as a C++ class, a procedure ICS claims defeats the purpose of having C++ for higher-level design. The software was developed by Doug Young at SGI in 1991 and has been used internally for the SGI Magic desktop and development environments as RapidApp.

### Fresco dropped

ICS, which foresees little further growth in the X/Motif market, is effectively taking one foot out of the development market and heading for C++ pastures. Its need for new products and new outlets has been compounded by the fact that there are no plans for a C++ version of OSF Motif which it could lever. Moreover, the X Consortium has recently dropped plans for a Fresco object-oriented interface to X because of the lack of interest in learning a new windowing system which wouldn't have supported the DEC toolkit. Although some recent reports have begun to question the rise and rise of C++, ICS backs its plan with numbers from Milpitas, California-based market researcher Strategic Focus, which expects that 50.6% of all Unix development sites will be using C++ by the end of next year, up from 32.1% at the end of 1994. C-based sites on the other hand will shrink from 40.6% to 36.4% over the same period, Smalltalk is expected to rise from 2.5% to 5% and Objective C from 1.3% to 2.7%. To drive its point, ICS points to Market Perspective Inc's survey of 500 ObjectWorld '94 attendees, which showed 65% plan to purchase C++, almost 60% indicating they'll buy class libraries and up to 40% buying frameworks. ViewKit ObjectPak includes a VkApp generic application class, described as the starting point for new development, with support for common tasks such as menu management, input blocking, cursor management and window manager support. VkComponent is used to build new components from Motif widgets and/or non-user interface components. Other supporting classes include ToolTalk components and graphs and dialog boxes. ICS ships ViewKit ObjectPak on May 22nd at from \$2,000 on DEC, HP, IBM, SCO and Sun Unix. It requires C++ and Motif 1.2x development libraries and supports native compilers on those systems. There are no run-time fees and ICS is seeking OEMs. ICS will integrate its Builder Xcessory with ViewKit ObjectPak by mid-summer, allowing users to output C++ classes for use with the ViewKit. ICS' Database Pak won't work with ViewKit ObjectPak, at least immediately. SGI carries Builder Xcessory for use in RapidApp. ICS' other OEM is DEC. ICS had a 59% share of the \$25.5m Motif toolkit market last year, shipping 18,365 kits. ICS will add support for the Common Desktop Environment once the vendors begin to ship it.

•With SunSoft Inc becoming the first vendor to bundle a full-blown interface development system, the Imperial Software Technology Ltd X Designer GUI builder, Sun Express will no longer carry Integrated Computer Solutions Inc's Builder Xcessory. ICS claims it was in the running for the deal but refused to go as low as the \$60 a copy it claims IST's pre-paid royalty deal works out at. It expects unit ships on Suns to decline and revenue to remain flat as a result, although it claims overall Builder Xcessory revenue is still rising.

### SMALLTALK SHIPS METHODWORKS FOR BUSINESS OBJECTS

Smalltalk-house ParcPlace Systems Inc is shipping MethodWorks 1.0, an analysis and design tool for defining business objects. The MethodWorks scripting editor creates, links and reuses scripts to capture and organise business logic before coding. The process consists of five steps, beginning with the identification of core business principles such as price, performance and objectives. The scripts indicate roles and responsibilities and represent 'building blocks' for further application development. Written in VisualWorks, based on SmallTalk, it will be up on SunOS in June with ports to other platforms to follow. MethodWorks starts at \$1,500.

### SUN CORPORATE IMAGE IS A DOG

This week at SunWorld Sun Microsystems Inc starts remaking its corporate image by kicking off a multimillion global ad campaign that begins with a teaser in the *Wall Street Journal* and then spreads out to the *New York Times*, *BostonGlobe*, *USA Today*, *BusinessWeek*, *Fortune*, *Forbes*, *The Economist*, and all the big trade rags. This time, thank God, it's an ad campaign with a difference, capable of giving you a big, fat, sloppy kiss 'cause it's built round a corporate spokes-dog named Network. Sun's new mascot, an adorable Greater Swiss Mountain dog, is supposed to personify friendliness and power and increase awareness of Sun as a leader in network computing. The "Network" campaign will position Sun as business' best friend and play on themes like "It's amazing how much information Network can carry," or "His name is Network. Tell him what you want and he'll get it for you." J Walter Thompson, which dreamt up the idea, is building a personality around Network, including a Dewars-style profile that quotes him as saying, "Unless you're the lead dog, the view is always the same." (Of course Network is paper-trained. Apparently he grew up on the *Wall Street Journal*) Network will be making a lot of guest appearances with his new human Scott McNealy and we've been given to understand that Scott and his bride Susan are so smitten with the pup they're trying to adopt him.

### SYBASE MAKES CUTS ACROSS THE BOARD

Sybase Inc has quietly canned a bunch of people, as many as 150 worldwide. It has also decentralised its marketing department, particularly product marketing. Its VP, corporate marketing Richard Yanowitch is heading for a start-up, and executive VP, marketing Stu Schuster has been named executive VP, business development. Contrary to rumours that had Schuster on a two-month leave of absence from which he was unlikely to return, a Sybase spokesman said he would be continuing in his old job for another six months while they conduct an executive search for his replacement. The cuts were apparently across-the-board, hitting engineering, sales, marketing and even Oasis, its consulting operation. Sybase was loath to attribute the cuts, which it referred to as "assessments," solely to the hard times it hit in its last quarter. It claims it's been meaning to cut back for some time. It also didn't completely rule out other layoffs declaring them "a process not an event." On the other hand, it has 350 recs outstanding for new staff and said its headcount could be up over the 5,400 people it had worldwide before the terminations by the end of the current quarter, despite the fact it has lost its human resources chief. Its spokesman could not confirm reports that the layoffs cost corporate marketing 15% of its staff.

### UNIPLEX INTEGRATES ANALYSIS TOOLS FOR ITS BUSINESS SOFTWARE

Uniplex Ltd, the Unix office software company which has been relatively quiet since its acquisition by Folsom, California-based CP Software Group last July (UX No 498), says it will release Version 8.1 of its office automation Uniplex Business Software (UBS) at the end of September. Unlike Version 8, released in October (UX No 510), UBS 8.1 will be integrated with CP's existing Intext document analysis tools from the Australian acquisition. There are file management, interface and other enhancements to the UBS wordprocessor and spreadsheet. By mid-96 it will have integrated Intexts' spreadsheets into UBS, which is apparently similar to Lotus' 2.1 character release. Uniplex also plans document converters from Windows, Motif and character interfaces, and a mail link Windows front end. Most of its development work is done at its Hemel Hempstead, UK base, although it has a small user interface team in Redwood, California. Its particularly chuffed with a recent report from market researcher IDC, which reckons the company has just over 50% of a Unix office automation market expected to enjoy growth of 11% over the next five years. Uniplex plans to concentrate on its core products, including OnGo Office, meant to tie in character based terminals to UBS, and its DSM document management tool. UBS Version 8.1 is up on HP-UX, AIX, SCO Unix and DG's Aviiion. Prices in September.

## ORACLE BUYS APOGEE, SETS INFORMIX, SYBASE, INGRES DRIVERS

Oracle Corp has acquired the assets of Apogee Open Systems Corp, ~~Denver, Colorado-based developer of Unix and Windows financial~~ management products for the oil and gas industry, for an undisclosed sum. Oracle will integrate Apogee's Liberty product line with its Oracle Financials to produce a suite of new Oracle Energy products for oil and gas operations and financial management designed to facilitate migration from mainframes to client-server systems. Separately, Oracle announced that a collaboration with Intersolv Inc will enable it to offer drivers to enable users of its database to gain more direct access to data stored in the database managers of Informix Corp, Computer Associates International Inc and Sybase Inc, and to its own Oracle Rdb. It already has drivers for DB2 and NT Server.

## INTERSOLV ADDS OO TOOLS, WINS SUNSOFT

Intersolv Inc, Rockville, Maryland, which has been moving over the last few years from ODBC connectivity tools and quality assurance towards a full set of analysis and design tools, has acquired two new object-oriented development tools for its product line: the C++/Views cross-platform application framework from Liant Software Corp, Framingham, Massachusetts, and DataDirect Developer's Toolkit for C++, an ODBC-enabled class library for building database independence into C++ applications, from South Wind Design, of Ann Arbor, Michigan. The Liant tools run on OSF/Motif, Macintosh, OS/2, Windows and Windows NT, the class library on Windows 3.1 and Windows NT. Meantime, SunSoft Inc is bundling Intersolv's ODBC Driver Manager with every copy of Solaris Sparc and x86.

## MICROSOFT AND NOVELL TEAM FOR TECHNICAL SUPPORT

In an edgy non-aggression pact, Microsoft Corp and Novell Inc have agreed a co-operative technical support pact to meet the needs of customers whose installations include products from both companies: key elements of the deal include jointly authored technical support, and notes on integration issues, a management-escalation programme to resolve complex support issues involving the two companies more efficiently, co-sponsored support for a product-exchange programme, a technical information exchange, and a mentor exchange and cross-training programme between the two.

## ENCORE SP30 TO SUPPORT UNIX-SHARED MVS DATA SETS

Encore Computer Corp has enhanced its Infinity SP30 disk array processor so that Unix users can share IBM Corp mainframe data sets with mainframe users. The data interchange capability makes it possible for heterogeneous computer systems attached to a single Infinity SP30 to have direct access to user-specified shared disk images and managers can allocate storage managed by the Infinity SP30 to dedicated mainframe volumes, open systems SCSI disk images and to shared disk storage. Apart from MVS mainframes, the SP30 currently supports HP-UX and Digital Unix systems and Windows personal computers. The optional Encore Data Access Facility and Encore SCSI Target Emulation option, enables Unix and Windows computers to access sequential data sets stored with Infinity SP30-managed 3380 and 3390 mainframe disk data, with the emulator enabling some volumes of SP30-managed storage to appear as one or more groups of customer-specified SCSI disks via SCSI-2 port. General purpose data sharing is expected to be available in the fourth quarter but the Fort Lauderdale, Florida company did not indicate a price.

## ARIES TO CONCENTRATE ON TECHNOLOGY AND NOTHING BUT

At SunWorld this week Sparc compatible and cloner outfit, Aries Research Inc, will announce its deal with Salem, New Hampshire-based Sparc system integrator Workstation Technologies to manufacture, market and sell co-branded Marix Sparc systems. Aries has struck the deal because it wants to concentrate full-time on developing its core technology. It's showing off its Sparc 20 compatible workstation, the Marix SS-dt with 24-bit SX graphics, configured with a Viking 61V processor module and boasting 98.0 SPECint 92 and 107.0 SPECfp 92. Prices start at \$14,400.

## DEC CREATES ALCHEMY 7 FRAMEWORK-BASED ENVIRONMENT WITH LOTS OF HELP FROM FRIENDS, TO AID DRUGS COMPANIES

~~Digital Equipment Corp's Framework-Based Environment is at the~~ heart of Alchemy 7, a package of software and machine automation tools aimed at the pharmaceutical industry. Alchemy 7 will be marketed and distributed by Cap Gemini Sogeti SA's UK division, Hoskyns Group Plc, one of seven companies involved in Alchemy 7's creation and part of the Pharmaceutical Manufacturing Solutions Consortium. The consortium's six other members are DEC, Beckman Instruments Ltd, Cincom Systems Inc, Indusoft Ltd, Promis Systems Corp Ltd and Groupe Schneider SA, and each provides some part of the system, intended to speed drug production and reduce the amount of paper generated by companies. But the use of the Framework-Based Environment, which is Common Object Request Broker Architecture-compliant, means that pharmaceutical companies installing Alchemy 7 can preserve existing applications on existing equipment, and need not use the applications provided by consortium members other than DEC. The environment's chief purpose is to do away with multiple point-to-point linking of pairs of applications, thus enabling applications to be accessed from a single interface. It has a selection of application programming interfaces for users to access HP-UX, VMS, Digital Unix, OS/400, MVS, CICS, and AIX systems, as well as MS-DOS and Windows applications.

### Conservative pharmaceutical industry

The environment is based on a product DEC had about two years ago called Plant, that it was targeting at the pharmaceutical industry. The use of a standard like Common Object Request Broker Architecture is very attractive to the conservative pharmaceutical industry, which is more interested in standard packages than custom applications. Alchemy 7 has been designed to cash in on pharmaceutical companies' increasing need to keep costs down, as they speed up drug development cycles and fulfil regulatory obligations relating to drug production. This latter obligation involves a vast amount of verification and validation of all processes involved; for example, a drug company has to prove that the drug it is making is the one it says it is making, and plants have to meet certain criteria. Alchemy 7 is said to automate the collection and maintenance of batch records at every step of drug manufacture; it automatically sends information to laboratories checking for quality; and can control automated production machinery. Other advantages include the general improvement in information flow and the fact that personnel can have easy access to real-time data from every application, and at all stages of production. The components of Alchemy 7 are a manufacturing business and control system from Cincom that maintains information about raw materials and inventory, and provides manufacture scheduling; document management and electronic branch record systems from Promis Systems that are the central applications in Alchemy 7's drive to paperless manufacturing; supervisory control and data acquisition systems from Indusoft that connect to the factory automation products from Groupe Schneider, enabling supervisors to monitor the production environment; and Beckman Instruments' laboratory information management system that enforces any test rules, provides audit trails and sends information directly to the batch record. Hoskyns will act as the systems integrator.

## SIEMENS-NIXDORF "TO RESELL CICS, DB2 ON UNIX LINE"

Siemens Nixdorf Informationssysteme AG is mulling over the possibility of offering IBM Corp's Unix versions of CICS and DB2 on its RM series servers, *Computerwoche* reports, but the company insists that if it goes ahead with the agreement an IBM Deutschland GmbH spokesman described as "99% certain," it insists that it will not reduce its commitment to its own Universal Transaction Manager. The idea seems to be to pitch its own product at new users and at users of its BS2000 mainframes wanting to migrate to open systems, and the CICS and DB2 products at IBM mainframe users that want to downsize to Unix or build a Unix network around their hosts. The paper says that Nixdorf would market the products under the IBM logo; negotiations on a deal have been cooking for a year.

## SQUIRE EXPLAINS THE OPENVISION

"Been there, done that," is OpenVision Inc president and COO Geoff Squire's assessment of new kid on the client/server distributed systems management block, Platinum Technology Inc. Platinum - said last week it would learn from OpenVision's mistakes (UX No 538) - ~~and others have taken potshots at the Pleasanton, California company since a recent bout of re-grouping there led to a string of rumours about its health (UX No 523).~~ Squire's been hard on the campaign trail recently trying to snuff out any lingering concern and putting the changes into context. Since his arrival (UX No 469) Squire has re-jigged management, recently bringing in another Oracle refugee, Richard Barker, as senior VP responsible for all R&D outside the US, and overhauled the company's approach to the market. His first task was to break the prevailing notion that open systems is synonymous with Unix. OpenVision's now got a Windows NT and NetWare strategy as a result. (The NT stuff goes to beta next month). It's also broadened its platform reach, covering OSF/1, UnixWare and AT&T MP RAS as well as Sun, HP and IBM. The second was to re-establish the company's technologies as point products. OpenVision had to come to terms with fact that users deploy technologies one at a time, they don't generally swallow the whole caboodle in one sitting. So although integration, which consumed 90% of 1994's R&D resources, is important, Squire says all of the products had to be re-positioned as individual technologies in their own right.

### Database-aware

OpenVision now offers distinct backup, high availability, distribution, security and event management tools. Moreover the problems that users are trying to address with OpenVision's brand of management solutions are most often problems at large sites. The company is therefore focusing heavily on scalability. It currently offers support for between 800 and 1,000 remote sites in all of its products - it claims to have one 12,500-user distribution licence - and promises support for 10,000 users on all products by the middle of next year. Its integration strategy is based around a common repository and user interface (Motif and Windows 95), plus security, event management and policy management services. It's currently looking at adding new functions such as making its backup software database-aware. The idea is to back up the actual database tables using SQL technology from its Computer Time acquisition rather than doing the usual hardware block copying. The stuff could be integrated by year-end.

### Object options

Squire says OpenVision is definitely not in the framework business; that technology should be supplied by the hardware and operating system vendors in his view. It's the rapid application development technology and event management via OpenVision agents that really lowers the cost of operation, he argues. The products integrate with Karat, OpenView and Solstice network managers. Although the Open Network Computing-only house has Kerberos-based security, Squire says it's disappointed at the lack of Distributed Computing Environment take-up, but will go with a DCE flow, if that materialises. As far as object support is concerned there are several options. The first is to have its agents probe object databases - they support relational and legacy systems only right now. Second it could use an object architecture such as Corba for its own communications. Third, and this is what the company is evaluating but hasn't decided upon, the option of using an object database as a repository.

### Japanese venture

The 180-person OpenVision has 13 products in all, out with a claimed 1,000 customers. High availability, scheduling, event management and software distribution in its operations business. Auditing, authentication, access control and real-time security sniffing for DEC VMS in its security group. In addition there are a range of back-up, hierarchical storage management and archiving products, plus an Oracle-based defragmentation system. 30% of its \$20m-odd revenues are now achieved in Europe and the company plans to establish a joint venture in Japan shortly, presumably through one of its distributors there, Itochu, Kalamatsu and Nippon Steel. It's long-anticipated deal with Sun Microsystems Inc which was being forged around the use of some OpenVision code in Solstice (UX No 524) never materialised because of changing requirements, though Squire says the two are still working on a wider deal. Squire sees the competition as still either a Unicenter lock-in from Computer Associates Inc, a framework from stock market darling Tivoli Systems Inc ("we'll port to it when it has a million nodes," says Squire), the mainframe-based Platinum, or Legent Corp, which it claims it never sees.

## NOVELL FORECAST TO MAKE BID FOR BORLAND SHORTLY

While Dan Dorfman of CNBC, the cable television arm of General Electric Co Inc's National Broadcasting Corp, was saying that the list of putative suitors for Borland International Inc is growing, and naming IBM Corp, Oracle Corp, Informix Corp and Computer Associates International Inc among potential buyers, adding that IBM looked at buying Borland about a year ago, *PC Week* was going with a rather firmer story, saying that the buyer would likely be Novell Inc. Novell's board gave chairman Robert Frankenberg permission to buy Borland nearly five months ago, according to sources familiar with the deliberations, the trade weekly said. It cites the sources saying Novell's board gave a green light after Frankenberg approached it with a hypothetical buyout bid for Borland, and suggests that the delay is because Frankenberg is being especially deliberate in order to avoid the kind of criticism faced by his predecessor, Ray Noorda, who was chided by investors for bulldozing the board into approving the acquisitions of Unix System Laboratories Inc and WordPerfect Corp. Novell wants Borland's Paradox and Interbase database technology, and its tools and languages to enhance substantially the applications development environment for NetWare by standardising on Delphi. It already has rights to include Paradox in its applications suite, reportedly for three years, but the suite is going sufficiently well that outright ownership would be attractive. *PC Week* reckons that Computer Associates, Lotus Development Corp and Fujitsu Ltd have all looked at Borland and walked away. Dorfman reckons that Borland would go for \$18 to \$20 a share, about \$500m all told, against a current \$11.875. Novell wouldn't deny the speculation but declined to comment.

## AMERICAN SOFTWARE PUTS WINDOWS ON ITS UNIX SOFTWARE SUITE

Atlanta, Georgia-based American Software Inc, the supply chain management company, has added a Windows front end to its Unix Supply Chain Planning software. The software suite, which comprises three modules - demand forecasting, inventory planning and resource planning - can be installed as separate modules or as a full package. American Software says the main advantages gained from using the software are a reduction in forecasting errors at the stage of assessing supply and demand for products and a lower investment in inventory as a result of more accurate forecasting capabilities. The Windows version also enables text and graphical data to be viewed simultaneously and SQL database searches to be carried out on the underlying data and replicated in both text and graphical formats. The system also provides on-line help as to why particular forecasting simulations are infeasible. It also has an Electronic Data Interchange interface to enable customers to integrate their systems with Supply Chain Planning modules. American Software is targeting the product at manufacturing and distribution companies especially those involved in consumer goods, spare parts, pharmaceuticals and utilities. The Supply Chain Management software runs under AIX, HP-UX and SunOS or OS/400s or on 80486 personal computers and is compatible with Informix, Oracle, Sybase and DB/2 databases. The company says it is currently developing a Windows version of its execution systems software using Synon Corp's Obsidian development tools. The execution system contains financial management, manufacturing, distribution, logistic systems, inventory systems and order processing modules. The product will be available in the second half of the year.

## CHINA ANNOUNCES DAWN 1000 PARALLEL PROCESSOR

It's unlikely any technical details will emerge any time soon but Chinese engineers say they have developed the Dawn 1000 Massively Parallel Processing System for weather forecasting and oil exploration. Rated at 2.5 GFLOPS peak, it was built by the National Research Centre for Intelligent Computing Systems in Peking, *Xinhua* reported.

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**Sun Microsystems Inc** reports perhaps the biggest order yet for Solaris on iAPX-86-based personal computers: Edward D Jones & Co has given the company an order for up to 60 Sparcservers plus Solaris on custom-built Pentium servers for up to 3,200 retail locations for the US-wide retail brokerage chain; the agreement is valued at up to \$30m.

**Sun Microsystems Inc** does not get all the business though - **Tektronix Inc** is to supply Edward D Jones & Co with more than 8,000 analogue video network desktop X-terminals for the same 3,200 branch offices. Tektronix will supply its TekXpress XP300V X terminals for the 200 branch offices and its headquarters campus in St Louis, Missouri under an agreement valued at up to \$20m. The broker is investing \$100m all told to upgrade its retail network; there will be at least two Tektronix X-terminals in each branch.

The **IBM Corp-Apple Computer Inc-Motorola Inc** Common Hardware Reference Platform white paper (UX No 538), sets the baseline at the PowerPC 604 processor with 8Mb to 1Gb memory, capability to run native versions of AIX, Mac OS, OS/2, Windows NT, Solaris and NetWare; a standard boot ROM and slot for the Macintosh ROM, Peripheral Component Interconnect bus, and two system input-outputs, one for the Macintosh with Apple Desktop Bus, GeoPort, LocalTalk and SCSI interfaces, the other for people coming from iAPX-86 world with IDE, AT serial and parallel interfaces are also included; IBM personal computer keyboard, mouse and floppy controller, and SoundBlaster sound capability.

Mike Maples, 52, **Microsoft Corp's** top executive for product development and a member of the three-person Office of the President, plans to retire to a Texas cattle ranch.

The Common Europe, Common (USA) and Common Australia user groups for those with **IBM Corp** mid-range systems have decided they have so much in common that they are merging to form Common International, which will have an expected membership of over 30,000 system users worldwide; the group brings together users of the AS/400, System/36 and RS/6000.

**Network Computing Devices Inc** has won an OEM agreement for its X terminals and software products from **Takaoka Electric Manufacturing Co** for the Japanese market; the financial terms were not disclosed.

**DEC** reckons that by the year 2000 there will be a unified Unix, with similar APIs, a single file system and GUI, plus NT, which itself will be the motivating factor in driving the Unix vendors together. Despite its plan to migrate OpenVMS users over to NT it says it has no plan to give up on Digital Unix; overall development has cost it some \$500m.

**DEC** claims it pre-sold 70 TurboLasers before the launch - it's got 20 away in the UK now.

**X/Open Co Ltd's** Web site is now up at <http://www.xopen.org/>

and <http://www.xopen.co.uk/>

**IDC** figures just 20%, or \$2,500m of IT equipment and software reaches users in Latin America via the largest 100 resellers in the region: the market is worth some \$11,000m in total, the biggest markets are Argentina, Brasil, Chile, Colombia, Mexico and Venezuela.

**IBM Corp** is getting sentimental in its old age: as we told you, the PowerPC-based AS/400s are expected in the same week as the Power Personals, and we now hear that they will appear on Wednesday June 21, two days after the desktops, because it is the anniversary of the original Silverlake AS/400 launch.

**Unison Software Inc**, the 16-year-old scheduling specialist now headquartered in Santa Clara, California, is reportedly getting ready to go public in the next few months. Previously on minis, the company got a new lease on life a couple of years ago when it brought Maestro to Unix where it's now tight with NetView, OpenView and soon Tivoli. Hambrecht & Quist are bringing them out.

Market researcher **BIS Strategic Decisions**, supposedly the third largest of its ilk with \$25m in revenues, has been sold to the **Giga Information Group**, an investment group led by Gideon Gartner, who founded the famed **Gartner Group**. Terms were not disclosed. Gideon is launching a new company, the Giga Information Group Inc that sounds like the old Gartner Group which he cashed out of back years ago for a sizeable chunk of change. Giga also has an investment in **Exper-Net** a California company currently developing a "knowledge network" of experts in information technology, a service that's said to complement BIS. Apparently there are other pieces of Giga still to be unfolded. Obviously he will be competing with his erstwhile creation.

**Usenix** is sponsoring a conference on Object-Oriented Technologies to be held at the Monterey Conference Center in California June 26-29. It'll cover OLE and COM among other things.

*Advanced Systems*, the magazine that used to be called *SunWorld* until last year when it changed its focus, has bitten the dust.

The second Commercial Parallel Processing Conference will be held September 27-29 at the Hyatt Regency in Chicago.

Rumours were swirling the early part of last week that **Legent Corporation** was going to be acquired which probably accounts for the movement in its stock. Wall Street thought **Computer Associates** might take it over but we hear not. The Street also came up with the idea of **IBM**. It's believed Jerre Stead, who came over to run Legent from **AT&T GIS** a few months ago, has been shopping the thing around the last few weeks.

Cary, North Carolina-headquartered **SAS Institute** is committing an additional \$2m to its data warehouse budget, it says, to investigate automated extraction, distribution, data scrubbing and scheduling tools. It claims to have invested \$42m in the technology over the last three years.

**IBM CEO Lou Gerstner** has brought in a old buddy to be Blue's chief counsel. Lawrence Ricciardi, a newly ordained IBM senior VP, had been Gerstner's general counsel when the two were at American Express, then again at RJR Nabisco. Ricciardi's predecessor is retiring.

This week at Sun World, **TriTeal** will announce an integrated Internet browser for TED, the TriTeal Enterprise Desktop created in support of the industry's Common Desktop Environment (CDE).

**Legent Corporation** has become increasingly Steadized since its new CEO Jerre Stead came on-board from **AT&T GIS**. It's not only lost its chief financial officer, its chief operating officer and its VP, indirect channel but last week Mark Wasillko, its VP, marketing who came over from **Computer Associates** much to CA's displeasure and its chief technology officer Bob Yellen reportedly got the boot.

Its jumped to PowerPC (UX No 530), but Santa Clara, California-based **Auspex Systems Inc** shows little sign of taking its foot off the HyperSparc peddle. It's got a new low-end addition to the Network File System (NFS) server line, NS 7000/100, which runs a 55MHz HyperSparc, comes with from 32Mb to 128 MB of memory, 8Gb to 90Gb disk and supports from 15 to 50 concurrent users. Prices start at \$50,000.

Just in case some of you have been suffering sleepless nights wondering how many vendors have qualified for the Unix 93 trademark, and it would seem there may be quite a few of you, here is the list of ten vendors who comply; Sun, Groupe Bull, SCO, HP, Digital, IBM, AT&T GIS, Novell Inc, Amdahl and Siemens Nixdorf. Of course, Unix 93 is the interim brand on the way to full Spec 1170 Unix 95, and to qualify for compliance an operating system must conform to XPG3 or XPG4, and comply with System V Interface definition 2 or 3, include a Novell Inc licence and a plan to move to Unix 95 within a year.

UK-based I/O connectivity supplier, **Specialix Ltd**, has been bought by its management team for £17m. With revenues of \$30m, the management team retain 52% equity and plan to extend the company into Middle East markets and expand its networking operating systems. The company has 107 people worldwide.

**Oracle Corp** has been waving its cheque book in the direction of object-oriented database **Object Design**, offering to buy it for \$200m. Burlington, Massachusetts-based Object Design turned them down after discussions and plans instead to go public within the year.

**Intel Corp** has decided to get skilled users to test-drive the P6 ahead of its launch in the hopes that they will find any serious bugs that its own comprehensive testing has missed: later this summer, it will begin lending personal computers using an early version of the P6 to users like the professor that disclosed the Pentium flaw.

**Oracle** has lost its chairman, James Abrahamson. Larry Ellison is stepping into the breach.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: [info@unigram.globalnews.com](mailto:info@unigram.globalnews.com)

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Registered at the Post Office as a Newspaper

London, May 29-2 June 1995

Number 540

## US FEDERAL COURT DENIES OSF-HP-DEC MOTION; PAVES WAY FOR ADDAMAX ANTITRUST SUIT

It being the season - given Microsoft Corp's recent experiences - for weighing antitrust matters, the US District Court in Massachusetts at long last delivered itself of a decision that could see Addamax Corp's four-year-old multimillion-dollar antitrust suit against the Open Software Foundation, Hewlett-Packard Co and Digital Equipment Corp (UX No 331) finally brought to trial. In a decision handed down on Friday May 19, but not received by the lawyers until last Tuesday May 23, Chief Judge Joseph Tauro denied - in very unequivocal language - a motion for summary judgement sought by OSF, HP and DEC to get the Addamax suit thrown out of court. The 27-page decision, sought since last August 24, essentially means that from what the judge has seen so far Addamax has a case. Whether it gets to trial - and that probably wouldn't be before next year - now apparently depends on the defendants' readiness to settle. They have never suggested they might settle, evidently because they never took the case that seriously. Now that Addamax presumably has their attention, they may reconsider, figuring the suit may go against them. It would be better for the industry, however, if the case goes to trial. A thorough airing of the issues the suit raises might help to spell out the rules under which the industry may legitimately operate. Among other things, Addamax charged OSF with rigging its vaunted RFT procurement process and forcing technology suppliers to sell their products to it and its sponsors for piddling amounts of money that were below market prices - even below R&D costs - and under disadvantageous licensing conditions, after Secureware Inc won a bid to supply the security system in OSF/1 in 1990. Addamax subsequently went out of business, contending that its natural market, the OEMs, had dried up because OSF's anticompetitive practices - coupled with the hegemony over the market it and its sponsors had - essentially constituted an illegal buying cartel. Judge Tauro's decision is something of a moral victory for Sun Microsystems Inc, which has been helping Addamax pay for the suit out of a special \$7.5m fund earmarked for the purpose. From its inception back in 1988, Sun always maintained that OSF actually stood for "Oppose Sun Forever." In his decision Judge Tauro finds that "there is substantial evidence, in the form of internal HP and OSF memoranda, that OSF was formed specifically to combat Sun and AT&T," then the owner of Unix and a Sun shareholder. He says that this evidence is such that it raises "a genuine issue of fact" as to whether OSF constituted "a conspiracy for Sherman Act purposes," a charge Addamax must successfully portray to win. Tauro warns that "conspirators cannot gain immunity from the antitrust laws by labeling their agreement a 'joint venture,'" a defense the OSF side has already offered. (*Details on Page 7*)

## AS UNIGRAM PRESSES COURT TO UNSEAL OSF-HP-DEC RECORDS

Although the First District Court has finally decided to throw out the OSF-HP-DEC motion for summary judgment and let the Addamax antitrust suit against them proceed to trial, the court has yet to rule on *Unigram.X*'s own petition that it unseal the documents related to the case. Unigram filed its motion to intervene last September (UX No 504). At that time there were some 250 documents and motions listed on the court docket only six of which were accessible to the public. These documents form the crux of Addamax' case and were sealed at the insistence of the Open Software Foundation, Hewlett-Packard and Digital Equipment Corp. Legal opinion suggests that such a seal is highly unusual and we have argued that the documents cannot be sealed merely to avoid "bad publicity and commercial embarrassment." Now that Judge Tauro has made his decision - and used those documents liberally in coming to his decision - the circuit's binding case law precedents suggest that he must now unseal those documents. Our counsel in this matter, Donnelly, Conroy & Gelhaar, wrote a letter to the court last week asking that our motion now be handled with dispatch.

## SERVIO BECOMES GEMSTONE, FOR THREE-TIER DEVELOPMENT

Throwing in the towel on what it says is an uphill battle to win MIS managers over to object databases, the new management team over at Servio Corp has decided to take another tack. Leveraging what it believes is the increasing popularity of Smalltalk, where it claims to have its roots, the Beaverton, Oregon-based company, will next week reposition itself for three-tier application development a la Forte and Dynasty, albeit with a Smalltalk bent. It's going to rename the company too, after its Gemstone object database, which it'll utilise as the application server and execution engine in the new environment. The development environment is a repackaging of its current technologies including the Smalltalk front-end, persistence, transaction services, database and application servers together with a new home-grown gateway providing links out to relational databases and application partitioning. The plan to steer towards Smalltalk application development, hatched by VP of marketing Doug Pollack, a recent hire from rival Objectivity Inc, and new CEO Bryan Grummon (UX No 527), is premised on Servio's belief that MIS doesn't need an alternative to relational storage - a mechanism the majority are only now beginning to swallow in any case - but does require development tools and business objects. Servio envisages existing users moving with it into a broader market space. The company, reckoned to be of a similar size to Objectivity Inc and Versant Object Technology Corp - all three trail Object Design Inc in the ODBMS market - claims a modest number of development licences and several thousand runtimes.

## IBM PREVIEWS PC POWER SERIES, WITH SOLARIS

IBM Corp's PowerPersonal systems, which will be announced on June 19th at the Grand Hyatt Hotel in New York, were much in evidence on the show floor at SunWorld last week, where IBM was touting Solaris for PowerPC on the Sun stand and at the booth of one of its partners, imaging software house Orion Systems of Danvers, Massachusetts. The systems - now officially christened the Personal Computer Power Series - will include at least the two models shown at SunWorld, a 133MHz 604-based desktop system that will come in a slim-line version as well as the more bulky, expandable system on the show floor, and the new 603E-based notebook, badged as the Power Series 800, which will also come in two versions, one with a built in video camera for video conferencing. Both were running an early beta of Solaris 2.5. Although Sun only received a 604-based machine two weeks prior to the show, IBM is apparently quietly confident it can resolve its 604 deficit to meet its schedules. And, in a show of equity at the launch, IBM will be showing AIX, NT, OS/2 and Solaris each running five applications. Pricing won't be finalised until nearer the event. Meanwhile, Motorola Inc was also showing what it called technology demonstrations of Solaris running on its low-end PowerPC PowerStacks at SunWorld. While officially Motorola maintained a "no announcements, no commitments" stance to offering Solaris on them, unofficially it was talking excitedly about pent-up demand for the "biggest Unix version out there." In any case Motorola's PowerPC partner Compagnie des Machines Bull SA - in which it now holds a minority interest - is already promising Solaris on re-worked PowerStacks it says it'll ship by year-end, *see page 5*.

## DOE PRELUDE DUE OCTOBER, CRESCENDO TO BETA IN Q4

With Taligent Inc lining up an announcement with IBM Corp at Object Expo next week, the latest news on SunSoft Inc's Distributed Objects Everywhere progress suggests object honcho Bud Tribble could end up forking out for dinner for Taligent boss Joe Gugliemi (UX No 518). SunSoft has set its sights on an October date to deliver a set of Corba-compliant services - including integration with the Iona Technologies Ltd object request broker - now in beta, on top of Solaris. This part it's calling the Prelude. The full-blown OpenStep implementation of NextStep on top of these services and Solaris as DOE is being dubbed Crescendo, and will go to beta in the fourth quarter. That almost certainly pushes general availability out until at least the first quarter of next year - certainly beyond the end of the year marker that Tribble had envisaged. Following the initial Crescendo release, still anchored in NextStep's Object C, will be a language-independent version wrapped in IDL.

## SUN STEPS UP ITS CAMPAIGN FOR INTERNET DOMINATION

Sun Microsystems Inc is capitalising on its runaway success with its Netra Internet servers by coming out with a blitz of products for those wanting to get involved with the Internet. The company duly launched the Java language and HotJava World Wide Web browser, which enable material to be downloaded complete with executable code that runs on the user's machine. Material can then be made to sing and dance rather than just sit there - see page 7-. It also announced the Solstice SunScreen network-security hardware and software for protecting business communications. SunScreen includes Sun's packet-screening software running on what the company calls the SPF-100 black box, actually a dollied-up SparcStation 5. In addition it's offering version 1.2 of the Checkpoint Software Technologies Ltd FireWall-1 network security system.

### Prices

A basic SunScreen system starts at \$40,000, a more realistic implementation would go for \$100,000. The company also added a new Netra Internet Server with enhanced Web publishing capabilities, a new administration tool, and NetWare compatibility and a software-only Internet Gateway for Solaris for iAPX-86 machines, so that integrators working with Solaris x86 can create their own Netra-like servers on iAPX-86 machines. The Netra Internet Server comes in three models - a workgroup server with 85MHz microSparc-II CPU, 16Mb memory and 1.05Gb disk for \$6,000, a 110MHz microSparc-II version with 32Mb for \$8,500, and a high-performance departmental server with 75MHz SuperSparc-II, 32Mb and 1Gb disk at \$15,500; it can take a second processor. They are out next month. Sun is also promoting Reston, Virginia-based CyberCash Inc's electronic payment services to its customers.

## ALPHA VERSIONS OF JAVA, HOTJAVA - NETSCAPE ADOPTS JAVA FOR NAVIGATOR

Sun Microsystems Inc has announced alpha implementations of the Java programming language and HotJava navigator - free for non-commercial use - for Solaris, SunOS and Windows NT. Windows95 and Mac OS 7.5 versions will follow in late summer along with beta releases of the software which will include a bundled Web page builder and integration with third-party authoring tools. Java, which Sun hopes will become an Internet standard, has already been picked up by Toshiba Corp, and leading browser company Netscape Communications Corp, which will implement it in the Netscape Navigator which Sun also supplies. Mountain View, California-based Netscape - widely regarded as the hottest property in the Internet world - reckons Java is the first product to provide a comprehensive solution to the challenges of programming for the Internet, and the facility will enable Netscape Navigator to download small Java applets to be run on the client system so that designers can create applications for things such as interactive advertising and real-time share portfolio management. Programs written in Java are transported securely through the network using Netscape's Secure Sockets Layer open protocol in a machine-independent format. Netscape Navigator is claimed to hold over 75% of the browser market.

## TRITEAL TARGETS TED CAMPAIGN AT SUN'S McNEALY

Seeking to win the hearts and minds of Sun Microsystems Inc users at the highest level for its CDE implementation, the TriTeal Enterprise Desktop - Sun has its own implementation of the Common Desktop Environment - TriTeal Corp has a new ad campaign addressed directly at Sun CEO Scott McNealy. It runs "Dear Scott, The network is the desktop. And the CDE desktop is TED." Six years ago Sun was right, TriTeal goes on, "The network was the computer. But today, hardware and operating systems are irrelevant to most end users, Now their universe revolves around the desktop - not the Sun." Its offered Scott a demo. TriTeal has also licensed Spyglass Inc's Enhanced Mosaic Web browser which it will integrate as TED-vision.

## C++ WITHOUT KNIVES, TCL OR NEWS REBORN - JUST WHAT IS JAVA?

NetScape Communications Corp's support of the Java language was greeted with relief by SunWorld attendees, who now regard Java as a done-deal which would otherwise have languished as an interesting backroom technology. Java - previously known as Green and Oak - was a technology looking for a purpose until the explosion of the World Wide Web on the Internet suggested a focus. Sun originally thought interactive television would be its first application (the failed First Person initiative). Trying to position Java against other technologies is difficult: although billed as a "safe" version of C++ "without the guns, knives or clubs", (by Sun chief information officer Bill Raduchel), Java has characteristics in common with Smalltalk and Pascal, and with powerful scripting languages such as Perl, Grow and TCL. None of these are directly comparable, however, and TCL tool command scripting language developer John Osterhaut, who also works at Sun, is apparently a Java fan.

### Overlapping features?

C and C++ come in for some stringent criticism from Java masterminds James Gosling and Henry McGilton in a White Paper on the new language. C and C++, say the authors, have "evolved into a collection of overlapping features, providing too many ways to say the same thing". Java omits C++ features such as operator overloading, multiple inheritance and extensive automatic coercions, but adds object-oriented extensions similar to those found in Objective C. The biggest difference from C is that Java has a pointer model that eliminates the possibility of overwriting memory and corrupting data, using true arrays instead of pointer arithmetic. Eliminating such features obviously affects performance, as does the fact that Java is an interpreted language (like Smalltalk and TCL). But the authors claim to have hit "an attractive middle ground between very high-level and portable but slow scripting languages and the very fast but non-portable and unreliable compiled languages". Its exact relationship between other network-aware technologies currently emerging onto the Web, such as Kaleida's Script X and Silicon Graphics' VRML (Virtual Reality Modeling Language) is also hard to fathom. VRML creators Tom Parisi and Mark Pesce of San Francisco-based Intervista Software say they are interested in using Java as the extension language for VRML. Finally, one ex-Sun developer, pointing to the involvement of James Gosling in the Java project - Gosling was responsible for Sun's Network Extensible Windowing System which lost the de facto standards battle with X-Windows - claimed that - "Java is the Windowing System reborn".

## SUN OFFERS NATIVE NEXTSTEP-ON-SPARC

Sun Microsystems Inc is chugging away along the NeXTStep trajectory which will provide a leg-up into its full-blown Distributed Objects Everywhere (DOE)/OpenStep environment, last week announcing it'll begin distributing native versions of the NeXT Computer Inc environment on its Sparc 4, 5 and 20 workstations. End-user and developer copies of NeXTStep 3.3 - both the interface and MachOS microkernel - will ship in the US in June, worldwide in July, prices start at \$800 and \$5,000 respectively. NeXTStep provides some of the application development frameworks which feature in DOE. OpenStep is the operating system-independent version of the NeXTStep user environment, an implementation of which will be included in DOE. As well as offering tools and services for moving applications created under NeXTStep across to DOE, SMCC, Sun's hardware arm now run by Ed Zander, says it'll continue to offer native NeXTStep releases for Sparc as they emerge. The 3.3 port was a joint development effort, it says. As well as offering the Corba object network layers, frameworks and tools supplied by SunSoft Inc and third parties, the 20-strong software development group inside SMCC plans to create a series of object competency centres which will productise Sun-based object solutions for specific vertical markets such as finance, telecoms and manufacturing. DOE was originally due out of Bud Tribble's SunSoft object team sometime in the second half; SMCC reckons it'll have commercial DOE-based solutions out by year-end, but that seems unlikely given Tribble's latest timescales. - (see page.1)



### **BIGGEST YET: COMPUTER ASSOCIATES' \$1,750m BID WINS LEGENT**

Confirming mounting speculation that it would acquire one of the few remaining diversified software companies of any size (UX No 539), Computer Associates International Inc last week swept in for Legent Corp with an agreed \$47.95 a share cash offer. The deal - which should boost CA's annual revenues past the \$3,000m mark this fiscal - values the Herndon, Virginia systems management company at \$1,750m. Unless the Feds find an objection on monopoly grounds it looks like a done deal, because Islandia, New York-based CA says the boards of both companies have approved the deal, and that Legent's largest shareholder, General Atlantic Partners, which has 10%, will vote its shares in favour. Legent denied that its recently-appointed CEO Jerre Stead had been shopping the company around, claiming that in Stead's first ever meeting with CA boss Sanjay Kumar during the first weekend of May, Stead was simply offered a price so spectacular that he couldn't refuse. CA described it as "the largest software deal in history." The pair will gather this Tuesday May 30th at the Waldorf Astoria Hotel in New York City to outline their strategy. Part of the vast cash sum will come from a \$2,000m line of credit underwritten by Credit Suisse. The offer price represents three times Legent revenues and 36 times earnings. It won't dilute CA's earnings. CA had turnover of \$2,600m in the year to March; Legent earned about \$50m on \$502m in sales its last fiscal year ended September 30. Its projected to do around \$80m on \$600m in sales this year. CA plans to absorb Legent, strip it of overlapping personnel and functions - as it usually does with acquisitions - pare down its expenses and integrate its product line with its own. Legent management, led by CEO Jerre Stead and some of the cronies he has brought over from the old days - some in just the last few weeks - are not expected to stay. It's believed Stead, who left AT&T GIS for Legent back in January, stands to make around \$12m on the deal thanks to stock options. Doubtless some of the folks he's brought into Legent lately also stand to make a killing. CA said it regards the Legent product line, which is still focused on the mainframe market, as not overlapping its own. Its also apparently interested in what Legent has in the way of Unix and client/server though it's not an area Legent has been willing to invest much in lately. Legent currently has 2,500 employees. CA expects to take a \$700m-\$800m charge in September because of the purchase. CA said it would review the situation Legent posed over the next couple of months and see how it and its product is best integrated.

### **DEC's FREEPORT TRANSLATOR TARGETS "VULNERABLE" SUNOS 4.1 USERS**

Like a cuckoo in the nest, DEC turned up at the SunWorld show last week to preview FreePort, its free binary translation tool that translates user executable code for Sparc-based systems running SunOS 4.1 into Alpha executable code for Digital Unix (UX No 522). DEC has had some experience of binary translators, having already written VEST (for VAX to Alpha) and MX (Mips Ultrix to Alpha). FreePort acts like a compiler, using a Sparc executable as a source file to generate Alpha binary code. The real source code is not required, and it doesn't matter what language the application was written in. DEC isn't offering a Solaris 2 to DEC version, saying that it's concentrating on where Sun is at its most vulnerable. According to DEC, SunOS users are faced with an increasingly outdated system, running on older hardware, with less performance and with a shrinking applications catalogue. Staying with Sun means a transition to Solaris 2.x (notoriously difficult with earlier versions) and then maybe another one to 64-bit, it says. FreePort works with eight out of ten applications - it either works completely or doesn't work at all. DEC guarantees that performance will be at least comparable to that of the original, although any additional performance that might be expected from the Alpha chip is soaked up dealing with complexities such as endian conversions and 32-bit to 64-bit addressing. DEC hopes FreePort, in conjunction with a conversion kit it's preparing, will act as a practical catalyst to get the 800,000 or so SunOS users still out there onto the conversion road. It dismisses HP's competitive marketing against Sun (UX No 538) as "just the usual 20% off thing". To strengthen its hand, DEC is planning some "Sun-killer" hardware announcements for July 30th, the date when FreePort goes into unrestricted beta, when it will be available over the net.

### **ULTRASPARC SAMPLING, CHIPSET, REFERENCE PLATFORMS UNVEILED...**

Sun Microsystems Inc unveiled its UltraSparc chipset at Sun World last week, along with the immediate sampling of UltraSparc CPUs at 143MHz or 167MHz, with volume next quarter and machines anticipated from Sun by year-end. The chipset supports Net.Core, a system interface specification due to become generally available this summer. Sun says that a dozen Sparc OEMs are already building Net.Core-compliant systems, a number it hopes to double over the next six months. It has also built the first of what it says will be a series of Net.Core hardware reference designs, Net.Core SBus, a uniprocessor design including system schematics, bill of materials, manufacturing and design automation information, development tools and consultancy, to help OEMs build to a baseline reference platform. Further reference designs for multimedia, multiprocessing and alternative bus architecture models will be forthcoming. All will be based on what Sun calls the UltraSparc Port Architecture (UPA), a basic hardware architecture design that Sun says "centralises critical functionality, reducing memory and shared data latencies to an absolute minimum". UltraSparc, unveiled last September, is the new pipeline for future Sparc development at Sun, and its main hope of holding up in the performance stakes against increasingly fierce competition. Sun anticipates the new chipset will allow it and its OEMs to build 167MHz UltraSparc systems that will run at an estimated 240 SPECint92 and 350 SPECfp92. That still doesn't give Sun a lead in performance terms, where the DEC's Alpha is still top of the pile. But Sun is trying to move the performance goalposts somewhat by emphasising multimedia performance (through UltraSparc's extra VIS graphics instruction set supporting 2D, 3D image and video processing, MPEG-2 image decompression and audio processing) and networking data throughput (using extra block load/store instructions and split data and instruction buses). Production pricing (per 1,000) is \$1,100 (143MHz) and \$1,600 (167MHz). UltraSparc Data Buffers are an extra \$85 per 1,000. The chipset, which consists of a Uniprocessor System Controller, UPA to SBus Interface, Reset/Interrupt/Controller and Crossbar Switch-Uniprocessor, is available from June in samples, with production devices by October. The set costs \$450 per 1,000. The 12 UltraSparc OEMs who went public at SunWorld are: Axil, Cray, CDAC, DTK, Force, Haitai Electronics, Hitron, LG Electronics (Goldstar), Tatung, Themis, Toshiba and Trigem.

### **...AS DATA GENERAL PREPARES DG/UX FOR ULTRASPARC**

At the same time, Data General Corp went public on its first Unix operating system port beyond its own Motorola 88000-based hardware. As we reported (UX Nos 527, 532), DG/UX is being ported to the 64-bit UltraSparc and Net.Core System Interface specification. The port is due for completion during the first half of 1996. Widely regarded as one of the strongest Unix implementations around for high-end enterprise users, DG/UX is also a 64-bit operating system, and therefore plugs a gap that Sun itself has shown little sign of filling. Sun's own work on a 64-bit implementation of Solaris is still in the earliest stages, with Sun claiming that customers have not been demanding it. As well as supporting the 64-bit Sparc V9 architecture, which provides for 64-bit data and addressing, fault-tolerance, fast context-switching and compiler operations, the DG/UX port will also support the Sparc V8+ server instruction set, allowing it to be used on current Sparccenter 1000 models.

### **VENDORS RE-ACTIVATE JEKYLL & HYDE COMMON DESKTOP ENVIRONMENT API**

Sources say work on the so-called 'Jekyll & Hyde' APIs that a bunch of X Windows ISVs and terminal developers had planned to unveil back at UniForum for extending the Common Desktop Environment to support stuff like database access from Windows, deployment of Windows-based C++ code on Unix and Internet access, is on again (UX No 526). There's no date for the stuff yet, but we hear that Jekyll & Hyde sponsors, including Santa Cruz Operation Inc and its IXI-Visionware unit, have been waiting for Integrated Computer Solutions Inc to complete the makeover of its business model (UX No 539), before it could proceed. Indeed following ICS' planned de-emphasis of its Motif interface development tools in favour of Silicon Graphics Inc-sourced C++ technology, IXI Visionware is plotting to lever its Premier Motif environment into ICS' Builder Xcessory toolkit.

## BANYAN HOPES TO CASH IN ON INTERNET WITH REDWOOD STRATEGY

As anticipated (UX No 532), Banyan Systems Inc has unveiled a vision of its future in a development plan it calls Redwood. The company envisages Redwood to be a three-year effort to mobilise and integrate its various products to enable organisations to find, share and manage information in "the emerging extended enterprise marketplace." In its view that market encompasses remote and mobile workers, inter-enterprise networks and electronic commerce technologies. Redwood will include three core elements. Click to Information will be based on the StreetTalk global directory to provide what it hopes will prove an improved means to access and use information and resources throughout the extended enterprise. Business on Mail will be based on Banyan BeyondMail and Intelligent Messaging and will provide the basis for building and extending multivendor line-of-business workflow applications by combining electronic mail and client-server databases. And Self-Managing Networks will be based on the Banyan Distributed Enterprise Management Architecture (DeMarc) and will automate routine management tasks and provide planning and design tools for a more proactive approach to network and systems management, the Westborough, Massachusetts company says. The Banyan strategy will involve strategic partnerships where third parties have technology the company needs. "We think the Internet will be the most common pipeline for companies to communicate with one another and with customers," Bob Martin, Banyan's director of product strategy, told *Reuters*, adding "Internet is central to our vision of the extended enterprise."

Getting deeper down, the StreetTalk element - Click to Information - is designed to evolve the directory service beyond its existing boundaries, to include extended enterprise network components, and new features. Broadly speaking, Banyan is aiming to give users point-and-click access to a variety of network elements including electronic mail; network devices such as printers; applications; or to search for World Wide Web pages or Gopher sites. As part of this, Banyan is implementing a series of initiatives including StreetTalk 500, which is designed to provide X.500 compatibility through support for the X.500 DAP, DSP and LDAP protocols (UX No 532); Universal StreetTalk, through which Banyan hopes to increase the number of enterprise applications using StreetTalk by licensing it royalty-free to application developers; and Directory Synchronisation tools designed to enable administrators to keep track of application directories including those from Microsoft Corp, Novell Inc and Lotus Development Corp. Also under way is a Business Objects initiative, which will define new classes of objects, including printers; Object Linking & Embedding objects; terminal emulation objects; client-server databases; and user-installed applications.

### Internet Business Directory

Security will be provided through the X.509 standard, says the company. Another initiative intended to take StreetTalk beyond its existing boundaries is the Internet Business Directory, which, as its name suggests, will result in a version of StreetTalk that runs over the Internet. Finally, the company also has plans for intelligent agents designed to give remote users access to information on the corporate network on an as-needed basis. Business on Mail is designed to build line-of-business applications centred on store-and-forward messaging. A key element of this, says the company, is a new set of application development tools for creating electronic mail and World Wide Web forms and linking them to database systems. In this way, says Banyan, access to corporate databases can be extended to remote users via the Internet, while the high costs of deploying TCP/IP protocols and client-server databases on desktops throughout the organisation will be eliminated. The tools will be based on BeyondMail using its electronic forms, rules and agents technology, which will be extended to work "with any database or electronic mail application," according to the company. Finally, Banyan is introducing the concept of Self-Managing Networks. This expands the concept of the self-healing network introduced with DeMarc, using its intelligent agent architecture - and the workflow, rules and forms technology being introduced with Business on Mail - to automate routine tasks, identify potential problems, and resolve frequently-occurring problems automatically.

## SUN READIES ENTRY INTO DATA WAREHOUSING

Top Sun executives were hinting broadly last week about Sun's forthcoming entry into the decision support and data warehousing market. Ed Zander, president of Sun Microsystems Computer Company, pointed to existing relationships with Red Brick, Informix and Oracle, and told us to "stay tuned" during the second half of the year for more ISV and hardware announcements, including clustering and SMP systems. Sun's multi-threaded operating system would give it performance advantages in this area, he claimed. And Scott McNealy, president and CEO of Sun Microsystems Inc, said that activities in the area of large databases, clustering and storage/backup were now "extensive" within Sun. The Sun-owned Parallel Open Systems Corp in Boston, formed from staff bought in from the now defunct Thinking Machines Corp, is working on large-scale loosely-coupled clustering solutions. McNealy said to expect machines beyond the current 20-way SMP SparcCenter systems to emerge, along with balanced storage solutions. Top on the list of large database users amongst Sun customers is currently the First USA Bank (550Gb), followed by on-line database provider Knight-Ridder (540Gb) and the Swiss Bank (360Gb). The larger Sun database users have mostly opted for Oracle.

## SOMERSET FACES MANAGEMENT SHAKE-UP AS SINGLE HEAD SOUGHT

A major organisation shake-up is underway at the Somerset Apple/IBM/Motorola PowerPC design centre, according to our sister publication *PowerPC News*. The previous structure whereby a Motorola Inc and IBM Corp manager sits at each level may be scrapped as too unwieldy. What is definite, however is that the existing two-headed structure will go. Long-time Somerset directors Jan Janick (IBM) and Russell Stanphill (Motorola) were recalled to their respective companies earlier this month. Dave Mothersole of Motorola and James Thomas of IBM are currently taking charge of the operation, on a care-taker basis. Sources say that the new director will be employed from outside of the two companies within the next couple of weeks. An unnamed individual has already been offered the job, it is said. The new structure, the companies acknowledge, will allow the design centre to be quicker on its feet and make decisions more quickly. That's not to say - they add hastily - that the existing structure is cumbersome and bureaucracy bound. Instead, both IBM and Motorola have a carefully crafted statement which says that this is all a natural part of Somerset's evolution. Now that the first set of chips are finished, Somerset's role is subtly changed and needs a new form of management. We'll have more on this once the new director gets his or her feet under the table. Meanwhile, both companies have denied suggestions that engineers are abandoning Somerset in droves for better paid jobs elsewhere. One reliable ex-Somersetter, now working for a competitor, told us that the Centre has been losing five employees per week for the last two months, and had been holding meetings on how to counter this drain.

## SUNRIVER INTRODUCES X-TERMINAL THAT SINGS TO YOU

X terminals are becoming more and more exotic, and if your terminal doesn't sing and dance as well as supporting the X Window System, you might as well pack up and go home. Now SunRiver Data Systems Inc, successor company to Hauppauge, New York-based Applied Digital Data Systems, now a wholly-owned subsidiary of All Quotes Inc (which said it would change its name to SunRiver), has unveiled a new line of X-stations that it promises bring the power of multimedia to the world of Unix-based multi-user systems. The new SunRiver CXLE 3531 X-Station, using the same Intel Corp i80960CA RISC processor as its other family members, combines desktop audio, video and telephony capabilities, and implements the Sbus so it can pick up the base of peripherals in the Sparc world. The CXLE 3531 X-Station is designed for information centres needing concentrated telephony-based customer interaction, such as customer service, telemarketing sales and data centres. SunRiver will ship about 10,000 units to AT&T Corp for internal use at its information centres by year-end, and Bell Atlantic Corp has also placed orders for the X-Station for use in its information centres - all of which raises the question why did AT&T sell the company in the first place? A CXLE 3531 X-Station user can simultaneously talk to a customer through the terminal's integrated headset connector, access multiple databases and applications, review and replay television commercials in another window and share radio and television commercial audio with the customer. Orders are being taken for the CXLE 3531; it's available from SunRiver and distributors, and from AT&T Global Information Solutions. Prices for the terminals start at \$2,845 to \$7,000 depending on memory and screen.

## BULL TOUTS EIGHT-WAY ESCALAS, READIES LOW-END UNIPROCESSOR, MULLS POWERPC PROJECTS WITH MOTOROLA

In the next couple of weeks Compagnie des Machines Bull SA's eight-way SMP PowerPC 601 Escalas will finally become available. It reports performance marks of 2660.3 TPC-C (\$530 tpm-C) for the deskside D401/8 and 2660.3 TPC-C (\$560 tpm-C) for the rackmount R201/1, both running Informix 7.1 and Rev 3.0 of the TPC benchmark. The four way Escala D201/4 and R201/4s deliver 1562.93 (\$549 tpm-C) and 1562.93 (\$584 tpm-C) respectively. ~~It's expected to re-price the desksides at the same time and claims that now it's taking 25 orders a day it'll have shipped 2,000 Escalas by the end of next month.~~ By comparison, Hewlett-Packard Co's K-Class quads achieve 2,616 TPC-C at \$544 tpm-C - the eight-way T500 does 3118.20 TPC-C. Like other parts of the PowerPC community, Bull says it's been hamstrung by the drought of 604s, which it can't get in sufficient numbers to put into its SMP boxes until September. Meantime, it's also expected to unveil the promised low-end unit built from the guts of Motorola Inc's PowerStack Series E as a uniprocessor which it hopes can be fitted with 604s from July. The Motorola PCI-based motherboard will be housed in new desktop and mini-tower configurations with new communications and workgroups and pushed out through a new channel programme. Solaris will feature by year-end, it promised.

### Promises Mississippi in July

Also in July, Bull will debut its Mississippi technology for clustering up to eight Escala nodes, and debut a raft of data warehousing, access, replication management and gateway software. Although it claims it has some samples lurking in Italy - general sampling is due this quarter according to Somerset's original schedule (UX No 509) - PowerPC 620 systems are now seen firmly as first-half 1996 products. Meanwhile, Bull and its new minority owner Motorola have been in Italy deciding what PowerPC-based products should be in their development plans. Apparently they think that both Zenith Data Systems and Packard Bell - both Bull investments - could be PowerPC playmates. Although at the time it claimed otherwise, the negotiations appear to have scuppered the planned roll out of a separate Bull software subsidiary based in the US in the immediate future (UX No 530), though Bull says it still fully intends to go ahead with the venture.

### DEC CLOSES ON Q4 TURBO LASER TARGET, RAWHIDE READY FOR YEAR-END

DEC's fourth quarter target for its Turbo Laser box, now recast as the AlphaServer 8400 5/300, had reported orders for 300 boxes. As of last week, about half way through the quarter, it looked like it would do between 225 and 300. Meanwhile, HP took a bunch of analysts down to the Caribbean last week, and was taken to be a bit concerned about Turbo Laser since it has been diss'ing it, criticising the imbalance between the processors and the memory amongst other things. DEC has Rawhide in the works, which will make it possible for them to put four Alpha modules on a board and free up slots for additional memory. Rawhide should be ready at the end of the calendar year, sources say.

### SCO's MERGED X UNIT READIES NEW PC X SERVER, MOTIF RELEASES

Santa Cruz Operation Inc's IXI-Visionware unit next month rolls out a new version of the XVision PC X server with improved performance and connectivity options. It's the first product out of the operation formed by the merger of SCO's two UK acquisitions, although it doesn't actually contain any IXI-derived work. In July the company will begin deliveries of a new release of IXI's Premier Motif development system, based on Motif 1.2, for SCO, DEC, SunOS, Solaris, Solaris x86 and AIX. It includes SCO's Visual TCL scripting language implementation. IXI Visionware's now got Sun Microsystems Inc's SunExpress unit peddling IXI Premier Motif and Panorama worldwide. Although SunSoft Inc's own Motif implementation is based upon IXI's Motif work, Premier Motif comes with additional development features and is generally a release ahead of the version SunSoft ships. Other stuff due out of the combine includes a Windows 95 terminal emulator, which is due in August.

### SET DISCOVERS NEW USE FOR CODE PARSER

As anticipated (UX No 531) Lexington, Massachusetts-based Software Emancipation Technology Inc has re-fashioned its ParaSet C and C++ development environment as the Discover DIS development information system. Its aim is to market its code-parser as a client/server solution for managing large software development projects. Discover includes an information server and repository which consolidates information about all of a company's software components. There are administration, reengineering and reporting decision support tools, and client-based program, debug, design and documentation tools. There are other change management and impact analysis modules - prices start at \$75,000 on Sun and HP Unix boxes.

### NOVELL BASKS IN EURO SUPPORT FOR UNIXWARE 2.0

Novell Inc took itself off to Nice last week to trumpet its troika of European vendors supporting UnixWare 2.0; Ing C Olivetti & C SpA and Siemens Nixdorf Informationssysteme AG in addition to long-time ally ICL Plc. The Fujitsu Ltd sibling, which is already supplying UnixWare 2 on its Intel-based TeamServers and SuperServers, will have its long-promised Sparc in place by September, according to VP of client/server products, Jukka Norokopi. Olivetti plans to migrate its SVR4-based systems over to its implementation of UnixWare 2.0, which it says will see the light of day by year-end. SNI, which is offering UnixWare 2.0 as a shrink-wrapped option for its Intel Corp product line, also plans to migrate selected middleware components from its own SVR4 Sinix to UnixWare. First will be communication, mainframe connectivity and network administration, by the third quarter. Other stuff will follow, promises product division server general manager, Gernot Henning. Meanwhile, Computer Associates Inc says it will offer CA-Unicenter and Open-Ingres on UnixWare 2.0 by the third quarter.

### NOVELL INTEGRATING TUXEDO, NETWARE DIRECTORY

Speaking at Novell Inc's Brainshare Eurofest in Nice last week, senior NetWare architect Drew Major said that by the end of the year Tuxedo OLTP users will have access to NetWare Directory Services (NDS). Acting like a distributed database, NDS allows networks to be managed as a single entity, rather than as a set of linked modules. The hierarchical topology displays information graphically and provides a system-wide single log-on. Different parts of the directory are replicated across different servers. Tuxedo users will effectively add a new list (NDS) to their existing services.

### NOVELL's HUFFMAN TAKES OVER AT AIMTECH

Multimedia authoring outfit AimTech Corp in Nashua, New Hampshire has lured Andy Huffman from Novell Inc to be its new president and CEO. Huffman, once VP and general manager of the distributed computing group in Unix System Labs, latterly VP enterprise solutions, apparently turned down an offer to head-up Novell's \$100m GroupWare operation, in favour of running his own show. Ten-year-old AimTech, which did \$8.5m last year and claims to be looking at \$12m to \$15m this year, began life as a consulting operation and switched to offering tools for creating multimedia-based training, presentation and retail applications. It got bogged down as the market - and hardware configurations to support multimedia - didn't grow as fast as anticipated, but claims it's returned to profitability in the last few months. The Visual Basic-like IconAuthor development environment is up on six Unix flavours, Windows and a range of other operating systems.

### Promises new offerings soon

It's planning a slew of new offerings over the next few weeks. It's looking at integrating Sun Microsystems Inc's Java and HotJava WWW technology in its products, but is casting an eye over others too, including Kaleida Labs' ScriptX. Huffman plans to take AimTech - claimed to be number two or three in its market - to an IPO next year and then go on the acquisition trail. Former president and CEO Usman Ismail left AimTech at the end of last year. CenterLine Software VP US sales Jack Slavin is on board as VP sales.

## **DIVISION'S DVS OPERATING SYSTEM ENHANCED TO OPEN VIRTUAL REALITY UP TO THE ENGINEERING DESIGN WORLD**

Bristol, UK-based Division Ltd is targeting the computer-aided design market with the new release, dVS 3.0, of its run-time operating system, which it claims makes serious virtual reality accessible by major engineering design users for the first time. Translators enable design files from a number of widely-used packages to be imported into the dVise end-user authoring software. The company has also adapted functions more common in computer-aided design and animation packages for the dVise 3.0 end-user authoring tool kit, which has 30 built-in functions. These, which include object movement and cosmetic features such as changing colours and sizes, previously had to be programmed by the user. The tool kit includes 70 pre-written functions, and supports point and click operations, which can automatically create special effects and animated sequences. Division has also redesigned its dVS operating system and dVise tool kit to provide a simpler code-free interface for programmers, who no longer need to write code to manipulate three-dimensional images on-screen but can move objects and change their colours by pointing and clicking on icons.

### **More functions earlier**

The latest release gives designers more functions earlier on in the design process so they can evaluate a design more accurately," says Clive Jones, a consultant who worked on the product. Apart from the new graphical user interface, dVS 3.0 enables multiple users to work on one design simultaneously. The company is unwilling to say at what point multiple users grind the system to a halt since too many variables are involved. However, the ultimate design is governed by the access authority granted to each user, which is set at the user interface. Division claims its dVS design software, launched three years ago, is unique. "The nearest competitor is Sens8 but its products don't have the same level of integration and developers have to write code to get the system to hang together," says Jones. Prices range from £2,000 for a low-end version running on Silicon Graphics Inc's Indy workstation or Hewlett-Packard Co's HP-UX environment to £30,000 for a version for the Silicon Graphics Onyx workstations. The operating system ships with the tool kit incorporated and is out next month.

## **VIRTUAL PRESENCE'S G WEB DOES THREE-DIMENSIONAL GRAPHICS**

Virtual Presence Ltd, London-based virtual reality specialist that started out marketing products in the field imported from the US, has developed its own World Wide Web tool kit to create three-dimensional graphics. G Web is based on the recently-announced graphics standard Virtual Reality Modelling Language, VRML, a virtual reality equivalent of HyperText Mark-up Language, announced last month. The company says the product is an extension of Genesis, its virtual reality prototyping tool kit, launched last year. G Web has its own basic library of design tools but the company admits that in order to achieve advanced three-dimensional graphic images, users would need to use computer-aided design software and then import the files to G Web. The tool kit supports .DXF files and design software from 3D Studios Inc. Virtual Presence is targeting the product at two markets: out early next month, it will ship a Windows version needing a full 80486 with 8Mb memory for \$250, for the creative home user, and a Silicon Graphics Inc workstation release, at \$1,750, for firms seeing it as a new way of marketing products on the Web.

## **PARCPLACE TO PAY \$45m OF STOCK FOR DIGITALK**

ParcPlace Systems Inc, Sunnyvale leader in Smalltalk licence revenue is to merge with Digitalk Inc, leader in Smalltalk unit sales, to create ParcPlace-Digitalk Inc. The pair reckon they will create the largest independent company dedicated to object-oriented technology. Headquarters will be in Sunnyvale, with offices in Santa Ana, California and Portland, Oregon. ParcPlace president and CEO Bill Lyons retains both titles in the merged company. ParcPlace chairwoman Adele Goldberg is joined by Digitalk chairman Jim Anderson as co-chairman. Digitalk president and CEO John Carrington will leave the company after the transition, but gets a seat on the board of the merged outfit. ParcPlace will be the surviving entity, issuing 3.8m new shares worth \$45m for privately-held Digitalk. The new company will employ about 350 and the two had combined turnover of about \$55m for the year to March 31.

## **CANDLE SNUFFS FRAMEWORK, RECASTS OMEGAMON LINE**

Due to lack of interest, Candle Corp has snuffed its Candle Technologies framework as a commercial product. It's renaming its Omegamon line of products, based on the framework, the Candle Command Centre for Unix, MVS, CICSplex and Sysplex, with the Unix version being released next month, and will concentrate on out-of-the box systems management products. Candle says its own developers will continue to use Candle Technologies but adds that it took the decision to drop it from sale because customers did not appear to want it. Peter Marshall, European technical director, said, "there are a lot of frameworks out there, with a lot of promise, but we don't see a lot of people building solid, scalable applications on them." Other problems include weak APIs - to which ISVs couldn't be attracted - complexity and the generally proprietary nature of most frameworks. Candle Technologies was touted as the company's grand move from MVS to Unix and it has spent \$60m over four years on it. The Candle Command Centre, products which also grew out of this R&D spend, are out-of-the-box systems management offerings. Candle says it renamed Omegamon the Command Centre because the software was viewed by users as monitoring tools for systems specialists. Calling them Candle Command Centre was better branding and the name is deemed to give a clearer indication of what the product does. The Unix version had been called Omegamon for Unix and had been due to ship last quarter; it was delayed when the company changed tack over Candle Technologies and has had some functionality added. Command Centre for Unix builds automatic routines and now has 100 attributes to utilise. The system administrator configures aspects of the system that need to be monitored as managed objects and it is through these that navigation and detailed analysis is achieved; an object can be opened up to reveal other factors affecting it. Candle says this is faster than drilling down. Coupled with Omegaview 2, Candle's existing product designed to pull together disparate views of systems provide by performance monitors, it enables the user to integrate applications and see into other types of Command Centres. It comprises the object-oriented graphical user interface and the server, which is the management hub and a set of system-specific intelligent monitoring agents. It runs on Windows NT, AIX or MVS hubs and under AIX, HP-UX and SunOS. Later this year Candle will launch Command & Control which will enable any terminal application to be opened. The Command Centres are designed to provide a single point at which to manage an enterprise, a point at which it is possible to detect problems and then navigate through applications using managed objects. Eventually, Candle plans to merge the different versions of Command Centres so different systems can be managed from a one point.

## **SNI STREAMLINES UNIVERSAL TRANSACTION MONITOR FOR UNIX, WINDOWS AND BS2000/OSD OPERATING SYSTEMS...**

Despite its flirtation with IBM Corp over CICS and DB2 for Unix, Siemens Nixdorf Informationssysteme AG remains committed to its Universal Transaction Monitor and has come out with a new version that is identical for Unix, BS2000/OSD and Windows operating systems. SNI senior director for middleware products Joachim Feldmann says the openUTM breaks new ground and is a "new direction" for the company and complements its existing product line. This is because openUTM includes the X/Open interfaces XATMI and CPI-C, which enable heterogeneous applications to be interlinked between different makes of computer with different transaction monitors, Feldmann said. The OpenUTM interface can handle distributed transactions using Informix, Sybase and Oracle databases. In addition, transaction-protected processing with openUTM is possible on computers from SNI, IBM Corp, Compagnie des Machines Bull SA, Hewlett-Packard Co and Sun Microsystems Inc. It will soon be made available for ICL Plc's computers as well. Siemens Nixdorf also wants to introduce the product into the US market with the help of its recent acquisition of Pyramid Technology Corp. "In the client-server architecture the openUTM enables networks to be expanded into large configurations," says Feldman. The goal is to enhance interoperability with competitors' transaction monitors.

## **...AS PYRAMID CONFIRMS SNI'S IBM DB2, CICS REMARKETING PACT**

Meantime, its Pyramid Technology Corp unit has now confirmed that parent Siemens Nixdorf Informationssysteme AG is to market Unix versions of IBM Corp's CICS transaction processing monitor and DB2 relational database. Pyramid says it will offer the products in the US on its complete line of enterprise servers as a result of the joint development work done by IBM and SNI. Pyramid now sells all the SNI RM Unix machines in the US as well as its own line-up of big servers.

## JUDGE SAYS ADDAMAX HAS A CASE AGAINST OSF

By Maureen O'Gara

The Open Software Foundation-Hewlett-Packard Co-Digital Equipment Corp motion for summary judgement - *see front page* - challenged Addamax Corp's right to bring suit at all, but Judge Tauro finds that Addamax has "made a threshold showing of the defendants' significant leverage" over both the input (buyers') market and the output (sellers') market, laying the groundwork for charges that OSF not only exercised ~~an anticompetitive monopoly over the output market but also an equally anticompetitive monopsony, monopoly's mirror image, over the buying side.~~ Content with the groundwork, "the court finds," Tauro says, "that Addamax has properly alleged that their injury 'flowed from that which makes the defendants' act unlawful'" and further that "Addamax's harm allegedly 'flows directly from collusive activity that decreases competition among buyers.'"

### Collusive monopsony

As a result, "the court holds that Addamax, as a seller to a collusive monopsony, has alleged sufficient antitrust injury and has the standing to bring this suit." The issue of market power of course is key to any antitrust suit and OSF has attempted to depreciate its share of operating systems by arguing that its sales are so small as to be insignificant, as are its purchases of security technology. However, allowing for the fact that Addamax's definition of what constitutes a relevant market is currently better developed than the defendants', Judge Tauro clearly leans towards accepting Addamax's contention that the defendants' collective market share must include the purchases and sales of its individual sponsors which represents the bulk of the market. "The essence of Addamax's complaint," Judge Tauro reasons, "is that OSF affects the industry by establishing de facto industry standards, and the volume of OSF's purchases and sales are not of particular concern to the alleged conspirators. The leverage of the conspiracy, Addamax argues, is not market power as measured in purchases and sales. It is, rather, the simple fact that OSF's choice of technology amounts to an unqualified endorsement of that technology by seven or eight giants of the industry. Once OSF has blessed a particular technology by including it in an operating system package, competing technologies become obsolete." As the judge reasons, "whether or not it is appropriate to aggregate the market power of the defendants in assessing market share, Addamax has put forth evidence that HP and Digital were aware of, and in fact counted on, OSF's ability to influence the relevant markets." (In fact, he says, it appears that IBM was recruited as an OSF sponsor "in a conscious effort to increase OSF's leverage on the market.") These actions, he says, "suggest a triable issue of fact with respect to the sponsors' collective market power."

### Limited competition

As to market share, Tauro says "Addamax has put forth evidence that suggests that OSF's monopsony power extends beyond its immediate share of the market." Tauro maintains that contrary to what the defendants allege, Addamax "has established a genuine issue of fact" that OSF limited competition in general. He says that deposition transcripts and documents submitted by the parties - papers the OSF side has insisted on putting under seal away from public view - "permit an inference that OSF, HP and Digital embarked in a course of conduct designed to confuse and paralyse the market" to deter users from committing to other systems and cause ISVs to reconsider their commitment to the Sun operating system. In other words, FUD, the industry's old friends fear, uncertainty and doubt was created by the formation of OSF and the promise of new technology destined to become the industry standard. An OSF inter-office memo quoted by the judge reads "our sponsors wanted a hammer, axe or two-by-four that could be used to beat the competition." Tauro then voices Addamax's allegation that "this evidence indicates that OSF was formed not to create a new product, but to 'bully the market' into adopting certain standards for computer products. These standards were consistent with the sponsors' interests, and inhibited competition in their purchases of operating system components." To support the claim that OSF did little in terms of actual R&D, Judge Tauro quotes the deposition testimony of OSF engineering chief Roger Gourd, who testified that "he was unaware of any research into 'new product offerings,'" testimony that seems to undercut OSF's whole legal position as a legitimate venture based on the National Cooperative Research Act of 1984. Judge Tauro concludes that Addamax has presented sufficient evidence of OSF's structure, purpose and strategy to "support an inference of anticompetitive effect." He also gives space to Addamax's charges that OSF violated the Clayton antitrust act as well as the Sherman Act and says OSF appears tarnished by the degree of control its sponsors appear to have had over it. Lastly he says Addamax has presented evidence that HP and DEC "knowingly interfered...through illegal conduct" with relationships Addamax had

with Convex Computer Corp - which allegedly breached a contract with Addamax after the Secureware deal was cut - and with Tektronix Inc - which might have become an Addamax customer but didn't. Meantime, after months of waiting for a decision, Addamax boss Peter Alsberg allowed one whoop of joy, saying "we are very pleased with the decision. The court clearly found merit in our claims against OSF and its sponsors. We are looking forward to our day in court where the OSF sponsors' own documents will show a dark, anti-competitive side to the creation and operation of OSF."

### CHEYENNE'S LATEST UNIX PITCH

Roslyn Heights, New York-based Cheyenne Software Inc, best known for the ARCserve storage management and backup software it offers for NetWare LANs, is ramping up its Unix (and Windows NT) story, admitting that whilst it's got a slew of Unix and NT products, it's done a terrible job of telling the world about them. Version 2.0 of the company's ARCserve/Open implementation for Unix now includes client agents for NetWare and Windows, database agents for Oracle 6.x and 7.x, and support for Irix, SunOS, Solaris, HP-UX and AIX. NetWare agents are from \$700, Windows agents from \$500 and the Oracle software is from \$1,500. ARCserve 2.0 is \$700 on SCO and Solaris x86, \$2,000 on the RISC Unixes. SCO will bundle version 2.0 with its OpenServer 5.0 release, whilst Exabyte Corp is putting the software into its EXB-10h half-high 8mm tape library. Cheyenne has also debuted the hierarchical storage management software it picked up with the acquisition of Minneapolis, Minnesota-based NETstor Inc as HSM for Unix (UX No 519). Currently up on Sun boxes supporting workstations and PCs running NFS and FTP, Cheyenne HSM is from \$9,500 for 16-slot optical library support. HP and DEC bundle the HSM software with their respective OpenView and PolyCenter network management environments. Cheyenne's plans for 1995 include further operating system support, a heterogeneous migrator for use across Unix, NetWare and NT, cross platform management, archiving, disaster recovery, communications and security. It's notion is to build up a suite of operating system extensions. The technology will be built, bought or OEMed. Cheyenne claims it'll grow its 2,000 Unix sites to 8,000 by year end, much leveraged off NetWare users integrating Unix systems. It says its NetWare business will continue to rise, but not as fast as it has been. The company says 88% of its business is still NetWare-based, 5% Unix and the rest split between LAN Manager/NT, MacOS and fringe products. It did \$97.7m to June 1994, and \$35.5m in its last quarter. 80% of products go through two-tier channels, 15% is OEM, the rest direct. It has 570 employees, 40 doing Unix R&D and marketing. With European headquarters in Versailles, France, offices in London, Munich and elsewhere and a Japanese subsidiary with 25 employees, the company will open in Singapore in July.

### STERLING HAS OO REENGINEERING SYSTEM

Atlanta, Georgia-based Sterling Software Inc has created a new object-based application development environment for Solaris and Window clients it claims marries business process reengineering and data analysis with visual programming. Target platforms for Key for Workgroup are Solaris, HP-UX, NT and OS/2 servers. It uses the Object Design Inc ObjectStore database as a repository and can accommodate business models created under the Application Development Workbench (ADW) and graphical interface development system Sterling took on with the acquisition of Knowledgeware Inc last December (UX No 499). It's already turned the Windows-based ADW into Key for Enterprise 4.0, an OS/2 development system. Key for Workgroup costs from \$3,500 for a single user; client/server implementations with methodology, modeling and visual development elements starts at \$45,000. Sterling, the eighth largest software company in the world, is heading for revenues of some \$600m this financial year. The applications development division it created out of Knowledgeware has some 5,000 customers and did \$45m in the six months to the end of March.

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**Novell Inc** has reported second quarter net profits down 0.2% at \$95.9m against a period that included a \$30m exceptional gain on Unix licenses, on turnover that rose 16.2% at \$529.5m. Mid-term net profit fell 6.6% at \$177.4m on turnover that rose 8.5% at \$1,022.7m.

**Pegasus Group Plc** shares have been a lively market of late, and market gossip has the accounting software company marked down as an acquisition candidate, with **Sage Group Plc** the number one name in the frame.

Downsizing arrives in Japan: **Hewlett-Packard Co** has an \$11m contract to supply **Tokyo Marine & Fire Insurance Co** with a distributed system based on HP 9000 business servers. The systems will bounce **IBM Corp** and **Fujitsu Ltd** mainframes and 72 IBM 8100 distributed systems, and will cut on-line response time to 4.5 seconds from 10 seconds. It includes 60 HP 9000 business servers running the HP Encina/9000 transaction processing monitor, the HP OpenView system- and network-management software, and HP SwitchOver/UX high-availability software.

**IBM's** Research Division is to establish a third US lab in early summer, in Austin, Texas. The lab will initially work on circuit design and new design techniques and tools for powerful microprocessors.

There is still a big international market for **Cray Research Inc's** supercomputers, new chief executive Phillip Samper told *Reuters*: "I believe the opportunities in the international world are considerable and we have every intention of focusing on international. Cray has a credibility problem in some areas, mostly because of ignorance on the part of the customer - they don't know Cray and what Cray can offer," he said, adding that he plans to boost spending in sales and marketing, but did not give details; he has also identified areas where expenses can be cut.

**Apple Computer Inc** has blown the gaff on the PowerPC 615, according to *MacWeek*, which says the company is strongly hinting in public that there will be a 615-based Mac one day "soon." The paper adds that reliable sources say that prototype Macs based on the PowerPC 615 specs already exist.

As indicated (UX No 525), **DEC** can't deliver workstations that exploit the power of its bleeding edge 21164 chip because of continued delays surrounding the '164's Alcor chipset also known as the 21171. Volumes on Alcor, designed by DEC's systems group and being made by **LSI Logic**, is now a reported 18 weeks out, making it September before DEC's box, also code named Alcor, can debut. Alcor is believed to be the 266MHz workstation that DEC will officially call the AlphaStation 600 5/266.

In light of recent reports about how **Hewlett-Packard Co** appears to be reversing into **Intel Corp's** microprocessor architecture, **Sun Microsystems Inc** boss Scott McNealy now dubs the HP Precision Architecture RISC as "Posthumous Architecture".

Commenting, rather guardedly, on the **Addamax Corp** suit (see front page), **Sun** boss Scott McNealy said that all he was interested in doing was finding out what was legal and what was illegal, so that everybody plays by the same rules.

**Sam Greenblatt**, who went to **Computer Associates** from **Candle** as VP, R&D three months ago has been named CA's chief strategist reporting to president and COO Sanjay Kumar. He no longer has any technology responsibilities.

**HP's** OpenView-on-Unix team has apparently been trying to figure out its strategy for the Unix market as well as estimate the real potential of Tornado, the long-delayed port of its stuff to Windows NT. Team members from Europe and California were huddled in Fort Collins, Colorado, reports our sister paper *Client Server News*, where the nucleus of the OpenView staff works, to air the surrounding issues. New team players weren't given details of the parallel effort to port the Windows version of OpenView to NT, a redundancy that the company admits would create two mutually incompatible OpenView-on-NT iterations. As reported, HP isn't really doing Tornado itself, AT&T GIS is, and the effort is at least six months behind the port from Windows.

*Newsweek* is going into the cyberspace business with a new quarterly magazine called *Virtual City* that starts in September. Its frequency may increase in time. It's partnering with **Virtual Communications Inc** and Jonathan Sacks will be publisher and editorial director.

What does it say that the two richest men in the industry, billionaires Bill Gates and Larry Ellison, are both college drop-outs?

With money burning a hole in his pocket and unable to spend it on, say, **Apple** or **Lotus** or even **Object Design**, Oracle chief Larry Ellison stopped by **Novell** in March to see if Bob Frankenberg wanted to sell him Unix - out of their mutual distaste for Microsoft. *BusinessWeek* says Ellison gave up the idea because the "deal might spoil relations with other software companies that depend on Unix."

**Versant Object Technology Corp** will unveil version 4.0 of its object database on June 13th, claiming it'll feature new fault-tolerant, high-availability and replication services, plus event notification, tools and support systems. It's preparing a Versant Fault Tolerant Server specifically for the 24x7x365 market.

Rumour behind the rumour about **Oracle Corp** waving its chequebook at **Object Design Inc** (UX No 539), is that the \$25m ODBMS company managed to lose \$10m on flat revenues in 1994 after raising its expenditure following its 1993 heyday when **IBM Corp** bought a 27% stake in it for \$20m and took on its ObjectStore database. Not surprisingly, ODI investors are reportedly livid.

We tripped over our own feet: **Legent Corp** chief technology officer Bob Yellen certainly hasn't got the boot (UX No 539).

Austin, Texas-based **IPC Corp's** FirePower Systems-sourced PowerPC boxes are NT-only affairs, as the Open Firmware standard they support apparently means that they cannot run **IBM's** AIX operating system, since AIX currently requires **IBM's** special boot firmware.

**RDI Corp**, San Diego, California, has added a PowerLite 110 portable based upon the 110MHz microSparc II with from 32Mb to 128Mb RAM and 2.4Gb disk at from \$13,000. The 85 MHz PowerLite is now \$12,000.

In his BrainShare Europe address in Nice last week, **Novell Inc** chief Robert Frankenberg claimed that in the first quarter of this year 30% of the company's business was NetWare 4. He says it sold 140,000 NetWare servers during the last quarter of which 100,000 were new server sales.

**Motorola Inc** is to begin marketing **ICL Plc's** AccessManager access control software.

It's still not clear just which countries will benefit from **Sun Microsystems Inc's** new SunScreen security products - certainly not users in France where government imposed rules on encryption are the toughest. Sun president and CEO Scott McNealy said it would depend on export licenses, and would have to be done on a country by country and company by company basis. While the US government tries to make up its mind on encryption, McNealy warned that once it's there, it would be hard to get rid of. "Of course they could make private encryption illegal, but lots of things have been made illegal and are still here".

No one can have failed to notice how New Zealand's Black Magic thrashed the pants off Dennis Connor's US team in the America's Cup. **Cray Research** contributed its Cray Y-MP with four added processors to aid the design and simulation efforts of the US PACT '95 team. The Kiwis used SGI's Mips 8000-based Power Indigo2 desktops and Power Challenge servers clustered using **Platform Computing's** Load Sharing Facility.

*PC Week* got slammed for predicting that Windows NT would become the World Wide Web server platform of choice at Unix's expense (UX No 538). Choice reader replies included "maybe you should take your bias and lack of computer awareness to someplace where it will be appreciated - sometime B.C. would be appropriate." Or "you must be the same guys that declared Apple dead too," and "obviously you know little or nothing about running WWW servers."

**Sun Microsystems Inc** president and CEO Scott McNealy is careful to point out that Sun views the move to UltraSparc "not as a transition, but as an enhancement." Sun is aiming for 100% binary compatibility with existing applications he says, and if anything doesn't run it will be viewed "as a bug not a feature." McNealy is remembering the traumatic moves from **Motorola Inc** 680x0 to Sparc and from SunOS to Solaris 2, and says Sun has learnt from those experiences. "I've been compatible and incompatible, and compatible is better," he says.

**SunSoft Inc** rationalises its decision to distribute **Insignia Solutions Inc's** Windows-on-Unix SoftWindows emulator alongside Wabi, saying users will be able to run all of those Windows applications which the Wabi translation system can't handle.

**Sun Microsystems Inc's** new mascot, Network the dog, was led on stage at Sun World during Scott McNealy's keynote, and presented with four fire hydrants marked **IBM**, **DEC**, **Hewlett-Packard** and **Microsoft**. Despite a few perfunctory sniffs, Network failed to do the business. "He did it in rehearsals", said McNealy, "but I don't suppose any of us would in front of 3,000 people."

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram · X

6 JUNI 1995

The weekly information newsletter for the UNIX™ community worldwide

London, June 5-9 1995

Number 541

## R.I.P. OSF/1

Although everyone and their dog had already made the assumption, it's now official, OSF/1 is dead. Speaking at the Open Software Foundation's members meet in Boston last week, president and CEO David Tory formally announced the demise of the Mach microkernel-based operating system. OSF/1 is now in its final release and there will be no more work on the core, he said. OSF instead will concentrate on layering technologies in future. It was not really a surprise. DEC has been the only real fan of OSF/1 and since it announced that it would encourage VMS users to switch to Window NT, the writing has been more clearly on the wall. OSF will henceforth focus its system software development work on the Mach MK6 and MK7 kernels. Dropping OSF/1 will ease some of the OSF's political difficulties as it stops competing with its members in the operating system market.

## NOVELL TO RE-NAME SUPERNOS, AS MK DEVELOPMENT PLAN AND RE-ORG APPROACH

Having apparently prototyped a handful of incarnations of its proposed SuperNOS NetWare-UnixWare microkernel hybrid, Novell Inc is reportedly now a couple of months from an internal reorganisation and redefinition of strategic direction that'll give the ambitious project a development shop of its own. It's going to change the name too. SuperNOS - "we're saddled with it for now" - apparently carries too much negative baggage for Novell's liking. Specifically we're told to expect integration of the various SuperNOS development teams into a single project unit. There are currently 50-odd engineers attached to the UnixWare/Chorus Systems SA microkernel development and a dozen working on the NetWare integration side. The company still doesn't appear to know what'll feature in the initial release of (not) SuperNOS, scheduled for the end of next year (UX No 529), but executives, led by senior NetWare architect Drew Major, are now peddling a step by step approach which would see modular releases and gradual integration of NetWare and UnixWare pieces on a microkernel rather than a full-blown day one release. Officials are in any case now admitting that wholesale integration of the two on the microkernel might not be possible at all in the foreseeable future, describing that route as too problematic given what's known today and what's likely to turn-up further down the road. Having UnixWare technology inside NetWare is seen as crucial if Novell is to make any headway against Microsoft Corp and Windows NT, and the SuperNOS concept appears to have been accepted internally as a way of achieving this goal. Internally the challenge has been, and apparently remains today, to get the NetWare side of the house to buy into the strategy, and for the company to agree on an architectural strategy for getting there. Despite a huge amount of internal debate, insiders say NetWare folk have never really appreciated what Unix can do, preferring instead to claim it's stuff NetWare can already or could easily do on its own. Publicly the problem is that Novell is still trying to convince customers and other vendors about technologies it put together ages ago, whereas Microsoft Corp is already selling people on concepts that are two or three years out. The way it was told to us, SuperNOS is at the point now where Microsoft was when it first started talking about Cairo - ie at the end of 1992 (UX No 393).

## POWERSOFT TO DEBUT DISTRIBUTED POWERBUILDER FOR UNIX

Sybase Inc's tools division, Powersoft Corp, will announce distributed Unix and Windows NT server versions of its PowerBuilder front-end development system at its user group conference in Orlando, Florida this week. It'll debut a bunch of new tools in the PowerBuilder line there too, as well as S/Designer for PowerBuilder, its new data modeling tool taken from the acquisition of SDP SA, Suresnes, France in April (UX No 536). S/Designer has been integrated with a PowerBuilder 4.2 release such that it incorporates PowerBuilder characteristics including the look and feel and data documentation features. S/Designer for PowerBuilder will be sold exclusively by PowerSoft; the standalone version will be sold by SDP. The SDP acquisition also provides Sybase with a much needed software engineering tool to compete against Oracle Corp's Developer and Designer/2000 offerings. However calling the thing Designer might be a way of throwing up some chaff against Oracle, but it's also destined confuse the heck out of people too. PowerSoft, which has shipped a Motif client version of PowerBuilder since December, will unveil Distributed PowerBuilder for Unix and Windows NT. The client/server edition effectively raises up Powersoft another notch in the application development environment market, where it'll now compete against the likes of Informix, LBMS, Cognos, Progress, Computer Associates and Uniface. Distributed PowerBuilder includes application partitioning, which Powersoft describes the ability to "distribute and process PowerBuilder objects across clients and servers." Powersoft will also reveal plans to build an object repository to gel its products together. The repository will comprise core technology from Sybase's now defunct object-oriented EnterpriseMomentum project along with technologies taken from internal projects and third parties. A set of Sybase/PowerBuilder/SDP-specific class libraries are also being developed that will be bundled with new versions of PowerBuilder. The company hasn't decided whether it'll make or buy the systems management, scheduling and software distribution components it still requires for PowerBuilder.

## FILIP RETIRES, IBM PUTS SP2s INTO WORKSTATION DIVISION

Following IBM Corp's decision to turn the parallel SP2 into an RS/6000 - we're now meant to call it the RS/6000 SP (UX No 539) - the company is combining its workstation division with the massively parallel systems division under Irving Wladawsky-Berger, who comes in with the parallel business where he is currently general manager. The move was prompted in part by the retirement of Bill Filip, who heads the RS/6000 division. Filip, 50, and a 29-year IBM vet, plans to retire in 1996 for personal reasons, after a leave of absence beginning this September. The parallel business did \$400m last year - analysts quoted in the *Wall Street Journal* reckon the RS/6000 business is only doing about \$2,000m a year, much less than had been assumed (IBM has claimed \$3,000m for all AIX hardware and software - UX No 539). Nick Donofrio, head of the server business in which the RS/6000 and RS/6000 SP units reside, was going to announce the changes last week but was pre-empted by the leak to the Journal. It's not clear if or when IBM will now officially deliver the news; it's spokespeople are telling reporters they should simply believe what the Journal says.

## CHEN SYSTEMS TO USE SOME SUPERCOMPUTING TECHNOLOGIES IN UNIX BOX

Steve Chen's latest venture will debut in a couple of weeks time as Chen Systems Inc. It'll be peddling those SMP Intel Corp boxes running UnixWare 2.0 (UX No 530), dressed-up with stuff like I/O load balancing, system administration and maintenance and on-board bus technology that's been carried over from his failed Supercomputing Systems Inc outfit. They'll be marketed as mid-range commercial Unix solutions.

## IBM HOISTS TALIGENT FLAGS

Sources we spoke to said they couldn't really understand why IBM Corp will be making such a big noise about the Taligent Inc CommonPoint application development technologies it's debuting during Object Expo in New York next week. IBM has already begun its early experience program for OS/2 and AIX and will include the CommonPoint beta and 1.0 reference release in its ongoing developer kits during 1995. Taligent, which released the CommonPoint beta to its investors in March, is gearing-up for the introduction of the 1.0 Reference Release of CommonPoint over the summer. Taligent boss Joe Gugliemi warns SunSoft Inc's Bud Tribble he'll be booking a restaurant at Bud's expense following their bet on who'd be first out with an object environment (UX No 518). IBM's mainframe group will also be announcing a slew of the object technologies it's promised for MVS next week (UX No 508).

### PARAMETRIC TECHNOLOGY TO PAY \$194m SHARES FOR RASNA

Waltham, Massachusetts-based Parametric Technology Corp, developer of the Pro/Engineer family of mechanical design automation software products, has definitive agreement to acquire privately-held Rasna Corp, paying 4.2m new shares to value Rasna at an indicated \$194m. San Jose-based Rasna develops the Mechanica family of integrated products for mechanical design synthesis. Its technology enables a mechanical engineer to prototype a product design in software - with the ability to analyse and optimise performance of the design prior to creating a physical prototype. Parametric, doing some \$260m a year itself, puts Rasna's sales for the year to this month at \$28m to \$30m.

### FRAME TECH WILL PAY \$27m IN SHARES FOR MASTERSOFT

San Jose document publishing software specialist Frame Technology Corp is to acquire Mastersoft Inc, publisher of the Word for Word document conversion program, for about 1.2m new shares, putting an indicated value of \$27.3m on the deal. Mastersoft will become a wholly-owned subsidiary of Frame. The companies see the combination as a significant step in Frame's plans for becoming a corporate standard for managing document-based information. Mastersoft specialises in software tools that provide conversion, viewing, and document comparison capability across different machine types, addressing compatibility issues at the system and application levels, they said.

### HP TO SELL BOEBLINGEN PLANT TO HUNGRY SOLECTRON

Contract manufacturer Solectron Corp, Milpitas, California is hoovering up unwanted plants of the majors, and recent acquisitions have included IBM Corp plants in Bordeaux, France and in Charlotte, North Carolina, a Philips Electronics NV plant in Dunfermline, Scotland, and a Hewlett-Packard Co plant in Lake Mary, Washington. Now it has a memorandum of understanding with Hewlett to buy its printed circuit board assembly plant in Boeblingen, Germany, for an undisclosed sum. It will also establish operations to service Hewlett and other electronic manufacturers and offer employment to the current employees of Hewlett-Packard GmbH's plant.

### LANDMARK TO PAY \$16.7m IN SHARES FOR GEOGRAPHIX

Landmark Graphics Corp, Houston oil and energy prospecting software and systems developer, has definitive agreement to acquire GeoGraphix Inc of Denver, Colorado for 655,000 new shares valued at about \$16.7m. Geographix is in the same business, but it specialises in much lower-end systems for geoscience, land, engineering and petrophysics applications and they run under Windows.

### INFONET SOFTWARE SOLUTIONS HAS X400 1992 IMPLEMENTATION FOR UNIX

Vancouver, British Columbia-based Infonet Software Solutions Inc has introduced Messenger 400 1992, an X.400 message handling system for Unix servers which, as its name suggests, supports the 1992 X.400, as well as the 1984 and 1988 standards. It also enables storage and retrieval of both Electronic Data Interchange and electronic mail messages from the same user mailbox, says the company. It is available now for Tandem Computers Inc's Integrity fault-tolerant Unix systems, with a version for Sun Microsystems Inc's Solaris shipping in July. Other Unix versions are planned for next quarter. Pricing starts from \$3,500 depending on processor type, says the company.

### TOSHIBA "PREPARING POWERPC 604 SERVER FOR SEPTEMBER"

Toshiba Corp is ready to launch a PowerPC 604-based mid-range server according to *Computerworld*. The company is the most recent convert to the PowerPC alliance, and has apparently decided to produce the machine a year earlier than planned, in order to meet Japan's speedy adoption of client-server computing. The paper reports that the server will run AIX, following the agreement, inked last September, to license the operating system from IBM Corp.

### FUJITSU DETAILS THE ACHIEVEMENTS OF A PATCHY AND DIFFICULT FISCAL YEAR

Fujitsu Ltd has detailed its fiscal 1995 figures to show that the computer business rose 1% to \$24,379m (on the company's own yen-dollar translation) with domestic sales up 2% at \$17,656m, and foreign sales - which include those of ICL Plc and part of those of Amdahl Corp on an equity accounting basis - flat at \$6,723m. Semiconductors and electronic components were up 17% at \$5,172m, with domestic business up 6% at \$2,771m and foreign up 33% at \$2,401m. Communications systems were up 3% at \$5,626m, with domestic business up 6% at \$4,077m but foreign off 4% at \$1,549m. Other domestic operations rose 7% at \$1,151m and other overseas rose 18% to \$1,426. Adding all those together, total business rose 4% to \$36,603m, with domestic up 3% and foreign up 5%. Although Japan suffered from adverse economic conditions, influenced by the appreciation of the yen and a slumping stock market, says Fujitsu, favourable trends continued in the US and Asian nations, while Europe also moved toward recovery. Continued trends towards downsizing and open systems spurred demand for personal computers and workstations among corporate users, and there was also strong demand for home personal computers. Expanded demand for mobile telephones resulted in increased sales of mobile communications systems, and sales of high-speed transmission equipment for value-added networks and corporate network systems also grew. The operating environment will continue to be impacted by yen appreciation as well as the dramatic transformation of the information technology market, including the trends toward lower prices, increased variety of product functions and growing demand for client-server systems this fiscal, Fujitsu says. In response, the company says it plans to move ahead with the globalisation of its operations, restructure its domestic and overseas production structure, develop higher-value-added products, and carry out selective targeted investment to offer new products and reduce prices.

### OLIVETTI CASTS \$410m RED SHADOW

Ing C Olivetti & Co SpA saw consolidated net losses for the year to December 31 the equivalent of \$410.0m, after an exceptional charge of \$275.0m, up from \$280.2m losses last time, on turnover up 5.4% to \$5,480.5m. Conversion at \$0.0006 to the lira. Olivetti says it expects an operating profit this year, but it has been saying that for some time now. The company insists that the losses were due largely to extraordinary costs and that on its industrial operations it was close to breaking even after four years in the red - it made a net loss on its industrial operations of \$10m in 1994 against \$123m a year earlier, and with sales rising 14% over the first four months of this year and further action to contain costs, it expects to meet its goal of an operating profit in 1995 - but the 1994 loss was higher than most share analysts' forecasts, which were for the company to lose between \$300m and \$325m.

### ORACLE HAS NEW ENCRYPTION AND DATA MANAGEMENT SOFTWARE

Oracle Corp is claiming that it is the first among the relational database vendors to develop client-server database encryption software. Secure Network Services, already released as part of AccessMaster 2.0 under its joint development and marketing agreement with Compagnie des Machines Bull SA, has now been released as an add-on to Oracle's SQL\*Net. Secure Network services is said to encrypt data, SQL statements and procedure calls between Oracle clients and servers running applications to Oracle7 databases, it says. It will support all protocols which SQL\*Net already supports, says Oracle, including TCP/IP, Novell Inc's SPX/IPX, DECnet, X25, NetBIOS and Open Systems Interconnection. Oracle has also added client management software to its Oracle7 Workgroup Server. Shared Oracle is designed to make software upgrades and version compatibility easier to manage. It automates the installation and management of Oracle client software over networked personal computers and automatically updates applications across the network. Updates are loaded onto the file server using the Oracle Windows Installer. A shared directory containing all shared Oracle applications can then be set up incorporating each user's profile information and privileges. An intelligent agent on each networked personal computer then monitors this directory for changes, such as different user privileges or new software, and makes these changes on the client. Shared Oracle runs under NetWare and SPX/IPX or a Windows NT File Server, and it is available now.



### LEGENT TO "JUMP-START" CA'S CLIENT/SERVER EFFORT

Computer Associates International Inc had little in the way of substance to add to the news of its proposed \$1,750m acquisition of Legent Corp last week, declaring all organisational and integration issues effectively off limits until the deal closes, anticipated early in July. One thing the companies don't seem to be able to agree on though is exactly when the deal was hatched. Their party line holds that the first discussions about an acquisition took place on the weekend of May 6th, when Legent CEO Jerre Stead was made an offer he couldn't refuse. Thereafter Stead canvassed other interest in Legent, finding no offers greater than the one CA had put on the table. A price was agreed at 10pm on Monday 22nd. However *Unigram.X* last week learned that third-party feelers identifying CA as a prospective buyer may have been received by Legent as early as April 10. Meantime, contrary to Legent's claims that it had met CA for the first time in May, it appears that Stead met with CA president and COO Sanjay Kumar back in February, just a few weeks into the job, and began exploring how Legent's Extended Processing Environment (XPE) distributed systems management products and the CA-Unicenter system management suite could be made to work together. There is also a hint that CA actually wrested Legent from the arms of another suitor at the last minute and was able to arrange a \$2,000m credit line in the very last hours because of friends over at Credit Suisse.

#### Expanded requirement

Executives from the two companies will be sweeping around the Legent offices worldwide over the next few weeks offering new packages under CA's ownership and handing out some pink slips, though neither company would put a figure on how many job losses there will be. CA CEO Charles Wang pointed to the 500 openings that CA already has, saying the company would expand that requirement to sell Legent products. He described the acquisition as a way of jump-starting CA's client/server effort, especially in field sales and in professional services where CA intends to build on Legent's 300-strong professional services organisation to create a business it currently doesn't have. CA will create a single support organisation for the combined product lines and will put all of Legent products on to its licensing schemes.

#### XPE - just a vision

CA maintains there is little overlap between its and Legent's products, pointing to a Meta Group study which suggests there is maybe 10% redundancy mostly in areas such as storage management and data transfer. Kumar said CA-Unicenter and Legent products could be integrated within "months" of the deal closing. Stead meanwhile, maintains "there is no XPE architecture;" describing the environment as just a vision that holds together some products. Funny, when Legent unloaded its vision on us 18 months ago (UX No 460), we heard about a client/server glue based upon a three-year \$50m investment consisting of internally developed code, licensing agreements and acquisitions. After Morino Associates and Duquesne Systems Inc merged to form Legent in 1989, the company bought Business Software Technology in August of the same year, Goal Systems International and Spectrum Concepts in 1992, and CMA Software, Corporate Microsystems, Networx, Performance Technology, TeamOne Systems and National Dataguard Technologies the following year. The two firms are betting that many Legent's 12,000 customers also have CA products and that they'll be able to lever off this base, though they're claiming they won't do a headcount until the deal goes through.

#### Partner

Jerre Stead, who took over the reigns at Legent Corp on Jan 1st off this year said "I sold the company, implemented a new strategy and a new organisational structure in five months. I didn't plan that. I did plan a new strategic direction over the next few years." Stead said he met with Sun Microsystems Inc boss Scott McNealy a couple of days before the acquisition to discuss how Legent and Sun could partner, and says he thinks new owner Computer Associates will be able to see the relationship through to an agreement of one form or another. (Although McNealy denies it, he's said to have been miffed Stead simply didn't cancel the meeting knowing Legent might go to CA. CA is after all deeply in league with both Hewlett-Packard Co and the hated Microsoft). Stead, who will be leaving Legent, doesn't expect to take up a new position until the beginning of next year. He's expected to make up to \$12m in stock options on the deal and says he's already been approached by 14 employment agencies.

### UK FIRM STARS IN DREAMWORKS-SGI DREAM

If you are setting out to exploit emerging technologies to create the glitziest movie studio in the business, you need to sign up with the runaway market leader in computer systems for special effects, and so it is no surprise that DreamWorks SKG, the entertainment company formed by Steven Spielberg, Jeffrey Katzenberg and David Geffen has been knocking on the Mountain View door of Silicon Graphics Inc. The partners plan to invest an estimated \$50m to create the DreamWorks Digital Studio for animation, feature film and television production - in which Cambridge, UK company Cambridge Animation Systems Ltd will play a leading role. Silicon Graphics will develop a new animation production system called DAD, for Digital Animation Dreammachine, and a computer system to be used for DreamWorks' first full-length animation project and for future feature film, television, music and interactive products, with first systems to be ready in September 1996. The studio will be designed as an open network available to third-party hardware and software vendors and will include Onyx graphics supercomputers, Indigo2 workstations, Indy desktop workstations and Challenge servers at its heart. Cambridge Animation will provide the key animation component of the digital animation studio: the partners plan to install more than 100 Cambridge Animo 2D software systems to provide digital ink and paint compositing, line testing, camera and effects, and Silicon Graphics is sealing the deal by buying a minority stake in Cambridge. All products and technology developed under the agreement will be available to the entertainment industry as standard products from the Silicon Studio subsidiary of Silicon Graphics. DreamWorks is already in bed with Microsoft Corp in the DreamWorks Interactive joint venture to create interactive multimedia programming.

### NEC READY WITH 250MHz VERSION OF THE 64-BIT MIPS R4400 RISC

NEC Electronics Inc is now sampling 250MHz versions of the 64-bit R4400 RISC, and says the VR4400-250 is the highest-speed version available within its line of MIPS Technologies Inc RISC VR-Series microprocessors to date. Fabricated in 0.35-micron CMOS, it is claimed to offer integer performance of 175 SPECint92 and floating point performance of 178 SPECfp92 - up to 1.7 times the performance of a 100MHz Pentium. The part has 16Kb instruction and 16Kb data caches and supports up to 4Mb secondary cache. It burns 11.5W and needs 3.45V. Samples cost \$2,000 each, now, with volume next quarter.

### CALDERA SHIPS LINUX-BASED INTERNET DESKTOP

Caldera Inc, the San Jose, California-based company backed by former Novell Inc boss Ray Noorda is now shipping Preview One of its Linux-based Corsair Internet desktop. It includes the Caldera Network Desktop for Internet Access, APIs, tools, utilities and support. It comes with the Linux kernel, GUI, built-in networking for Internet and other IP networks, NetWare client, back-up, and the 32-bit Windows API from Willow Software Inc, the Saratoga, California company formerly known as Multiport. An enhanced Preview Two release is due later this summer. \$30 buys Preview One and a free upgrade to Preview 2. Outside the US the software costs \$70 - \$30 for the product, \$20 for international processing and \$20 for shipping.

### MAC USERS TO GET DCE SUPPORT

Apple Macintosh users are to get Distributed Computing Environment support from Gradient Technologies Inc and the University of Michigan which are working on cross-campus deployment of DCE-based applications using Macs. Gradient, Marlborough, Massachusetts, is partnering with the University to release the software commercially although neither the University nor Gradient will be drawn on when it will be available. The campus project goes live in the autumn. The software will be aimed initially at 68xxx series Macs with System 7.5. Support for the PowerPC environment will follow sometime next year. Meanwhile, Open Environment Corp is also working on DCE for Mac support (UX No 535).

## IT'S HAIL TO THE CHIEF TIME NOW AT DEC, BUT FOR HOW LONG CAN IT BE RUN FOR CASH?

By Tim Palmer

Congratulations to Robert Palmer on his creation as the first ever chairman of Digital Equipment Corp, which he adds to his titles of president and chief executive. Not a man to set much store by appearances and glory, founder Ken Olsen was always content to hold only the latter two titles, but Palmer deserves his accolade for his triumph in getting the company back into the black. He has triumphantly delivered what the board was asking for and Wall Street and the shareholders are delighted.

### Easy headlines

The company may still be struggling in its core business but it is also doing extremely well in personal computers - not quite as well as Hewlett-Packard Co perhaps, but many times better than DEC has ever done before. That and the stable finances are the success story Palmer can bask in: how much he will be able to hand on to his successor is another matter. The worry is that when you look beyond the headline figures and the easy headlines they generate, the picture looks far less rosy. DEC has cut costs by firing people in enormous numbers and getting much more of its work done by third parties. That approach is fine when the work being done by third parties is simply taking orders, and provided it has the real volume movers, something it may not. Trouble is, DEC is handing off most of its development expenditure to third parties, and once a company allows a critical mass of development work out of its own hands, it ceases to have any importance to its customers, and people begin to ask, as the child did about the famous politician, "what is that company for?" Selling the disk manufacturing business was probably necessary, given the dire straits that DEC was in: not only did it bring in much-needed hard cash, it eliminated the need for DEC to invest money in developing new disk products - even if when DEC was last in the black before the fall, people were saying it should buy a disk business to bolster its own operation.

### Sales of the century

Selling the Scottish chip plant to Motorola Inc was probably equally necessary: it again brought in hard cash, even if with the insatiable demand for chips, any healthy company would have been able to hold on to it and run it at a profit. But the sale of the Rdb relational database to Oracle Corp and the decision to lay the foundations of a migration of its VMS user base to Microsoft Corp's Windows NT represent rather more than simply selling assets that are saleable: it begins to strip the company of its entire raison d'être. The database was clearly sold because DEC did not want to make the investment needed to prevent it becoming a wasting asset. The decision to begin to put OpenVMS on a care-and-maintenance basis rather than follow the Hewlett-Packard model and gradually bring it closer to Digital Unix (itself a product that DEC did not develop in-house but which came in large part from the Open Software Foundation) smacks of a counsel of complete despair.

### Painfully thin

It hands off to Microsoft development of DEC's future operating software - and what future does a computer company have if it lets go control of its operating software, the very soul of a computer-manufacturing company? A whole string of little businesses - financial systems, newsroom automation systems, things like that, which any successful large company would want to hang on to and grow, have been sold, simply, it seems, because DEC needed the cash and did not want to make the investment that would enable them to grow. The company has reduced its major investment targets to little more than keeping the Alpha RISC ahead of the competition in terms of performance - essential but far from sufficient for survival, and designing machines around it, and designing personal computers. The media server and the database server venture with Oracle look promising, but they are painfully thin ventures on which to build the entire future of the company.

### Chameleon-like

For the rest, the decision to allow VMS to transform itself, chameleon-like, into Windows NT looks like an extremely risky decision: some VAX users will find the idea of migrating over time to Redmond and all its works congenial enough, many will not, and DEC will find it a devil of a task to try to convince them that they should not look outside the company for their future. As for the personal computer business, a company as successful

as HP can afford to invest to become a major force in that commodity business; it is far less clear that a company in such dire straits as DEC can afford it. Margins on personal computers are painfully thin and big companies like IBM Corp are finding it extraordinarily difficult to translate large volumes of personal computer sales into anything at all that feeds through to the bottom line, but it is becoming harder and harder to see where the fat margins that will compensate are to come from within DEC.

### Dismal trail

The conclusion that has to be drawn from all the evidence is that either DEC is still in far worse trouble than anyone outside the company ever imagined, far worse trouble than anyone inside dares to admit publicly, or that the company is simply being cynically run for cash, as if its business were nothing more high-tech than cigarettes or cookies. Wall Street does not seem to have noticed, or does not seem to mind, and it is quite clear that Palmer is running the company under clear orders from the board - nasty leaks about how little time he had been given to turn the company around filtered out last year, making it plain that he found himself with little choice but to follow the slash and burn policies that are so evident. So it will be deeply unjust if when what has become of DEC is made clear, Palmer gets saddled with all the blame. But it seems amazing that a \$14,000m-a-year computer company can be accorded so little value that it be allowed to travel down the same dismal trail that is strewn with the likes of Prime Computer Inc and Control Data Corp. Companies as big as DEC don't simply disappear: bits of them are still able to survive, and ultimately come to thrive, and even end up as small as Wang Laboratories Inc.

## TEKTRONIX ADDS LAST WORD IN MULTIMEDIA X WINDOW STATIONS

Tektronix Inc has introduced its TekXpress XP400 series of X terminals with a new architecture that enables users to run multimedia applications such as graphics and high speed digital video. It has dedicated audio and video processors for sustained 30 frames per second performance as well as a RISC chip that supports normal X Window functions and 32-bit input-output bus architecture for future high speed networks. This is the first product announcement from the Video Networking Division since the Wilsonville, Oregon-based company merged its Network Displays and Video Systems Divisions in April in an effort to get a hand in the multimedia market (UX No 528). Tektronix anticipates training-on-demand will be a key use for the new terminals. Staff will be able to download training material and view it on screen in situ as they need to know about a particular aspect of their job, rather than having to take in everything all in one go in an initial training session, for example. It sees this facility becoming more necessary because the use of X terminals has shifted more towards the customer service type of application. Tektronix also plans to sell the tools to enable customers to create those training applications. The multimedia option board consists of a 24B video frame buffer, the CL480 based MPEG decoder from C-Cube Microsystems Inc and the 4231 chip from Crystal Semiconductor Corp for the audio decoder. The board also has a frame buffer and stereo digital to analogue converter all linked by a 16-bit data bus. Connections to the main logic board are by 32-bit data bus. Other features of the XP400 design include the MIPS Technologies Inc LR33120 RISC from LSI Logic Corp, 8Mb RAM expandable to 136Mb, 2Mb Video RAM, twisted pair Ethernet interface, two RS-232C ports, externally accessed dual slot PCMCIA interface resizable, scalable window, audio synchronisation, 1,280 by 1,024 to 1,600 by 1,200 resolution, choice of 17", 19", 20" and 21" display and 72MHz to 80Hz non-interlaced flicker-free viewing. The XP400 logic base with 1,280 by 1,024 resolution is £2,075. Models with colour terminal go from £2,550 to £3,760; volume ships begin in June.

## HP AND NETLABS LINK PROBLEM MANAGEMENT UNDER OPENVIEW

Hewlett-Packard Co OpenView users will finally be able to collect event information using Seagate Technology's NetLabs Inc NerveCenter data monitoring, reporting and fault detection system and have it automatically passed-up to OpenView's OperationsCenter problem management system with a new release of NerveCenter due in the fourth quarter. By that time the new NerveCenter will have been integrated to work with version 2.0 of OperationsCenter, which ~~HP will ship in August. OperationsCenter 2.0 allows users to create tiers of hierarchy based upon pre-defined rules that allow regional intelligent agents to take action according to a given set of procedures, only passing problems back up the chain they're not programmed to respond to.~~ It also means that all problems relating to a particular application or database could be forwarded to consoles where specialists in that application work, just as all network information could be sent to a team in a completely different location. 2.0 also includes a new API to Legent Corp's Prevail/XP that allows problems on mainframes and

AS/400s to be monitored and corrected. Version 2.0 will be up on most Unixes - the DEC OSF/1 port will ship in November. NerveCenter, which already co-exists with OpenView's Network Node manager is being merged with OpenView under the two firms' July 1994 agreement (UX No 494). OperationsCenter (a problem management module) is one of HP's three OpenView process centers that run atop its SNMP Platform, or the enhanced version called Network Node Manager - *see below* - which comes with additional services and application development tools. The other two are AdminCenter for change/configuration management and PCS/PerfView, the performance and resource management module. HP also has new versions of its OmniBack II and OmniStorage applications for use with OperationsCenter which support a bunch of new platforms and mainframe data backup via support for Emprise Technologies' Stage3 storage device, which is marketed by Boole & Babbage. On-line backup of Oracle, Sybase and Informix databases will follow in the fourth quarter. OmniBack II 1.3 is due in August, OmniStorage 2.0 is out in December.

## OSF DESCRIBES ITS NEW USER-FRIENDLY PERSONA AT MEMBERS MEET

By Colin Barker

This year the Open Software Foundation decided to throw open the doors of its members meet in Boston, Massachusetts, to the press. Not so as the industry at large might be able to figure out what the heck it is up to, you understand, but in the words of OSF VP sales and marketing Peter Shaw "so they can finally get the story right." (Well why didn't you think of that earlier, Peter). Still it's churlish to snipe when you have been thrown a crumb, but we can justifiably take aim at Michigan University's Ted Hanss, the chairman of OSF's Users Committee, who went all shy and wouldn't let the press in on his session. A pity really, since users were the focus of the meeting, and Ted's an oft-quoted authority in the trade papers.

### Real world

After the turmoil of the last couple of years, Open Software Foundation is settling down into its new persona. While it endeavours to bury the political differences of its various members - before they bury each other - the Foundation was last week justifying its continued existence. Gone is the commitment to developing and selling open systems software from operating systems upwards. Instead, OSF is becoming an "enabling" organisation, providing a vehicle for the creation of new ideas and directions and encouraging its members to turn them into commercial products. Gone is any interest the OSF had in the operating systems wars. Now we have an organisation preaching that open systems are not confined to Unix. Gone, it says, is the emphasis on OSF as a vendor forum. Now it wants users to contribute. Hello the real world.

### Breeding ground

As well as getting OSF to embrace users, CEO David Tory wants its vendor members to embrace each other too. He defined the Architecture Planning Council as the medium for the 15 principal vendor members to get together and try to get in step over the future of open systems. The OSF's Research Institute under Ira Goldstein is to take a more prominent role in the new OSF. Tory wants the Institute to be the main breeding ground for new technology for the open systems industry. Goldstein outlined the MK7 kernel and the World Wide Web as two principal areas for research. He envisages introducing an e-mail system based on web technology.

### Success story?

Distributed Computing Environment was the main focus of the event (don't ask 'well what else is there?'), which is perhaps its one bona-fide success story. The US Army expects to spend \$2,000m on DCE related purchases we're told, much of it going in battlefield systems; Barclays Bank Plc is using DCE to hitch-up the corporate systems across its divisions and subsidiaries; and Schlumberger is using it in a project to link its oil-field analysis systems. There were the Jet Propulsion Laboratory, Stanford University, Chemical Bank, Bellcore, General Motors (secure communications between on-site and off-site CAD/CAM systems and a new system for dealers) and Ford before them. The improved security that came with DCE 1.1 was a major reason for going the DCE route according to many of the users. But they also cited its efficiency. Contrary to popular belief you don't need fat clients, Michigan's Ted Hanss told us. Meantime, OSF is to offer free DCE source code to universities and non-profit research organisations in an attempt to increase the adoption of its distributed technology.

### DCE Certification

OSF's also introduced a certification program for DCE implementations. Those branded initially are DCE 1.0.3 for OpenVMS 1.3 on Alpha and VAX - not, you will notice DEC's OSF/1-based Digital Unix; the CDE 1.0.3-based HPDCE/9000 1.2 under HP-UX 9.0; Hitachi's 1.0.3 DCE/Base-M 1.0 implementation under HI-OSF/1-M 1.2; and IBM's DCE 1.3 implementation of DCE 1.0.3 on AIX 3.2.5.

### Zooming

Meantime from October, Hewlett-Packard Co will be offering a new version 4.0 of the HP OpenView Network Node Manager. Enhancements include moving processes running under OpenView's Windows GUI off the server on to local clients, freeing-up, it claims, more CPU time for additional operator consoles (and presumably requiring local systems with higher specifications). HP claims 4.0 supports a dozen operators, up from four now. A new zooming module allows users to explode any part of the network map into a more detailed view. As well as its own flat file structure and CA-Ingres, the Manager now also supports Oracle as a repository. A lite version of Network Node Manager limited to monitoring and managing a maximum of 100 devices will cost \$5,000. Betas are expected in June.

## NETLABS AND NETWORK COMPUTING MAKE IPX EVENTS AVAILABLE TO NERVECENTER

Meantime, NetLabs and Seagate's other network event management house, Network Computing Inc, whose LANAlert deal with NetWare events, are combining their TCP/IP and IPX into a single event correlation systems. LANAlert will be able to forward IPX events to NerveCenter, whilst LANAlert Console for OpenView/UX will make IPX events visible to OpenView's Network Node Manager, which is integrated with NerveCenter. A LANAlert template will be available for NerveCenter from the fourth quarter. NerveCenter goes from \$15,000, LANAlert is \$1,000.

## MICROMUSE RAMPS NETWORK MANAGEMENT MESSAGE, LOOKS TO EXPAND US OPERATIONS

London-based Micromuse Ltd, the former Sparc-compatible builder turned Sun reseller says it's now done upwards of £1m on its two network management software products, Netcool/OMNibus and Netcool/Legacy-Watch (UX No 509), with 15 customers - three in the US. The first is a fault detection and reporting system that sits on top of standard SNMP management systems. It uses messaging services of the management platforms to pass information between its probes and the server, then passes-up correlated information to the desktop. It can monitor a range of devices. LegacyWatch is a graphical software development tool that manages non-SNMP-based environments from SNMP-based systems via intelligent agents. MicroMuse's main competition in this area is Folsom, California-based Objective Systems Integrators Inc's NetExpert network management system. MicroMuse, which has a five-strong operation in Dallas, Texas, is now scouting for an office in San Francisco, California, which will be run by managing director Chris Dawes. The company's £11m 1994 revenues were split evenly between hardware sales (a diminishing revenue stream), distribution of US software such as Remedy and Frontier in the UK (a growing business), and its own products and services, including Netcool (also growing). Its plan calls for a public offering on NASDAQ in a couple of years if all goes well.

**Computer Systems Advisers Inc**, Woodcliff Lake, New Jersey, is putting its Silverrun business process and data modelling workbench up on Solaris 2.4 under Motif.

**RAD Technologies** has been showing Sun's Java and Hot Java integrated with its PowerMedia multimedia authoring system. PowerMedia 1.0 is from \$2,500 on Sun, HP and SGI boxes. Windows and Mac versions follow later this year at from \$1,000.

**Isis** has version 3.2 of its Reliable Software Development Kit for Unixes and NT; developer seats are \$3,000 for Windows, \$4,000 on NT - runtimes are \$400 and \$800 respectively.

Wokingham, UK-based **Open Systems Management** has ported its Cosmos systems management suite to Silicon Graphics Inc's Irix operating system. Cosmos is now up on 18 platforms.

The UK division of **Bentley Systems Inc** in Bracknell, Berkshire, says its Masterpiece photorealistic and animation add-on for Microstation is shipping (UX No 527); an April roll-out was its US parent's flight of fancy.

**XVT Software Inc** has added a new Graphical Extensions package it says serves business and scientific requirements. Up on XVT's C and C++ development environments it's from \$1,600 on Unix.

**Platinum Software Inc**, Irvine, California, has partnered with OLAP house Sinper Corp, Warren, New Jersey, to incorporate the Sinper TM/1 multidimensional database into its SQL Enterprise financial application line. TM/1 provides a subject-oriented view of information needed for reporting, analysis, consolidation, budgeting or planning. TM/1 includes a database server and an integrated spreadsheet (Excel, Lotus 123) client.

**Tandem Computers Inc** has put Santa Clara, California-based Peer Networks' SNMP multi-management information base agent and toolkit up on its NonStop Himalaya MPP machines. The toolkit allows developers to create SNMP agents that can be used to manage applications and subsystems on the Tandem boxes from OpenView, SunNet Manager, NetView for AIX and other network management environments. The toolkit costs from \$14,600.

**WorkGroup Solutions Inc**, Aurora, Colorado, is offering Linux Pro 2.2 on CD-ROM for PCs with drivers for multiple sound cards, CD-ROMs, video cards, SCSI adapters and PCI cards for \$20.

**IRI Software**, Waltham, Massachusetts, has upgraded its Express on-line analytical processing software (OLAP) to support ODBC. It's also added a structured N-dimensional API to integrate OLAP functions into application development environments and programming tools including Powerbuilder and SQL Windows. Express 4.8 is from \$12,500 on NT and Unix.

**1776 Inc's** clustering and replication software is up on SCO Unix.

**Bull** has rolled out its Mainway multiprotocol switching system, the cornerstone of its mainframe-to-LAN interconnectivity in the US. Available in Europe since the beginning of the year, Mainway comes in three models; the 2010, 2020 and 2040, supporting 10 to 58 Ethernet ports and seven to 13 FDDI links. It links IBM mainframes and Bull DPS servers with TCP/IP networks and starts at from \$40,000.

**Wang Labs** and now Microsoft Corp rival, **FileNet Corp**, has put its WorkFlo imaging software up on Sun boxes.

**Takaoka Electric Manufacturing Co** is licensing Menlo Park, California-based Competitive Automation's Dynamic Host Configuration Protocol client software for its X-mint X terminals. DHCP connects devices to TCP/IP networks. DEC has licensed the same technology for Digital Unix/Alpha.

**Unison Software Inc** has released Version 2.1 of its RoadRunner for Unix backup software that now supports any combination of Solaris, HP-UX and AIX networks. Management can be distributed around a network or located centrally. Prices are from \$4,000 for the master, \$2,000 for the server and \$300 per client.

**Sybase Inc** is opening subsidiaries in Malaysia and Singapore, giving it eight subsidiaries in the Asia Pacific region.

*Cardinal Business Media* and *Internetwork* magazine have a TCP/IP Expo at San Jose's Convention Center from August 6 to 10.

**Seay Systems Inc's** Dallas, Texas-based EastSpooler has added a portable API to version 4.0 of its print spooler saying print management and scheduling can now be added to any Unix application.

Norway's Statoil company is now a sponsor and board member of the **Petrotechnical Open Software Corporation**.

**Sun Microsystems Inc** is adding CNT/Brixton Systems Inc's SNA-to-Unix SNA3270 9.0 gateways which provide workstation-to-mainframe access as SunLink 9.0. Prices go from \$3,125. Brixton's also got all of its SNA connectivity tools up on Digital Unix for Alpha, which DEC will resell worldwide.

Backed by funding from the US DoD, **Ontos Inc** is prototyping a B1 secure version of its object database in conjunction with security specialist Arca Systems Inc.

Reuters Holding PLC's **Teknekron Software Systems Inc** has the first in a series of Teknekron Information Bus (TIB) transaction service modules for its Enterprise Toolkit TP messaging middleware and development environment. Transaction Express is a set of TIB communications extensions optimised for transaction data claimed to handle 100 messages per second. A Transaction Express Node sits between the publisher and subscriber, collecting messages and guaranteeing delivery even if the client is busy. The module comes with a console for configuring the Node network and messages. XA and CICS support is planned. Prices are from \$25,000 to \$50,000 per node depending on configuration on Sun, HP and IBM Unix, NT and Windows.

**InText Systems Inc**, Folsom, California, is offering an Object Router intelligent agent toolkit for the Internet; the C subroutine library watches traffic for pre-defined subject material and routes information to users. It costs from \$5,000 to \$150,000.

**Best Power Technology Inc**, Necedah, Wisconsin, is offering Unix versions of its CheckUps II UPS software at from \$180.

**SMCC** says it's too early to say where it'll be in a year's time when it needs to uprate the SparcStation 5: if and what microSparc III will be is still in the fog.

**Pyramid Technology Corp** is now offering Edinburgh Portable Compilers Ltd's Fortran 77 compiler, GUI and debugger on its Mips-based servers at from \$2,300.

**AutoGraph International Inc**, San Jose, California, has added version 4.0 of its EasyCopy/X print software, which it says allows colour or raster image screens to print to most raster and PostScript printers standalone or across networks. The software costs from \$400-up.

London-based **Staffware Plc** has added an executive information system for use with graphical forms and workflow designer components of its Workflow Automation system.

**DataTools Inc** is readying a backup and recovery tool for Oracle called SQL-BackTrack for the third quarter on Solaris, HP-UX and AIX that Houston, Texas company BMS Software will distribute.

West Los Angeles-based **Adrenalin Entertainment**, the software development unit of Western Technologies, has become the first development centre for applications using the Sun Microsystems Inc and Thomson Multimedia OpenTV technology.

Dun & Bradstreet's **IMS America** unit is putting a prototype data warehouse for its customers up on Sun Microsystems Inc SMP servers.

**Harris Computer Systems Corp** has reformed itself into two divisions, the Real-time Systems Division and the Trusted Systems Division: the new units will have full responsibility for product development, marketing, sales and profit and loss.

**Raptor Systems Inc**, the security start-up that had a rocky time getting off the ground and is now headquartered in Waltham, Massachusetts, has gotten second-round financing to underwrite international sales, marketing and R&D for its Eagle real-time firewall products. VCs include Norwest Equity Partners V and second-time investor Greylock Equity Limited Partnership. Raptor's stuff, which provides Internet and LAN security, runs on Sun, HP and IBM boxes.

William Franklin has left the **PowerOpen Association** where he was manager of third-party developer relations to join DBStar Inc as manager of strategic alliances.

### OBJECTIVITY MAPS PATH TO OBJECT SUCCESS

Mountain View, California-based Objectivity Inc believes the application development environment vendors are currently doing more to promote the use of object-oriented technologies than the object database houses which started the OO ball rolling in the first place. It compares the object database market to the struggle data warehousing had to become a commercially accepted technology and hopes its business, like data warehousing, can finish its uphill climb and start gathering momentum on the downhill side. The problem, it believes, is that MIS has barely had time to swallow the relational pill before being asked to try another kind of medicine. Key to success, Objectivity believes, is being able to show how object structures are far more suited to large databases that require complex, many-to-many relationships, than relational tables. Although there are instances of very large relational structures - Red Brick Systems' 300Gb AT&T site for instance - Objectivity claims 90% of relational databases hold less than 1Gb data and that 99% store less than 10Gb. Training, education and comparative studies are therefore imperative for the object industry as a whole, the company argues. Other issues that need to be solved include standardisation on a single object language for database interrogation. Currently the Object Data Management Group's ODL/OQL language is squaring up with the object extensions proposed in SQL 3, a situation Objectivity hopes can be reconciled within 12 months. Although frameworks have recently attracted a negative reputation for being cumbersome lock-ins, Objectivity believes they are a useful paradigm for object technologies, allowing applications to be deployed and to interoperate cleanly, and for clearing up any loose ends without the need for a separate package in addition to the application to do this work. Therefore, it believes packaged object solutions, with a database, application development environment plus a choice of the increasingly popular visual front-end tools are essential for winning MIS hearts and minds. Objectivity, which has recently tapped Red Brick's William Evans as its new VP marketing and created a new professional services organisation to further some of these goals, will debut version 4.0 of its object database in late summer. It'll feature user data replication, high-availability, and fully distributed processing, the company claims. Users can go into the Objectivity database through C, C++, Smalltalk or SQL and out on to 17 different platforms. Objectivity has raised \$18m funding since 1988 and claims it's on the cusp of profitability, with 200 development licences and 100,000 run-times in the field. More capital would be required to go off and do any new development, but it believes it could win new investment without too much dilution of its stock.

### ODI READIES COMPONENT ARCHITECTURE PIECES

Object Design Inc, Burlington, Massachusetts, says it'll begin shipping the components of its ObjectStore Component Architecture (OCA) next quarter. OCA is a framework of tools and technologies for creating object-based applications. ODI's ObjectStore database sits at the core. Components include a SmallTalk client for AIX and SunOS and a C++ client managing objects and relationships for NT, Solaris, SGI and HP due at the end of June priced at \$1,500. An SQL client providing access to ObjectStore C++ data from SQL-based tools and applications is due in September. ObjectStore Gateway, what used to be referred to as DBconnect (UX No 519), connects DB2/6000, DB2/MVS, Oracle and Sybase databases using IBM Corp's Datajoiner in conjunction with ObjectStore and enables 4GLs and other tools to access ObjectStore data through ODBC. Gateway will be available in September. ODI sees communications, manufacturing and financial concerns as OCA customers. ODI talks ambitiously of \$40m revenues in 1995 and an IPO in the first half of next year.

### CROSS WIND REVS SCHEDULING SOFTWARE FOR PORTABLES

CrossWind Technologies Inc, Felton, California, has a new version of its Synchronize scheduling and task management software for laptop users that connect to and can be updated from master schedules kept on a central server via LANs or dial-up. Synchronize server runs on Unix and NT; Motif, Windows and ASCII clients. The mobile version is a free upgrade for existing users and will be bundled in all future Synchronize licences, which cost \$100 per user. Meantime, CrossWind and Network Computing Devices Inc are going to give away a single user licence to each other's software with every order booked. Synchronize customer's get a free licence to NCD's \$165 Z-mail e-mail package, for Unix or NT. Z-mail users get a \$100 Synchronize licence.

### PICK SYSTEMS READIES NINJA CLIENT/SERVER RELEASE

Pick Systems Inc, Irvine, California, is readying a new release of its Pick database for the end of the year with a bunch of features it hopes will lend ~~its particular brand of technology more acceptance in the mainstream~~ client/server world. The release, which currently goes by the name Project Ninja, has the standard multidimensional Pick Data Model at its core and will include ODBC support and gateways to other relational and non-relational data and OLTP environments. Ninja will also include applications for storing and manipulating voice, image, data and video information (UX No 496). It'll run current Pick applications. Programs developed using PowerBuilder, Access, Forest & Trees and other C/C++ front-end tools will run in the extended Pick model. Pick will release an interim version 6.2 of its standard Advanced Pick database in October which addresses requirements such as Q pointers which allow Pick users to share files across remote systems. AP 6.2 (and Ninja) will be up on HP-UX, SCO, AIX and DG-UX. Meantime the PIX 100 handheld, LCD, CD memory and keyboard gadget for nomadic users which Pick had planned to have Sony Corp build for it has been ditched by Sony because "it was a niche looking for a market." Pick says it's talking to other manufacturers. It expects the ownership issues created by the death of founder Dick Pick to take at least another year to resolve.

### SUN RIVER HANDS PICK BUSINESS TO GA

Meantime, Sun River Systems Inc, the wholly owned subsidiary of All Quotas Inc, has transferred its Pick business to Anaheim, California-based General Automation Inc. Sun River says it will continue to participate in the revenues and the net income of the venture, but isn't letting on about the precise financial details of the deal. General Automation will continue to support of the installed base, which includes AT&T System 3000 hardware, ADDS Mentor software (ADDS being another All Quotes company) SunRiver/ADDS Tower Systems and ADDS Mentor PC/OS systems and other Motorola 680x0 and PowerPC platforms. The companies claim the combined operation will result in the largest total support and systems provider in the Pick market.

### SCO'S MERGED X UNIT OFFERS NEW PC X SERVER RELEASE, SEEKS NEW NAME

Santa Cruz Operation Inc's IXI-Visionware has debuted a new version of the XVision PC X server with improved performance and a NetCheck feature which examines the network and optimises installation on the PC (UX No 540). XVision 6 includes Microsoft TCP/IP VxD libraries, updated to support the latest X Image Extension and Network Audio Server to support multi-media Unix applications on the desktop. It ships on June 19th, from \$500 and is the first product out of SCO's merged X unit, now seeking a new name for itself. The integration of the IXI and VisionWare teams and technologies, overseen by IXI boss (now SCO senior VP) Ray Anderson, is referred to as project EnVision. Within SCO the combine's development unit is known as D2, development group two; D1 being Scott McGregor's operating system team. Whether the combined unit will end up as EnVision isn't known; there's a branding brainstorm underway. IXI, by the way, takes its name from a brand of Japanese underwear.

### O'MARA QUITS SEQUENT, VERTICAL REORG

Sequent Computer Systems Inc has lost the general manager of its Enterprise Division, VP Paul O'Mara, who resigned after the company decided to move to a more vertical structure, emphasizing its strengths in the industrial, finance, utilities and telecom segments as well as decision support and interactive multimedia, where the company is currently involved in some half-a-dozen pilots. O'Mara, who wants to return to a service job where his background lies, was party to the decision. The Enterprise Division was formed at the beginning of last year and was meant to focus on large accounts, responsible for sales, service, marketing, engineering and architecture. Apparently Sequent has come to the conclusion that marketing should not be as centralised as it has been. A Sequent spokesman said it would be looking for someone with product marketing, business development and outbound marketing skills to replace O'Mara. The company will also be seconding enterprise marketing and partner management VP Mark Miller back to the UK where he will be business development director, involved in field marketing and vertical markets. The changes were made in the wake of former sales VP John McAdam becoming president of Sequent. No other executive positions are expected to be affected. McAdam indicated that the company increasingly draws its revenues from consultancy-style operations, diagnosis and planning.

# unigram·x

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**Dell Computer Corp's** master distributor, Moscow-based **Intermicro Business Systems** has signed a one year agreement with **Siemens Nixdorf Osteuropa GmbH** under which both firms will distribute each other's banking computer systems and software. Intermicro Business Systems will sell Siemens Nixdorf cash dispensing machines, printers, cash registers and RISC servers, install Siemens Nixdorf banking systems and provide training. The companies' marketing and advertising will be integrated, but that deal does not include Dell personal computers.

DEC is said to be working to get the part that might come to be known as the 21164a out and about by the end of the year. The thing will be made on a process that's called EV56 making it functionally compatible with the existing 21164 but not electronically as far as we know. That means it won't fit in the Alcor chipset being made for the 21164. DEC's doing a Kodiak chipset which will apparently handle both EV5 and EV56 silicon that's six to nine months out.

**Advanced Systems** which ceased to publish in May is now going to reappear as **SunWorld Online**.

DEC is looking for a director of marketing for Digital Unix to replace Vickie Farrell.

**Associated Press** is building a new news delivery system using **Poet Software Corp's** object database. AP Server will transmit news to servers at multiple locations each supporting 32 simultaneous users. On OS/2 and Mac initially, the whole shebang is going AIX.

Sparc cloner **Integrrix Inc**, Newbury Park, California is offering two of its workstations packaged with Internet software. The SparcStation 5-compatible IGS5 with a 85MHz microSparc goes from \$5,200. The SparcStation 20-compatible IGS20E, with a 75MHz SuperSparc or HyperSparc is \$8,500. It's also announced a 110MHz Sparc 5-compatible at \$3,500.

OLAP Council member, Waltham, Massachusetts-based **IRI Software** has released Expressview, touting it as the first object groupware tool for On-Line Analytical Processing (OLAP). The company claims it transcends Windows 'data dippers' and SQL query tools by using data 'smart objects', live tables, graphs and data selections.

**Hewlett-Packard Co**, which is flying the Euro flock to Brussels and assailing the rest of us by phone, will unveil its SMP desktops on June 12th.

UK Sparc compatible supplier **Dataman Computer Solutions Ltd** is offering the Solair SparcStation 20 with a single 90MHz SuperSparc at prices starting from £11,000.

**IBM Corp** is amongst eleven vendors which have formed a Smalltalk Industry Council trade association in Raleigh, North Carolina, to promote the language. It's commissioned IDC to study the perception of Smalltalk in comparison to other object-oriented languages.

**Persistence Software Inc** has added a multithreaded version 2.5 of the object database **SunSoft Inc** is using in its Distributed Computing Environment. The object-oriented database now also supports objects up to 2Gb in size.

**Unison Software Inc**, headquartered in Santa Clara, California will release the latest upgrade to its workload scheduling software, Maestro 4.4, in July. Version 4.4 includes replication better network security and an improved GUI. It's up on HP, IBM and Sun boxes at from \$14,000.

Rumour de jour says **Data General Corp** would like to make itself attractive for potential buyers.

Version 1.2.5 of the **Open Software Foundation's** Motif graphical windowing system is available from June 15th. The maintenance release converges Motif 1.2.4 code with the Common Desktop Environment (CDE) 1.0 version of Motif 1.2. It's a precursor to work planned for the CDE/Motif Pre-Structured Technology (PST) proposal.

Asked to comment on whether it would now try and settle with **Addamax Corp** following the judge's denial of a motion for summary judgment sought by OSF, HP and DEC to get the anti-trust suit thrown out of court (UX No 540), Open Software Foundation VP sales and marketing Peter Shaw replied "We do not comment on ongoing legal action so I have nothing to say. We've just had one motion turned down in court. Is that really worth two pages of copy?"

How do you explain the need for organisational change in the new economic climate and the importance of approaching it with a new perspective in 30 seconds if you are Richard Schroth of **CSC Vanguard**. You show a clip from Raiders of the Lost Ark where Indy faces the huge Arab swordsman and instead of fighting him fairly, shoots him dead.

How to get on the wrong side of an auditorium of businessman in two minutes flat? Show four 30 second commercials for your own company back-to-back at the start of your presentation. Dennis Roberson **OSF** chairman and **AT&T GIS** VP computer products and systems did.

Vendors associated with the "Jekyll & Hyde" initiative to create API extensions to the Common Desktop Environment have gone mum, fearing the mixture of egos and advance publicity could kill the thing at birth.

Folsom, California-based **CP Software Group** is shipping release 5.0 of its **Island Software Corp** Write, Draw & Paint for Unix, which includes integration with the Island InText text retrieval system and Island-Build application customisation tool when they become available in a couple of months. Version 5.0 is priced at \$1,000 on Sun, HP and IBM Unix.

SparcStation 10, 20 and SparcServer 600 HyperSparc users are being offered upgrade packages that will see them up from 90MHz, to 110MHz (from the third quarter) and 125MHz parts rated at 133 SPECint92 and 154 SPECfp92 (first quarter 1996) at no extra charge. The initial 90MHz units are from \$6,450, \$11,600 and \$22,000 for uni-, dual- and quad processor systems respectively.

**Hewlett-Packard Co** has decided to increase its presence in the regions of the Russian Federation and will open five or six service centres in Russian cities during 1995.

**Tektronix Inc** has added token ring support for its TekXpress X terminals targeting banking, government and insurance markets. The PCMCIA adapter and card costs \$750.

Hoping to make some mileage out of **Computer Associates'** acquisition of **Legent Corp, Boole & Babbage Inc** is offering what it calls a No-Code Conversion Program to get CA or Legent customers to switch to its MainView AutoOperator systems automation package. B&B says it can move CA and Legent-based systems automation projects to its environment in days, without users having to write a single line of code.

**Wal-Mart Stores Inc** is using **NobleNet Inc's** EZ-RPC distributed client/server toolkit to distribute applications among Windows clients and HP-UX, AIX, Solaris, SVR4 and NT servers.

**Dun & Bradstreet Co** has put its SmartStream Financials, Human Resources and Manufacturing Distribution software up on DEC Alpha boxes at from \$100,000 each. Its decision support software is already up on the RISC.

**Andataco Inc** has a new RAID Lite series of storage systems which starts at \$5,000.

**AT&T GIS** is to offer the **Visix Software Inc** Galaxy application development environment to its communications industry customers.

**Informix Inc's IntelliCorp** is shipping version 1.3 of its Object Management Workbench object analysis and design tool with support for group development, and release 3.1 of Kappa its C++ GUI system. Both are up on Solaris and HP-UX servers and clients and Windows front-ends.

DEC has a Performance Advisor module for Poly-Center that tunes Alpha systems running Digital Unix V3.0; it's priced from \$3,000 - a collector agent required for each CPU costs \$1,000.

**Pure Software Inc** this week debuts PureVision allowing developers to track how software runs in real-world environments, collecting information and feeding it back to the supplier, whether internally or an external ISV, over the net. PureVision 1.0 for one project with eleven or more testing sites is from \$75,000 on Solaris 2. SunOS and HP-UX versions will follow.

**Pyramid Technology Corp** is now offering dual-CPU 200MHz R4400 boards for its Nile 100 and 150 systems at from \$90,000. It's now also supporting 2Tb disk, up to 4Gb RAM and IBM mainframe Escon links. A new ProStart Professional Services program will provide training services.

**Canon's** Advanced Technologies Operation has added 100MHz and 120MHz version of its Pentium-based object.stations as the models 50 and 52 running NextStep or Windows NT at from \$4,000 with 2Mb RAM and 500Mb disk.

We like the US Navy's definition of fault tolerance heard at the **OSF** members' meet last week: "the system keeps working so long as the boat is floating."

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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London, June 12-16 1995

Number 542

## HP PEGS SMP WORKSTATIONS AS TWO-WAYS; CLAIMS GRAPHICS LEAD WITH VISUALIZE ACCELERATORS

Hewlett-Packard Co this week stakes out its long-awaited SMP workstation campaign with J-Class desksides that come with one or two 100MHz or 120MHz PA-7200 RISCs in an all-new chassis. Fitted with a new series of Visualize graphics accelerators (also available on its existing workstation lines) the two technical compute boxes are claimed to provide the fastest 3D graphics and best price/performance available. HP's gambling the high-performance, high-margin and high-priced systems will make ideal mechanical and electronic CAD, software development, GIS, imaging and high-end visualisation engines, and puts the new graphics technologies up against Silicon Graphics Inc offerings in the same area. The 100MHz J200 and 120MHz J210 are rated at 139.4/168.7 SPECint92 and 222.5/269.2 SPECfp92 respectively as uniprocessors; 6432/7892 SPECrate\_int92 and 9646/11900 SPECrate\_fp92 with two CPUs running HP-UX 10.0. The systems use the same Hawks SMP architecture found in the K Class servers, providing 800Mbps at 100MHz and 960 Mbps at 120MHz, and can be upgraded to the PA-8000 when it arrives next year. With from 32Mb to 1Gb RAM, 1Gb to 4Gb disk, four EISA, two EISA/GSC and one GSC slots, the uniprocessor J200 starts at \$33,800 - \$43,770 with two CPUs, from now. In the same configuration - 32Mb RAM, 1Gb disk - the J210 is from \$41,800 as a uniprocessor and \$54,800 as a two-way, next quarter. HP claims its new Visualize graphics accelerators, which are built around PA floating point units and fit on top of existing HCRX and CRX48Z boards, give it the best price/performance at eight and 24 planes and the fastest 3D graphics with double buffering - see page 5. HP admits it lags Sun Microsystems Inc's unit volumes in the technical space, but claims better revenue ships, believing it has got insulated from the encroachment of top-tier PCs which are now right up against Sun's pricing model.

### Interim HP-UX release

Although the new J-Class boxes are available with either HP-UX 9.05 or the new SVR4 file system-based 10.0, a newly identified HP-UX 9.07 release due next month suggests the company is grappling with some interesting OS issues. 10.0 won't support the new Visualize graphics cards until the end of the year, when it gets a second rev and support for SMP multithreading. Version 9.05, which runs on the existing workstation lines, doesn't support Visualize either. To get existing users on to Visualize without pushing them into the year-end 10.0 release, HP is offering support through an interim 9.07 release which will go up on both existing systems and the new J-Class boxes.

## TALIGENT SHIPS COMMONPOINT TO INVESTORS; IBM ANNOUNCES FOR AIX

Taligent Inc duly announced plans to deliver the 1.0 reference release of the CommonPoint application system to its investors, Apple Computer Inc, Hewlett-Packard Co and IBM Corp later this month. IBM said it would be the first to bring the Taligent framework technology to market with its CommonPoint Applications System for AIX 1.1 and the CommonPoint Application Development Toolkit when they ship on July 28. CommonPoint supports the creation and deployment of distributed business applications. It's aimed at C++ developers building distributed, multi-system, object-oriented applications and consists of a set of some 100 integrated object-oriented application and system services frameworks claimed to provide a wide array of re-usable application functions. CommonPoint 1.0 includes a compound document structure, saveless document storage model, extensible application components, integrated two- and three-dimensional graphics, photo-realistic imaging, WYSIWYG colour matching, business-oriented multimedia, international text, localisation services, a set of foundation objects and task-centered user interface extensions. System service-level features include support for databases, shared document collaboration, multi-cast command routing, transport-independent communications, component licensing and a machine-independent distributed object model. A cpConstructor interface builder, the first tool in Taligent's CommonPoint Developer Series, is also included. cpProfessional, formerly know as TalDE, the development environment, will beta next quarter and ship by year-end. It'll come with incremental compile and link facilities, automated builds, customisable class and framework browsing, hyper-link navigation and team programming support. Apple and HP are due to make their own CommonPoint announcements - Apple has already demonstrated the software on early versions of its Copland System 8 microkernel. CommonPoint ports to non-investor platforms are under way; Taligent says beta implementations for Windows NT will be ready by the end of this year with production versions for either Windows 95, or more likely, NT, set for the middle of next year. In view of the multiple microkernel efforts at its investors and elsewhere, Taligent has abandoned plans to develop its own TalOS microkernel base. Tools Taligent used in development and incorporated into CommonPoint betas - TakeFive Software GmbH's Sniff++ (C++) graphical development system, Objective Software Technology Ltd's Look! debugger, and the Poet Software Corp object database - are available for use with the investor and other releases of CommonPoint 1.0, but are not bundled.

## CANON READIES POWERPC BROADSIDE FOR THE 19TH

As well as IBM Corp, Canon will be debuting its internally developed PowerPC machines in New York on the 19th. Our sister publication *Client Server News* learns that servers and mobile units will show alongside desktops Canon is OEMing from its FirePower Systems investment. Canon, which had originally booked itself into the same hotel as IBM for its launch - we think that would have been a most sensible use of everyone's time (and much more fun) - is seeking to bring together its various US entities into a unit later in the summer which can push NT on both Intel and PowerPC and Nextstep on Intel, not to speak of the OpenStep on NT on Intel, to Fortune 1000s. Canon, let us remember lost a small fortune as a NeXT investor and needs to recoup. The corporate entities involved in the restructure include Canon Research Company in San Jose, California, which is working on melding fax, OCR, imaging and other business automation skills into the hardware Canon will offer in some new easy-to-use way. Canon Information Systems in Costa Mesa, California, is working on server, communications and driver software. Canon Computer Systems Inc also in Costa Mesa, which is Canon's chief sales channel to the outside currently worth \$1,000m a year from PC gear; The Advanced Technology Operation in Portland, Oregon which develops interface and deployment tools, has also been selling the company's NT-on-Intel and Nextstep machines but will now cease doing that and turn it over to CCSI.

## IBM SETS EIGHT NEW POWERPC 604 RS/6000 MODELS

IBM Corp is to accompany the launch of its PowerPC-based Power Series personal computers with eight new PowerPC-based RS/6000 models, *US PC Week* hears. It is expected to turn up with five workstations and three servers, all using the hard-to-obtain PowerPC 604 chip clocked at 100MHz, 120MHz or 133MHz. They'll run AIX 4.1.3 and Windows NT version PowerPC and will work with the Power Series clients. The paper expects five workstations, three entry-level models that outperform the 66MHz 601-based Model 40P, and two mid-range models to succeed the 80MHz 601-based Models 25W and 41W. All are said to include AT and PCI slots and a faster graphics adaptor. The three RS/6000 servers are expected to include an entry-level uniprocessor model C20, succeeding the 80MHz 601-based C10, and two symmetric multiprocessing models in the J series, which can take as many as six or eight PowerPC 604s. One source told the paper that a PowerPC-based server expected from the PC Server division late this year or early in 1996 will use the PowerPC 615, the shadowy chip that runs iAPX-86 code - but while that capability might prove interesting on the desktop, it is hard to see the benefit on a server since there are native NetWare and NT for PowerPC.

### NT GETS FOOT IN ERICSSON DOOR, TANDEM HAS OEM PACT

Because of its genesis at AT&T Corp, telephone operators are the most dyed-in-the-wool adherents to Unix to be found, but Windows NT has got a foot in the door as a result of a deal Microsoft Corp has done with the Ericsson Business Network arm of L M Ericsson Telefon AB on computer-integrated telephony. Ericsson is said by *Dagens Industri* to be planning to use NT in low-end PABXes for small companies, with a view to integrating Windows95 clients. Separately, Tandem Computers Inc announced that Ericsson is not straying far from Unix and that it has agreed to a long-term strategic OEM partnership under which it will incorporate current and next-generation Tandem Integrity FT fault-tolerant Unix systems into its future adjunct processing applications sold with the AXE digital exchanges.

### SUMITOMO TO PAY \$11m FOR 5% OF INTEGRATED MICRO

Sumitomo Corp is to seal the deal under which it sells Consett, County Durham-based Integrated Micro Products Plc's fault-tolerant ft-Sparc Unix machines in Japan by taking a 5% stake in the company. Integrated Micro will not benefit from the transaction, because Sumitomo is buying the 150,000 shares from existing shareholders, paying \$11 a share, \$1.65m. All the venture capital investors still aboard Integrated Micro are participating in the sale to Sumitomo, but they will still retain significant holdings, the company asserts. ECI Ventures will be putting up about 80% of the shares being bought by Sumitomo, and will then have a stake of about 9% in the UK company.

### NOW DREAMWORKS TURNS TO IBM FOR DIGITAL LIBRARY

The new DreamWorks SKG movie studio is doing the rounds of the majors in its quest for sexy computer technology and following its pivotal agreement with Silicon Graphics Inc to create the DreamWorks Digital Studio last week, and its earlier agreement with Microsoft Corp, it has now landed at IBM Corp's door. It is to install a custom version of IBM's Digital Library asset-management system for the Digital Studio, running in on the parallel machine we thought was now meant to be called the RS/6000 SP, but is still called the SP2 in IBM's announcement of the agreement. The DreamWorks Asset Management System will act as a hub to manage content created by any developer's workstation on the Digital Studio network. "It didn't escape me that when I was a child my father worked for IBM for several years," DreamWorks co-founder Steven Spielberg commented dryly.

### HAPPY CARRICO-ESTRIN EVENT: IT'S PRECEPT SOFTWARE

Bill Carrico and Judy Estrin, the Goffin & King or Mann & Weil of the computer industry, are at it again. With two successful start-ups behind them, Bridge Communications Inc - sold to 3Com Corp, and Network Computing Devices Inc - which rather seems to have stalled after pioneering the X terminal market, they have now formed Precept Software Inc. According to the *San Jose Mercury News*, the husband and wife team is being coy about Precept, and are presently prepared to say only that it is a software company, is Internet- and multimedia-oriented, that it will take advantage of their experience with local networking and that its intended customers will be computer manufacturers and other large companies. First products are planned for early next year. "This time," Carrico told the paper, "we are not dramatically ahead of the market. But we definitely have some modern twists. What we're doing is not quite avant-garde, but it is different." Ms Estrin adds that a start-up can create a new market, take an existing one and do it cheaper, or "like Precept, you can look for a transition point in a market, when changes in technology or market forces provide an opportunity for new companies." The company is based in a multi-tenant two-storey office building in Cupertino, and the pair has majority ownership, having raised \$900,000 for Precept from their own contributions and from friends in the industry, with minimal venture capital involvement as yet.

### LEGENT TAKEOVER TALKS BEGAN IN MAY

Legent CEO Jerre Stead swears to God that he didn't talk to Computer Associates or get feelers from it about a possible acquisition before April 30 just as he reported to the Securities and Exchange Commission. Our last story suggested the date might have been earlier (UX No 541). Stead also said he got permission from his board in May to talk to up to four other companies about a deal but only talked to two and those were at the very last minute. He didn't identify them but others suggested they might have been IBM and Sterling Software which may explain why CA had a bout of pins and needles right before it locked in.

### GEMSTONE DEBUTS NEW IDENTITY AND DATABASE RELEASE

GemStone Systems Inc, Beaverton, Oregon, the former object database company called Servio Corp that we're now supposed to regard as a three-tier application development player (UX No 541), is nevertheless still working on its database product, and is readying a slew of enhancements for release 5.0 including an object 'lens' on the server for connecting lots of clients - apparently saving clients the need to run a bunch of connectivity code - and new gateways. Meantime the company released GemStone 4.1 at Object Expo last week - including a Windows NT implementation - which it says has an enhanced Smalltalk interface, higher transaction commit rates, new security, recovery and backup and faster sorting and querying. It's considering an Alpha/NT implementation. 4.1 also provides support for IBM's VisualAge C++ and Smalltalk development tools. Privately-held Gemstone, bankrolled by a single Malaysian investor who's sunk \$30m into the company so far, says its got no plan to achieve profitability in the near future, but is looking further out towards an IPO at some point.

### PARAMETRIC SHIPS ITS EVANS AND SUTHERLAND DESIGN TOOLS

One week after its Rasna Corp acquisition Waltham, Massachusetts-based Parametric Technology Corp, developer of the Pro/Engineer mechanical design automation software (UX No 541), has begun shipping the five industrial design software products it recently acquired from Evans & Sutherland Computer Corp. Four of the five have been integrated into PTS' Pro/Engineer and are re-packaged and re-priced. Pro/Designer, formerly known as CDRS (Conceptual Design and Rendering Software) an optional module within Pro/Engineer, provides tools which manipulate conceptual design models and goes for \$12,000. Pro/CDRS the functional equivalent of Pro/Designer, but a stand-alone product goes for \$25,000. The other three products extend capabilities providing tools for photo-realistic images, the conversion of 2-D images into 3-D and the animation of rendered models. Prices go from \$5000. Up on IBM and Silicon Graphics workstations, support is planned for Sun and HP. PTC claims revenues last year of \$260m.

### SHLAER-MELLOR COMPANY ACQUIRES OBJECTIVE SPECTRUM FOR ITS C++ TOOLS

Berkeley, California-based consulting and training firm Project Technology Inc, home of the Shlaer-Mellor method for object software design is branching further out into the software development world, acquiring three-year-old Objective Spectrum, Cary, North Carolina, via a stock swap. Objective markets the BridgePoint C++ application development system, which it claims is the first tool to support re-generative automatic code generation. The ability to support software systems via graphical modeling and code re-generation is the cornerstone of the Shlaer-Mellor design principle. BridgePoint includes a model builder, code generator and verifier. Up on HP, Sun and SGI boxes, the suite is from \$8,000 per user for 10 users. Objective founder and CEO Mark Lloyd gets to be director of automation tools at Project Technology. The operation promises first jointly-developed products at the end of the summer, plus new analysis models. Project, which has existing relationships with Cadre Technologies Inc and Scientific and Engineering Software Inc is offering upgrade options to BridgePoint. Meanwhile, Project has appointed former VP and COO of Verilog SA's Logiscope Technologies, Andy Gordon, as its new president and CEO. Project and Objective, both privately-held concerns, claim to be in profit and are not seeking venture backing.



### JAVA AND HOTJAVA'S EARLY USERS RANGE FROM ANDERSON TO XEROX

Keen to get its Java language and HotJava Internet browser technology (UX No 540) off the starting blocks, Sun Microsystems Inc has revealed who its earliest users are. Mitsubishi Electric, working on embedded systems, has been working with Java for two years at its Sunnyvale, California site, while Fuji Xerox in Kanagawa, Japan, has had it since July 1994. Systems integrator Andersen Consulting of Palo Alto, California, was an alpha user of HotJava, and says it has a variety of projects on the go which "span the financial, telecomms and publishing industries". CompuServe's Internet division, based in Columbus, Ohio, plans to support Java applets from its Mosaic browser once its Win95 release is out the door. Sun's partner and investor Eastman Kodak, which runs the Eastman Exchange and Kodak Picture Exchange on-line services for digital stock photography and motion picture productions plan, to use HotJava to deliver "state-of-the-art imaging services". Others using HotJava include content providers such as Dimension X and HotWired, both of San Francisco, and Starwave Inc of Seattle, Washington, and advertising companies Foote, Cone and Belding of San Francisco and MediaShare Corp of San Diego.

### VRML AND JAVA COMBO WILL RESULT IN KILLER APPS FOR THE WEB

Meanwhile, Tony Parisi and Mark Pesce, creators of VRML, the Virtual Reality Modelling Language, have also given the thumbs up to Java. Parisi and Pesce run Intervista Software, based in San Francisco, California, and say they are interested in using Java as an extension language for VRML. Apparently pronounced "vermal", VRML is an emerging standard for creating three-dimensional objects on the Web which grew out of work on a 3-D Web interface created by Pesce and Parisi in late 1993. Later, Pesce and Brian Behlendorf (of Wired Magazine) headed an effort to write a common language specification for 3-D scene description and WWW hyperlinks, described as an analog of HTML for virtual reality. After a search of technologies, a subset of Silicon Graphics Inc's Open Inventor ASCII File Format was chosen as the basis for VRML. Open Inventor supports full descriptions of 3-D scenes with polygonally rendered objects, lighting, materials, ambient properties and realism effects, and SGI has made it available to the open market. Gavin Bell at SGI adapted the format for VRML, and networking extensions were added. It aimed to be platform independent, extensible and suitable for working over low-bandwidth (14.4 Kbps modem) connections. VRML was not implemented as an extension to HTML, which the developers say was designed for text, not graphics: as Pesce has remarked "three dimensional worlds are never constructed in a word processor".

#### The future

Next generation Web browsers are likely to understand and interpret VRML, given the general industry support which it has received - SGI supports VRML through its WebSpace product, which it claims is the first commercially available 3-D viewer for the World Wide Web. WebSpace, developed in conjunction with Template Graphics Software, is free and runs on SGI, Sun and NT platforms, with Windows, Mac and HP versions due shortly. It works with existing browsers from the likes of Netscape Communications and Spyglass. Intervista says its own VRML browser, Worldview (nee Labyrinth) should also be out soon for Windows, Mac and Unix, and CAD-like authoring tools from companies such as Virtus, (Cary, North Carolina) and ParaGraph International (Sunnyvale, California) are under development - ParaGraph's Home Space product line should debut on June 20th. But it's early days yet, and VRML is still evolving. The specifications for VRML 1.1 will be out in late June, but it's VRML 2.0, due by year-end, that, in the words of Mark Pesce, will provide the "killer apps" and prove "why VRML isn't just 'Doom meets Home Shopping'". The key is support for interactive behaviours, and that brings us back to where we began - Sun's Java. In a prepared statement given to Sun, Intervista said that "with the addition of Java [to VRML], 3-D objects on the Web will be capable of interactive behaviour, such as animation, audio and real-time interactive response".

### IBM FIRST OUT WITH TALIGENT COMMONPOINT FOR AIX - OS/2, OS/400 VERSIONS DUE

As well as adding some kernel extensions to AIX 4.1 to support its implementation of the Taligent Inc CommonPoint environment - *see front page* - IBM Corp has created a multi-user version of the object system and new tools linking developer components. CommonPoint for AIX version 1.1 utilises IBM's C Set++ C++ compiler, development system and OpenClass Library and includes the CommonPoint Application System and cpConstructor interface builder. Regardless of processor type or number of users, CommonPoint for AIX carries a one-time charge of \$5,900 on the RS/6000. CommonPoint Application Development Toolkit for AIX version 1.1 is available separately at a one-time charge of \$1,500. The releases are numbered 1.1 (Taligent's reference platform is 1.0) in accordance with IBM nomenclature which sets first general releases as .1 products. IBM plans an OS/2 implementation by the end of the year using VisualAge C++ for development, and is currently fitting a server-oriented configuration on to OS/400. Indeed it has already shown the same CommonPoint class libraries running on AIX and OS/2 clients accessing OS/400 server resources. IBM has its corporate customer and ISV groups actively peddling CommonPoint, and claims to have already knocked NeXTStep out of use at American Express Financial Advisors and Adamation Inc. It lists British Airways, Abacus Concepts Inc, Nisus Software Inc and MicroBurst Inc as other CommonPoint for AIX developers.

### MOHAN TAKES OVER FROM TURNDAL AS SCO CHIEF EXECUTIVE OFFICER

Alok Mohan, current president and chief operating officer of The Santa Cruz Operation, has been named as the company's new chief executive officer. Lars Turndal, currently CEO and chairman of the board, says he will retire on July 1st as CEO, although he will continue as chairman and consultant, and will retain his title of president. Mohan was recruited last year by Turndal from AT&T GIS (NCR) as chief financial officer (UX No 487), and won respect within the company for his financial acumen, and, says one source, for his "bullshit detector". Once SCO's finances were back on a sound footing, Mohan became COO in December 1994, and is credited as the man behind splitting SCO's business into two streams; the operating systems business and the new IXI/Visionware side now under the control of Ray Anderson. He has also overhauled the flagging North American marketing operation. Turndal, who came to SCO in 1988 after a long stint at Memorex Telex in the UK, headed up SCO's Europe, Middle East and Africa division and got it to a state where it was contributing at least half of SCO's overall revenues. When the sexual harassment suit against SCO chairman, CEO and co-founder Larry Michels forced his resignation in 1993, Turndal took over, and went on to take SCO public in May of that year. As chairman, he is expected to handle the broader interests of the company and leave the day to day running to Mohan.

### BENTLEY ADDS NEW GIS, DRAFTING OPTIONS FOR CAD USERS

MicroStation CAD software developer, Bentley Systems Inc, Exton, Pennsylvania, is adding a geographical information system (GIS) extension to its MicroStation CAD system as Mapper, for managing CAD-related geometry alongside GIS information. Mapper has its own tools and an ODBC gateway and goes to beta in August. MicroStation 5.5 with Mapper starts at \$5,000, upgrades are \$1,650. Bentley's also developed a new set of tools for its PowerDraft drafting environment in conjunction with Geopak, IdeaGraphix and Jacobus Technology for civil engineering, architectural drafting and process and pipe drawings respectively. They are from \$1,250 each, or \$3,000 each with PowerDraft. A new TeamMate technical document management system is \$500 per client. Meanwhile, Intergraph Corp's software solutions division has announced that its MicroStation I/RAS B raster editor I Plot client is now running under Hewlett-Packard Co's HP-UX.

## IMPATIENT WITH MANZI, IBM LAUNCHES HOSTILE BID FOR LOTUS

By Maureen O'Gara

A surprised Lotus Development Corp last week became the target of a hostile takeover by IBM which mounted a cash tender offer worth \$60 a share - roughly double what the stock's been selling for lately - over the heads of Lotus management. The total amount offered comes to \$3,300m, a new record for a software acquisition following Computer Associates' purchase of Legent for \$1,800m and Microsoft's spoiled \$2,000m bid for Intuit. Lotus, which has seen the predominance of 1-2-3 successfully assailed by Microsoft Corp, suffered badly in the suite wars. It had poor earnings and posted a loss in the first quarter and has looked ripe for acquisition for some time. It's been the subject of some speculation; Oracle's CEO Larry Ellison wanted it but it was out of the range of his pocketbook. IBM has apparently been after it for five months. Its \$3,300m bid is high - and may in fact border on the profligate - but Lotus chief Jim Manzi is believed to have both overvalued the company and to have wanted to retain his independence, restricting IBM to only limited involvement. IBM last week made it clear the tender scheme was a way around the intractable Mr Manzi with whom, it indicated, it's been trying to negotiate to no avail. In an unusual self-justifying step, IBM published the letter its CEO Lou Gerstner wrote Manzi informing him of the tender offer. In it he wrote, "As you know from your conversations with IBM senior vice president John M Thompson, [the head of IBM's software group], IBM has been interested for some time in pursuing a business combination with Lotus. Because you have been unwilling to proceed with such a transaction, we are announcing this morning our intention to buy all of Lotus Development Corp's outstanding common shares..." IBM called the \$3,300m a fair price. It is three times Lotus' 1994 revenues of \$971 million, of which Notes represents a \$190m chunk, some 30% up on its 1993 contribution.

### "Toast"

During a teleconference later in the day, Manzi denied being in acquisition negotiations with IBM and claimed their talks centred on OS/2 applications. He also said he and the Lotus board would look at their other options "to the extent we have other options." Popular opinion last week suggested IBM had its prey outflanked and that Lotus was toast. Lotus' OS/2 productivity programs, which cost it standing in the Windows arena and which Manzi reportedly first tried to sell off to IBM last August, are a nice dividend as far as IBM is concerned but it's Lotus Notes that IBM is really after, it said, clearly putting into play a strategy that will escalate its confrontation with Microsoft whose tardy Exchange Server is the likely target. From the point of view of Notes users the proposed acquisition is probably good news since Lotus' development of Notes was being funded by the company's productivity software whose sales have been warned down by Microsoft. Whether the IBM-Lotus combine is actually as threatening to Microsoft as many made out last week remains to be seen. Notes, like Windows, has been slow to get off the ground and if lucky has a million users.

### Jumping ship

Whether IBM can leverage the Lotus installed base is another thing. IBM indicated it would like the takeover to be as friendly as possible doubtless to prevent Lotus employees - traditionally the real value at any software house - from jumping ship. There is concern outside that Notes chief designer Ray Ozzie could bail though he is also said to be held to the company by an employment contract. Wall Street took IBM at its word about a negotiated settlement and immediately bid up Lotus stock over the \$60 offered apparently figuring it would sweeten the pot perhaps to \$65 a share (perhaps the remainder in stock) before all is said and done. (It was at \$62.37 as we went to press. According to *The New York Times*, Gerstner and Manzi started meeting on Wednesday at Manzi's request. It described Manzi as "emotionally devastated.") Rumours immediately started circulating that Lotus - whose staff is said to be protective of its perks and culture and fearful that both would disappear inside the IBM bureaucracy - would bring in a white knight. Names like AT&T, HP, EDS - even Intel - were dropped but none regarded too seriously, Lotus and IBM being the most synergistic - despite AT&T's expensive involvement with Notes. However, there was talk Manzi had gotten some feelers - even from Japan. Most Lotus stock is in institutional hands, a boon to IBM, and only 3.3% out with its directors and officials though Manzi could walk away with \$73 million.

### Not King Kong

Gerstner said in a teleconference last week that "It's clear to me and many others that the industry is now entering a new phase in which all computing power is linked together." Apparently he's willing to arm wrestle Microsoft for hegemony, leading to specu-

lation that Lotus is only the first serious acquisition the emboldened Gerstner-Thompson team will make, with some eyes turning to Novell and its NetWare base as a possible candidate. (IBM indicated last week that Lotus is not the "King Kong" acquisition it hinted at back in April. King Kong, it said, would mean spending tens of billions of dollars.) Thompson said IBM will invest real money in leveraging Notes which has not lived up to its potential due in part to poor marketing by Lotus. IBM talks of making Notes a standard and compares its cross-platform plans for the thing to Microsoft's Windows-only policy. The usually staid IBM has certainly taken the gloves off as far as insuring the acquisition goes through. Concomitant with announcing the tender offer, which started last Tuesday and will run until Monday July 3 - and even before telling Manzi what it was up to - IBM lodged suit (at 8:20 in the morning in federal court in Delaware, according to the *Wall Street Journal*) to remove Lotus' poison pill takeover defence. It is also asking Lotus shareholders to dump Lotus' six-man board in favour of a restructured pro-IBM board of three including Mark Ewald, managing director of investment firm BEM Management Inc; David Hershberg, EVP of long distance provider Voatel Inc and former vice chairman of Shearson Lehman Brothers; and John Sexton, a dean at New York University Law School.

### Out of hand

For its part, Lotus, which has not rejected the offer out of hand, has hired merger expert Felix Rohatyn of Lazard Freres & Company and law firm Wachtell, Lipton, Rosen & Katz, the savvy creators of the poison pill concept. IBM says it will keep Lotus as a separate entity with its Massachusetts headquarters intact. It would be responsible for complementary groupware products, Gerstner said. For some reason that's hard to understand, considering the government spoiled the Microsoft-Intuit merger, IBM is expecting no difficulties with the Federal Trade Commission or the Justice Department swallowing this one. Meanwhile, the Securities and Exchange Commission is investing the heavy trading in Lotus shares and options right before IBM made its play.

## PLANNING SCIENCES HAS NEW GENTIUM EIS RELEASE

London, UK-based Planning Sciences International Ltd has introduced version 2.0 of its Gentium executive information system, which includes an on-line analytical processing database, SQL links to relational systems, an application development system and modeling. It can suck data from relational, ASCII and spreadsheet sources and comes with its own Corba 1.0-compliant object request broker for delivering services. It's working on support for the Distributed Computing Environment. The new version includes intelligent agents which automatically go off and do repetitive tasks and database queries, as well as collecting text-based data - including online news services - into Gentium's Infobase plus Text Infobase. A Gentium library, which comes with 240 pre-defined objects, is written in Objective C. The EIS is up on HP, IBM, Sun, Next and NT boxes at from £35,000 for ten users. PSI says Gentium supports more than 100 simultaneous users. Customers include News International, Barclays Bank, Walt Disney and the US government. Gentium 3.0, due in the first quarter of next year, will include an integrated report writer, a set of APIs for ISVs and enhanced performance. New data compression techniques and MPP support will follow. PSI, with 100 staff, has subsidiaries in the US and Australia and claims revenues of \$11.8m last year.

## FAULT-TOLERANT OPTION FOR LATEST CUT OF VERSANT OBJECT DATABASE

Versant Object Technology Corp, Menlo Park, California, will this week unveil its Fault Tolerant Server module for use with a new 4.0 ~~cut of the Versant object database (UX No 541). Versant says the Fault Tolerant Server option brings transparent server failover to high-availability database environments without the need to change application code. The add-on essentially turns on features in Versant 4.0 that allow data to be synchronised across two instances of the databases, using an enhanced two-phase commit implemented in the 4.0 release. If one database fails, subsequent changes are kept by the other and fed back to it once it comes back up. The Fault Tolerant Server was developed in conjunction with a Japanese power utility concerned at having its data stored at a single site, in its case at its operation in the Japanese city of Kobe, site of January's earthquake. Applications do not have to be written with two databases in mind, the company says. The software has been in testing for six months and will ship in July from \$3,150 on top of the basic Versant 4.0 database which starts at \$9,000 per developer seat on workstations. It will cost from \$1,900 running on the \$5,500 OS/2 and PC implementations of 4.0.~~

### Fast access

Versant 4.0 itself comes with a bunch of enhancements, including optimised locking which enables non-blocked reads in environments where there are many readers and few writers. Query enhancements include support for navigational (or path) queries on the server, which Versant says reduces network traffic; full Boolean capabilities; pattern matching; and cursor iterators the company says provide fast access to large query result sets. New cache management will improve performance on large databases. Versant is also offering event notification which it says provides similar functionality to the use of stored procedures in the relational world, allowing users to register for events with a database server and be notified when a given event occurs. Event notification is server-based - event triggering is detected by the Versant server - which doesn't require existing applications to be altered to detect and act on database events as in client-based notification schemes, the company claims. Versant offers asynchronous replication services, GDMO-based network management, auditing of database changes, and applications that use events to trigger the processing of orders in another part of the company as example of how server-based event notification can be utilised. Other features new in 4.0 include support for log roll-forward which enable a database to be recovered up to the last committed transaction in the event of failure; additional performance monitoring utilities including the opening-up of APIs for ISVs; and asynchronous replication and data distribution. New services add 24 hour a day support - standard support plus patches and updates currently runs to around 15% of the software price. Versant is focused primarily on the network management market (55% of its business) where the large majority of customers are telecoms houses. Banking, document management, workflow, some general MIS and multimedia make up the mix. It doesn't believe that object databases will replace the likes of Oracle for running standard business applications, rather their use will spread into areas where relational models don't fit and where users are more focused on tasks suited to object technology; in its case network and hierarchy databases. Versant claims 8,000 licences - "mostly development" - across 300 sites (more than its actual number of customers), and says it was profitable the second half of 1993 and 1994.

## ORACLE TO INTRODUCE ENTERPRISE MANAGEMENT PLATFORM

Oracle Corp is expected to reveal its next generation systems management environment with improved administration, automation and third party links for Oracle databases across workgroups and enterprise networks this week. According to *PC Week*, the blueprint, called Oracle Enterprise Management Platform, will reportedly include support for client and server administration tools. The management tools, some of which will enter beta this month, are designed to automate and consolidate maintenance of multiple distributed databases. Targeted at the distributed workgroups market, the first wave of Management Platform products will be released this summer. The software includes a GUI console and intelligent agent technology, dubbed Battlestar, *PC Week* hears. At the Enterprise level, for which product is due late this year and early next, the solution apparently includes Intelligent Agent, a communications service, and the Oracle Enterprise Console.

## OBJECTSPACE HAS C++ TOOLKIT WITH STL

Dallas, Texas-based ObjectSpace Inc, which has its mits in object consulting, training and development, has released a version of its ObjectSystem C++ development system as Systems ToolKit. The kit includes the company's multithreaded ~~implementation of the HP-derived ANSI Standard Template Library~~ (STL) container for storing C++ object classes and algorithms which ObjectSpace claims is the first to run across all native compiler systems. The STL interfaces with operating system files, sockets, threads and IPC processes - it's the lowest-level component library - and code written with the toolkit will apparently run without modification across Unix, Windows, NT and OS/2. Systems ToolKit is priced from \$375 and competes with products such as XVT Software Inc's tools.h++. STL is available separately at \$150. The company claims it has OEMs in hand. Meantime it's working on getting its ObjectCatalog for tracking and finding reusable code adopted by the likes of Taligent Inc or at least having Taligent advertise its wares in the catalogue so that users seeking particular types of objects and frameworks will get a CommonPoint listing with Taligent product details. Server versions are \$9,500, clients from \$300.

### OLE2-to-Corba development

The privately-funded concern claims to have been in profit since it was founded almost three years ago; its revenues are divided equally between training, consulting and product sales. It's looking to grow the product side of the business, focusing on distributed processing. It has 45 staff in Dallas, six in Washington DC, expects to be up to 100 by year-end, and plans a European operation. It's currently working on an OLE2-to-Corba 2.0 integration mechanism, including an object request broker - Iona Technologies Ltd's Orbix and more, it claims - for users trying to hook Microsoft and Object Management Group environments together. It's considering a response to OMG's interoperability RFPs, and believes Corba will go far. It sets little store by Distributed Computing Environment which it believes will quietly fade away. Taligent it says is a reasonable stab at a framework architecture, although the alpha cuts performed abysmally. MIS' penchant for Smalltalk over C++ will drive the object market, it believes, as Smalltalk in its view is more suited to folk used legacy programming styles, and also more likely than C++ to invest the user with an object mentality. The Digital/ParcPlace merger is an obvious indication of the trend to Smalltalk, it argues, and of the expectation of IBM Corp's Smalltalk VisualAge.

## HP ADDS VISUALIZE GRAPHICS ACCELERATORS PA FTPU

Hewlett-Packard Co's new Visualize-8, -24 and -48 graphics accelerators are built around the Precision Architecture floating point unit and run on HP workstations running HP-UX 9.07 - 10.0 support is promised by year-end. The eight-plane Visualize-8 and 24-plane Visualize-24 are supplied as a single board which fit on top of HCRX-8 or HCRX-24 accelerators, with which they are object-code compatible. The eight-plane combination costs \$5,500 - 24-planes are from \$7,500 - existing HCRX-8Z and HCRX-24Z users can upgrade for \$1,500. Video out is an option. The two perform up to 87 PLBwire93, 144 PLBsurf93, 15.4 Xmark93 and 315,000 light-shaded 3D quadrilaterals per second on the J210 running HP-UX 9.07. HP, which has estimated a set of performance numbers that SGI doesn't report (to a claimed 15% margin of error), says a \$26,800 715/100 workstation with Visualize-24 performs from 1.25 to two times as fast as a \$40,000 200MHz SGI Indigo2 Extreme across a range of graphics benchmarks, where both are configured with 64Mb RAM, 2Gb disk and 20" monitor. The double-buffered Visualize-48 incorporates three accelerators and performs up to 236 PLBsurf93, 182 PLBwire93, 16.7 Xmark93 and 925,000 3D light-shaded quadrilaterals per second on the J210. It costs from \$16,000 - upgrades from HCRX and CRX-48Z graphics are from \$2,000 - an additional texture mapping card is from \$5,000, and a video out card is an option. In a \$61,600 J210, Visualize-48 is claimed to be 2.5 times quicker than a \$57,500 SGI Power Extreme, when both are configured with 64Mb RAM, 2Gb disk and 20" monitor. All Visualize boards are available next month.

# uni gram x

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**Ing C Olivetti & Co SpA** has signed a worldwide technology, support and marketing agreement with **BMC Software Inc** to provide customers with integrated products and support. BMC will put its Patrol open systems application management software on Olivetti's servers, and Olivetti can resell, promote, market, support and advertise Patrol software.

Meantime, **Hewlett-Packard Co** is to resell those parts of BMC's Patrol that monitor Oracle, Sybase, Informix and other databases within its HP PerfView performance monitoring software. The two say they'll be working on additional integrated technologies for later in the year.

Doubt if even cash-ravenous **Digital Equipment Corp** has thought of this one: a gem from the *International Herald Tribune* relates that **Ing C Olivetti & Co SpA** is saving on the cost of gardeners and earning itself a little extra pocket money by letting the grass on the corporate lawn outside its celebrated Ivrea headquarters grow long so that it can be cut, baled and sold as hay.

Andover, Massachusetts-based **FTP Software Inc** has opened offices in the UK, France and Germany. "With the explosive growth of the TCP/IP software market in Europe, we felt that now was the right time to open offices here," said CEO David Zirkle.

**Oracle Systems Corp** has removed the confusion over its proper name by merging its holding company, Oracle Systems Corp, with its operating company, Oracle Corp, and named the restructured company Oracle Corp.

**Lotus Development Corp's** book - net asset - value is only \$500m, so **IBM Corp** could have to write off as much as \$2,800m or \$5 a share on its \$3,300m bid: it has indicated that it would take the entire hit against a single quarter's figures, but Dan Mandresh of Merrill Lynch & Co is sanguine, telling Dow Jones & Co a write-off is a one-time historical event and adding "Who cares?"

**IBM Corp's** having a busy time. As well as trying to gobble up Lotus, it's going to cast a PowerPC net across its product lines next week with the Power Series power personals, RS/6000s and new AS/400s. This week it'll unveil its promised S/390 CMOS parallel mainframes and debut a slew of new Internet and security-related business.

**Mortice Kern Systems Inc** has created a new professional services division to scoop up customisation and training business.

New York City-based **JYACC** will introduce version 7 of its JAM client/server development tool this week. JYACC says version 7 allows applications to be created without writing code via the use of wizard building blocks and includes new data presentation formats and extensions to its JAM scripting language for dynamically modifying objects. JAM 7 is out next month on Windows and Unix - Mac and OS/2 versions are due in the fourth quarter - with the development environment, JYACC's built-in prototype database and a database driver of choice.

**Pyramid Technology UK** is to outline its plan for carrying new parent **Siemens Nixdorf Informationssysteme AG's** RM servers this week.

**Platinum Technology Inc** acquisition **Trinzic Corp** will ship version 2.0 of its ObjectPro application development tool in the third quarter on NT with AIX and HP-UX versions due by year-end. 2.0 includes new code generation features, navigation tools, a new interface and additional reuse capabilities. Prices start at \$3,000.

Campbell, California-based **Black & White Software Inc** has acquired **Rogue Wave Software's** RWCGEN code generator which links UIM/X, the GUI builder from Canadian software house **Visual Edge Software Ltd**, with Rogue Wave's View .h++ C++ library (UX No 521). Up on Solaris, SunOS, HP and SGI platforms, RWCGEN goes for \$700. UIM/X is available from Black & White, RWCGEN and View h++ can be had from both software houses.

Following the overhaul of its PCI/EISA AcerAltos server line back in January (UX No 522), **Acer America Corp** has added a dual 100MHz Pentium option to the mid-range 7000/p and a 75MHz Pentium configuration to the 800/p entry-point, from \$5,700 and \$2,250 respectively. Both run SCO Unix and NT, although the low-end unit is seen primarily as a NetWare LAN server.

**Frame Technology Corp** has made good its promise to introduce version 5.0 of its publishing software this month (UX No 534).

**Sun Microsystems Computer Co** says that eleven additional design automation software vendors have now parallelised their applications for its SMP boxes; Systems Science, Silvaco, K2 Technologies, Attest Software, Intusoft, OEA International, SpeedSim, Meta-Software, Gambit Automated Design, TMA and Precedence.

We haven't heard of the company ever taking action to defend it, but **TechGnosis International Inc**, Cambridge, Massachusetts, is still reminding folk that 'middleware' is a registered trademark granted to it in 1992.

**Zinc Software Inc**, Pleasant Grove, Utah, is offering version 4.1 of its Zinc application frameworks C++ library and development tool. Zinc allows developers to create cross-platform applications with one set of source code. The Zinc engine is \$500, clients range from \$1,500 (Motif/NextStep) to \$500 (Windows/OS/2).

As we said, former **Sybase** VP, corporate marketing Richard Yanowitch has gone to a start-up (UX No 539), surfacing at **Cross/Z**, the Alameda, California-based data compression/ data mining company, as executive VP operations.

Customers **Hewlett-Packard Co** canvassed about their computing requirements before the introduction of the new J-Class workstations - see front page - said they needed 1,000 times the performance of today's technical boxes, not the single digit increments vendors are offering. HP says it's aiming to meet that performance mark by the year 2000 in systems using its PA/Intel combination architecture. By that time, stuff like the Visualize accelerators (or their successors) should be standard, bundled components of all of its workstation lines, the company says.

Windows-friendly **IXI-VisionWare** boss and keen aviator Ray 'Ban' Anderson made local television news in the UK a few weeks ago following an emergency landing he was forced to make in a field near his home town of Cambridge, UK. Anderson was returning from holiday in France when the light aircraft he was piloting developed engine trouble and started spilling oil on to the English countryside below. By luck - design, he says - the field he landed in was right beside the famous Addenbrooks Hospital, just in case.

Meantime, the UK-based **Santa Cruz Operation Inc** combine Anderson heads has drummed-up a new mission statement which goes "producing software for mixing Unix and Windows." It's still searching for a name to replace **IXI-Visionware** (UX No 541), but notice how the statement doesn't specify what's got to play on the server or desktop. It says it's leaving the door open to NT, in case SCO's Unix server-centric world view should happen to change.

**Intel Corp** CEO Andy Grove and **Oracle** CEO Larry Ellison share a platform this week to unfurl Intel's Proshare video conferencing technology and an agreement for Oracle's Media Server.

**TakeFive Software GmbH**, the Salzburg, Austria company whose Sniff++ C and C++ development tools were used by **Taligent Inc** to create the CommonPoint object application system is readying Windows NT and Windows 95 betas of its tools for release on November 1. Other work scheduled includes providing APIs to its code parser for ISVs, an IDL implementation and custom language implementations for corporates such as the telcos. Also underway is a client/server implementation - it's standalone right now - and the re-integration of enhancements created by other Sniff++ users such as **Tandem** and **Amdahl**.

Search for "SunScreen" on the World Wide Web and you'll more than likely be diverted to the **Linda Sy Products** skincare home page from Lafayette, California, with its handy "Ask the Dermatologist" column.

Dublin-based **Iona Technologies Ltd** has won Boeing Co for its Orbix object request broker in a deal it estimates to be worth \$750,000.

As expected (UX No 532), **Mergent International Inc**, Rocky Hill, Connecticut, is to market the AccessMaster security component of **Compagnie des Machines Bull SA's** Integrated System Management suite.

As we went to press, **Lotus Development Corp** was rounding up the home phone numbers of editors in preparation for a possible weekend or Monday teleconference.

Now that he's over at **SMCC**, Ed Zander's washed his hands of the bet he, and then **SunSoft** object lieutenant Bud Tribble made with Taligent Inc boss Joe Gugliemi that the first out with an object environment gets dinner bought by the other at the restaurant of his choice. Looks like new SunSoft boss Jon Kannegaard will be picking up the tab for the wager. Gugliemi says he's musing supper in Paris.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram · X

KBN

19 JUN 1995

The weekly information newsletter for the UNIX™ community worldwide

London, June 19-23 1995

Number 543

## CUSTOMERS BROUGHT IBM BACK TO AIX TABLE

The way we hear it from sources close to IBM Corp, we were quite right to question the longevity of the company's AIX Unix a few months back (UX No 514). Our sources claim officials high up were indeed toying with what to do with the operating system, including a deep six option. Reaction to *Unigram's* story - some of IBM's largest AIX customers reportedly "freaked" at the suggestion the operating system would go into maintenance mode - apparently pushed IBM into a series of actions to revive its Unix momentum. "Whenever IBM has (on purpose or otherwise) tested those waters it's gotten slammed hard by its large customers," the sources say, adding that "IBM does listen to its customers, especially when they're shouting obscenities through the phone." These same sources - AIX adherents, by the way - say IBM was wrong to deny our story and tell us it was probably the best thing that could have happened for AIX. As a result "AIX is finally very solid," they say. Resources were thrown into doing customer debugs and other optimisation work. Now some of the effort is being re-focused on development of future versions, beyond 4.2. Audio, video and general multimedia features is the kind of stuff apparently being asked for. However the AIX team is apparently also poking around in NT waters, eyeing stuff like the clustering work that the likes of DEC and AT&T GIS are working on with interest. Elsewhere, IBM folk with the real money, the hardware groups, are finally beginning to fund software development, including AIX, for customer-specific stuff like device drivers that they can't do. As a result, the same sources say, the only thing that's likely to kill AIX now would be a Windows NT end run. Hardware, mind you, reportedly has little appetite for all the OS bickering, and is eager to put out whatever will shift iron, witness NT and Solaris, on PowerPC.

## NOW HP OFFERS SCO/MERGE FOR WINDOWS APPS ON UNIX...

The ability to run what are euphemistically known as productivity applications - ie Windows applications - on Unix/X Windows desktops is proving a long hike, even without Microsoft's best efforts to grease the path. Straightforward porting of Windows products to Unix was stillborn due to cost, lack of volume and dearth of current versions of packages. The emulators, Insignia Solutions, Locus Computing, MainSoft and Bristol Technology sold their souls to Redmond for the chance to get their code working with any degree of efficiency. SunSoft Inc's Wabi translator tried to create a total Windows environment without Windows. Now, Hewlett-Packard Co, which already offers Wabi, and Insignia's SoftWindows (as a standalone solution in Europe only), is taking another bite at the PC application-on-Unix cherry, with an integrated solution it's calling the HP 500 Windows Application Server. It agrees that what it's offering is not new technology-wise - Locus Merge on top of Santa Cruz Operation Inc Unix, preferably (though not necessarily) running on one of its HP Vectra PCs, networked to any Unix workstation or X terminal. But it believes the integration work and additional administration and network printing tools it's built will prove attractive to customers, especially those struggling to implement point Windows-under-Unix solutions. A 30-users system with a dual 90MHz Pentium Vectra, 64Mb RAM, 1Gb disk SCO Unix and Locus Merge (HP 500 version 1.0) is from \$25,000. A 15-user solution on a uniprocessor is from \$16,500. Software-only solutions for folks with other PCs starts at \$8,000 for 30 users and \$5,500 for 15 users. Upgrades are \$3,000 for the 15-user SMP version, \$2,000 for uniprocessors. The integrated hardware/software is out in August, software-only in October. There'll be a free upgrade to HP 500 1.1, the enhanced mode Windows (16-bit, 80386) version of Merge due in October. Version 2.0, early next year will add Merge's 32-bit Windows 95 implementation. HP's drummed-up some heavy duty price/performance numbers it's using to pitch the HP 500 squarely at Tektronix Inc's WinDD extensions to Windows NT - which allow X users to run shrink-wrapped Windows, NT, DOS and OS/2 applications without emulation - and to a lesser extent Wabi. However the aggressive marketing is less impressive for its numbers game than for the well-researched, well-rehearsed and seemingly well-positioned campaign the company's embarked on.

## ...TEKTRONIX REFRESHES WINDD; NCD AT THE GATE

Meantime, after watching the company gobble up swathes of their market, Hewlett-Packard Co's HP 500 initiative is certainly fanning the fire under X terminal builders such as Tektronix and Network Computing Devices Inc, now reaching for their development teams. The fire's already been ignited by analysts, who forecast new approaches to running Windows applications on Unix could revitalise the flagging X terminal space, and customers, apparently thoroughly cheesed-off with the poor performance and behaviour of emulation products. Tektronix will re-vamp WinDD this autumn to address some well-publicised shortfalls and extend its functionality. Specifically it'll add support for window re-sizing, cut-and-paste between Unix and Windows applications, remote administration and debugging as well as extending the NT server-resident component for NetWare support, expecting to compete in some regard with Microsoft itself. Tektronix, which claims it shipped 2,000 seats on the product's first day out towards the end of last year, says it's looking to win 750,000 installs within three years, a run-rate requiring it to shift 100,000 copies in the product's first 12 months, a target it reckons it can make. Network Computing Devices Inc, meanwhile, says its readying a "more open" WinDD-like Windows-on-Unix solution next month for Unix and NT that's currently in late beta, expecting it to impact revenues next year.

## IBM's FIRST 604s ARE OUT

IBM's widely anticipated new range of PowerPC 604 RISC System 6000s are officially launched today (Monday), along with, at the low-end, the first of its Personal Computer Power Series and two ThinkPad Power Series systems using the low power consumption 603e chip - but IBM was still struggling to set the pricing for the new models as we went to press. Centre stage are the new RS/6000 43P Series of workstations and servers and their closely related cousins, the PC Power Series 830 and 850. The two ranges are almost identical: both come with a choice of either the 100MHz, 120MHz or 133MHz 604 chips, both use the PCI/ISA architecture and both come with 16-192Mb memory, three ISA slots and two PCI/ISA shared slots. The RS/6000s use more robust SCSI drives in place of the cheaper IDE drives used on the PC Power boxes, and also have 2D and 3D graphics capability. They only run AIX, while the Personals, which will be sold via IBM's PC channels, have a choice of pre-loaded AIX or NT operating systems (from July), OS/2 beta version (also from July) or Sun's Solaris 4.5 (expected by year-end). The 850 is the more expandable version, with a five slot, five bay design. The two families are expected to sell for much the same price, but Bill Colton, IBM's general manager, Power Personal Systems Division, is aiming the PC Powers at the high-end PC, or "super-client" space, and thinks they'll ship in high volumes. He's coy about actual numbers, but when pressed says that could mean "four to five times less than IBM's PC volumes", though not in the first year. IBM also launches the RS/6000 42T, an upgraded version of the 41T graphics workstation using the 120MHz 604, claiming a 30% performance increase over the old model, and the C20 server, a similarly upgraded 604-based predecessor of the C10 that runs 20% faster than its predecessor. See page 3 for more details.

## ALCOR ON THE DESKTOP

Although DEC's bleeding-edge 266MHz and 300MHz 21164 Alcor chipset, the part officially called the 21171 has had some teething troubles (UX Nos 525, 541) it's nevertheless expected to make its first desktop appearance as soon as July 18th. A PCI-based uniprocessor, the AlphaStation 800 5/300, will succeed DEC's long-standing 3000 line. There may be a 266MHz unit too. Alcor supports 32Mb to 4Gb RAM, a 256-bit datapath and 2Mb to 16Mb external cache. A 300MHz Alcor box with 4Mb cache will apparently make 322 SPECint92 and 447 SPECfp92. Its 64-bit PCI bus provides bandwidth up to 260Mbps and I/O is slated at 152Mbps. The 800 5/300 has eight slots: four PCI, three EISA and one shared, and will run Digital Unix, NT and OpenVMS. DEC will target the unit at 3D, imaging and network applications, although its price is reckoned to be in the \$40,000 region. The box isn't the first 21164 workstation to hit market however. DEC OEM DeskStation Technology designed its own processor-independent chipset and has been delivering systems for a month.

## EMC STEPS UP CAMPAIGN TO WIN HEARTS AND MINDS OF UNIX, OPEN SYSTEMS USERS

Stepping up its efforts to diversify from the presently very lucrative mainframe disk array market that is inevitably fated to go into a decline, Hopkinton, Massachusetts-based EMC Corp has added new models of its Symmetrix Integrated Cached Disk Array systems that attach to all major Unix machines, and brought in Oracle Corp, Sybase Inc and Informix Corp to lend moral support. The new, larger Symmetrix 3000 systems are aimed at the data warehousing, decision support, Unix-based transaction processing and other vertical applications that require large databases and rapid access to centrally managed information. Scaling to 1.118Tb, the subsystems offer concurrent multi-host support for HP-UX on HP 9000, AIX on RS/6000 or SP/2, SunOS and Solaris on Sparc, Unix System V.4 on AT&T System 3000 and Nile, Dynix/ptx, Digital Unix, Irix, as well as NetWare, Windows NT and OS/2 on Compaq Computer Corp or IBM Corp servers. List prices for Symmetrix 3000, shipping now, go from \$250,000 to \$2.588m. On the EMC Centriplex 2000 systems, announced November, now have a new graphical user interface to display configuration, control and status information locally, and the array can now be monitored with an SNMP agent; and it includes EMC's Remote Maintenance Processor. Also new is first fruit from EMC's Epoch Inc acquisition: Epoch Data Manager is designed to provide fast database and file system back-up across an open systems enterprise. The Epoch Data Manager provides direct connection to Centriplex and is planned to be extended to Symmetrix 3000.

## TADPOLE HAS TO CALL EMERGENCY MEETING AS NET ASSET VALUE WITHERS

Tadpole Technology Plc has suffered the ultimate indignity and humiliation, that of having to call an extraordinary meeting of shareholders within 56 days because growing losses mean its net asset value will fall to less than half its paid-up share capital (the aggregate sum a company has raised by selling its shares since it was founded). The 50% figure does not in itself signify anything, and is mainly a warning signal; the shareholders' meeting is only required to consider what, if anything, need or should be done about the situation. It can break up with a decision that nothing need be done, and the company can continue as before. Tadpole now expects its losses of £1.3m for April and May will rise in June by up to another £500,000, on sales broadly flat with the previous quarter at some £7m. Tadpole shares fell to a new low of 35p but later steadied at 42p, a loss of 13p last Thursday. Tadpole notes that final quarter sales are usually heavily weighted towards September. On the plus side, it is shipping an order worth more than \$1m for Sparcbook 3XP to a new US customer with potential for \$10m more over two years, and a new OEM board contract worth up to \$20m over four years.

## BULL LAUNCHES DATA WAREHOUSING WITH ACCESS-INTEGRATION-REPLICATION SUITE

Compagnie des Machines Bull SA has got aboard the data warehouse bandwagon with the launch of its Distributed Data Warehouse suite, which it claims is better than anything offered by its rivals. The suite comprises Access, Integration and Replication applications. Access, as the name suggests, gives users direct access to enterprise-wide databases, Integration pulls the data from various systems into a unified image for Unix systems and Replication creates a separate data warehouse for data integrity and security purposes. Sylvia Summers, vice-president of distributed computing solutions in the Open Systems & Software division at Bull reckons that the software has key points that differentiate it from its rivals. It is supposedly more open than IBM Corp, database-independent unlike Oracle Corp, and gets quicker results than Prism Solutions Inc's offerings, claimed Summers. SAS Institute Inc, which specialises in data warehousing was however passed over. The company claimed that the Access, Integration and Replication software can be installed in 10, 20 and 30 days respectively, but the while the first two are available now, Replication is not out until next month. The cost of the three elements is obviously dependent on the type of customer, but Access would be in the range \$10,000 to \$20,000; Integration would be \$40,000 to \$100,000, and Replication would be between \$120,000 and \$200,000. The Distributed Data Warehouse is Open Database Connectivity - and Open SQL-compliant, and supports IBM Corp's DB2, IMS and VSAM, Digital Equipment Corp's (now Oracle Corp's) Rdb and DEC's RMS, Oracle, CA-Ingres, Sybase and Informix, as well as Bull's GCOS IDS II, RFM and UFAS mainframe systems.

## IBM 'EMBRACES INTERNET' WITH CONNECTION FAMILY

IBM Corp's Global Network duly unveiled a blitz of Internet products and services last week which in the first analysis appear designed to ensure that existing Big Blue customers return to it, rather than head off to rivals, for their Internet requirements. John Patrick, VP Internet applications described the Internet Connection Family of products as "IBM embracing the Internet." There is server software to enable users of OS/2, AIX, OS/400 and MVS to create their own World Wide Web sites, and Web browser software for OS/2 and AIX. It is also offering help with home page design, creation, and hosting on the Web, and advice on security. It's promising Internet application building tools; gateway products to link DB2, CICS and MQSeries to the Web; and search engines to help users find information on the Internet by colour and shape as well as straight text. IBM says it has or will deliver Internet Connection products in four sectors; access, with connection and firewall software; presence, World Wide Web-based marketing and distribution; integration, connecting WWW sites to core business systems; and enablement, running and subscribing to applications networked over WWW. Web Servers for AIX and OS/2 will be available at the end of July at from \$1,500 and \$800 respectively - secure versions will beta at that time. Web Servers will also go up on SP2s and be integrated into OS/400 (first half of next year) and MVS (no timescale given). Secure versions will support Secure HyperText Transport Protocol (S-HTTP) and Secure Sockets Layer (SSL). An additional Network Security Program (NetSP) Secured Gateway for AIX to protect networks from outsiders on the Internet is also on the way. The CICS, DB2, and MQSeries gateways will allow users to initiate queries from their browser, have it access an IBM WebServer that translates (in the DB2 case) to SQL, which interrogates the database and passes the result back to the user over the Internet. The DB2 gateway can be downloaded from IBM's web site from this week and the CICS implementation is in beta. There's no date for MQSeries, which IBM says will provide guaranteed delivery of messages over the net. A WWW implementation of the VisualAge development environment is also being readied.

### Home page design

On the client side, IBM's home-grown WWW browser, WebExplorer is already bundled in OS/2 Warp and gets new graphics streaming next month. The Windows version, based upon the Spyglass Inc Mosaic implementation, came out in March. An OEM version of Spyglass will go up on AIX next quarter. Secure versions are also underway. Network services include a variety of Internet access options via the IBM Global Network; content services will include creating and hosting Web services. There's a Query by Image Content natural language Internet engine for searching by colour and shape as well as straight text. An infoMarket Search system now in beta will provide access to selected Internet databases by year-end. AntiVirus software to protect against 6,000-odd viruses is available from IBM's home pages. Consulting and solution services will include NetSP firewall bundles and AS/400 server installations, plus planning, network design, home page design, content design, creation, testing and security. Fees for home page creation would typically begin at between \$10,000 and \$20,000 IBM estimates. Hosting home pages begins with a one-time charge of \$1,200 plus five tiers of service pegged to a use of a maximum 100Mb disk (every extra 30Mb is charged at \$30 per month). Pages with up to 5,000 hits per month cost \$800 a month. Up to 10,000 hits are \$1,050 a month. 20,000 hits are \$1,500; 50,000 are \$2,300 and 100,000 are \$3,300.

### Other platforms

All of the new products and services will go up on IBM platforms initially, followed by its supported environments - such as Windows NT and Solaris - and then on whatever platforms customers ask for; "we'll hook anyone up," said Patrick. It'll accommodate whatever Internet technologies users have already accumulated. The company is less clear about how it'll make the switch from targeting IT managers for its products to selling to the marketing managers typically responsible for Web operations. Meantime, IBM has developed, iKP a mechanism to provide secure transactions over the net. IBM and Europay International, Waterloo, Belgium, will develop a system for delivery in 1996 that uses payment cards with Europay's money-on-a-chip system, swiping readers attached to PCs, telephones and televisions to buy products and services on-line using iKP.

## NOVELL REORG: NETWARE AND UNIXWARE PUT INTO NOVELL SYSTEMS GROUP POT

Novell Inc's anticipated internal re-organisation fell into place at the end of last week with the merging of the NetWare and Unix Systems Group into a Novell Systems Group, which accounts for 55% of the company's revenue or some \$1,045m. NSG is headed by executive VP and general manager Richard King who reports to president and CEO Bob Frankenberg. The group is broken down into four separate P&Ls. Mike DeFazio, formerly executive VP and general manager of the Unix Systems Group, becomes senior VP development of the Operating Systems Division which will be responsible for all core OS development, including the integration of UnixWare and NetWare into one platform, currently known as SuperNOS, desktop OS integration and the NetWare, Unix source and UnixWare businesses. Toby Corey, formerly VP marketing for the NetWare Products Group leads a new integrated product marketing team as VP marketing of that division. Darl McBride heads the Extended Networks Division as VP and general manager, which includes Embedded Systems Technology for NetWare or NEST. Joe Firmage gets the new tools division, formerly the AppWare division, as VP and general manager. Joe Menard, one-time marketing VP at the old Unix System Labs and latterly head of the Tuxedo effort gets the distributed services division, which includes NetWare Directory Services, OLTP and distributed printing, as VP and general manager.

### Development

Engineering teams currently working on separate developments in the same area, for example NetWare and UnixWare file systems or messaging, will be combined. Novell's two other product groups are the Information Access and Management Group, which includes the new AT&T NetWare Connect Services public data network, and the Application Group which does PerfectOffice, GroupWise and other Groupware software. SuperNOS - now a 1997 item first expected as a non-dedicated architecture then on a microkernel - will be preceded next year by an environment that melds Novell's Gemini and SkunkWorks developments. Gemini, or NetWare for OS/2, allows the two environments to co-reside on a box. A modified version will initially utilise shared drivers, one file system, one administration system and other integrated components. SkunkWorks is a project based upon the Unix-like Linux public domain software and was originally touted to produce Expose, a 32-bit MS-DOS-Windows-NetWare-UnixWare system. A full-blown product blueprint (UX No 529), and re-branding strategy is expected within 60 days.

### IBM's 604 SMP's "LATER THIS YEAR"

As the currently very scarce PowerPC 604 parts when in symmetrical multiprocessor (SMP) configurations, IBM has instead extended its existing J Series and R Series 601-based systems with add-on cards that scale them up to six or eight processors, along with a new AIX release (4.1.3) to support them (UX No 538) - see page 1. 604 SMP boxes will eventually come along "later this year" according to Randy Groves, VP RS/6000 System Development, who said that a six-way 601-based J-Series would pretty much equal the performance of a four-way 604 machine. Upgrade options will be offered. Meanwhile, SMP machines can now participate in high-availability clusters, with the release of HACMP for AIX Version 4.

### THINKPADS HAVE VIDEO CONFERENCING

IBM's new ThinkPad Power Series notebooks - the N40 notebook which it previously bought in from Tadpole Technology is now no more (UX No 539) - also offer a choice of AIX, NT (and later on) OS/2 and Solaris. There are two models, the 820 and 850, both using the 100MHz 603e PowerPC chip, and with a choice of 10.4 inch 800 x 600 or 640 x 480 resolution Black Matrix on Array colour screens. The 820 has a 32-bit memory bus, 16Mb memory expandable to 48Mb via memory modules, and a choice of removable 540Mb, 810Mb or 1.2Gb SCSI-2 hard drives, as well as built-in CD-ROM, and two PCMCIA slots. It weighs 7.3 pounds. The 850 adds a 64-bit memory bus, G10 graphics and up to 96Mb memory, allowing it to handle full-motion video. An optional clip-on video camera turns the machine into a video conferencing machine.

### IBM Briefs

- IBM rejected the rather more catchy Power Personal tag in favour of the awkward Personal Computer Power Series moniker for its 604-based "super-clients" - but for some reason we haven't worked out yet the IBM division headed by Bill Colton is still named the Power Personal Systems Division.
- Future versions of the RS/6000 43P Series are likely to be differentiated further from their PC Power Series cousins by an upgraded memory controller in the future: currently both families use the same controllers.
- Donna van Fleet, VP, AIX Systems Development, is adamant that only AIX, as IBM's "premium" operating system offering, will be offered on the RS/6000 range, and that NT, OS/2 and (especially, we imagine) Solaris will remain safely down at the client-end of things on the PC Powers.

### BMC INTRODUCES PATROL 3.0

After winning Olivetti and HP for its distributed database management software last week (UX No 542), BMC Software Inc has announced version 3.0 of the Patrol package with new autonomous agents, integration with other SNMP framework agents and independent consoles. There are new and enhanced versions of BMC's Knowledge Modules in 3.0 which provide Patrol agents with product-specific information, allowing a single agent to manage all the components and objects associated with a server, the company claims. Patrol's autonomous agents operate independently from a console. They store log parameter and event history locally and can determine and implement any required changes, removing the need for console dependence and reducing network traffic, BMC says. As 3.0 includes agent support for SNMP, other vendors' SNMP management console can access the Patrol autonomous agents. The agents can also act as mid-level managers, accepting data from other SNMP agents including those monitoring databases and hosts. Patrol 3.0 is offered with an operator console which provides centralised monitoring of Patrol information, or a development console allowing users to create their own Knowledge Modules. The Patrol console or any other SNMP manager can be used as the console for viewing data via PatrolView, a new line of tools BMC has for allowing the native console of a network management framework to display events and information collected by Patrol. PatrolView works with HP OpenView, NetView for AIX and SunNet Manager. There's also a new Knowledge Module which can monitor Lotus Notes applications and resolve problems. Also new is incremental backup and recovery for Oracle and Sybase via modules for DataTools' SQL BackTrack products. BMC says Patrol's scripting language now includes over 100 built-in functions for collecting and analysing data and comes with a new graphical debugger. Patrol 3.0 will ship in August priced from \$6,000.

### CA TURNS TO FUJITSU AND ORB-II TO ADD AN OBJECT DIMENSION TO INGRES

Rather than approach any of the young US firms formed to create and exploit object-oriented databases, Computer Associates International Inc has turned to Fujitsu Ltd to add an object dimension to its CA-OpenIngres relational database family. The first new product under the alliance, CA-OpenIngres/ODBMS, includes Fujitsu's nine-year-old ODB-II object database. The CA-OpenIngres/ODBMS system development tool kit will be shipped to customers later this year and a fully integrated object and relational database will be ready in the first half of 1996. It will run on Unixes and Windows NT servers and Motif and Windows clients. An early demonstration of CA-OpenIngres/ODBMS will be unveiled next month. Current CA-Open Ingres development and the beta test of Version 2.0 of the product, scheduled for the autumn, will go ahead in parallel. CA says it chose Fujitsu because its object technology represents "the best in its class. We discovered that Fujitsu's large software development team has developed perhaps the most nimble, enterprise-ready object database." CA-Open Ingres/ODBMS will be a composite database system that uses both relational and object technology. ODB-II can incorporate data from various legacy sources while managing complex relationships and data, such as multi-media. Fujitsu has also developed a virtual class interface which allows classes to be defined in an external relational database. This allows ODB-II to translate queries against a virtual class into an SQL-query against a table in an external relational database - effectively merging the capabilities of two different technologies. Won't this create some kind of hybrid system that works in two worlds without being particularly good in either? Not so says CA. While the demand for databases capable of handling complex data types (video, sound, etc) is rising there is a need to graft ways of handling them onto traditional enterprise-wide systems handling traditional data as well as client/server systems. CA-OpenIngres/ODBMS will do this, the company claims. The agreement's been under discussion for nine months, according to project leader Russ Artzt.

## MANAGER: ORACLE ENLISTS TIVOLI, SUNSOFT, DBMX

Clearly determined to dominate the week and hustle into the middle of IBM Corp's two-week announcements jamboree, Oracle Corp announced the promised Oracle Management Platform - with a little help from its friends. It describes the Platform as the central component of a comprehensive new systems management strategy for supporting all Oracle products via a single integrated and open system centred on Oracle7. The key friends are Sun Microsystems Inc's SunSoft Inc, contributing its Solstice Enterprise Management framework, and Tivoli Systems Inc, with its Tivoli Management Environment. With SunSoft, Oracle is working on a joint project called Diamond, for Distributed Integrated Administration and Management of Oracle Networks and Databases, which will lead to systems management offerings integrating Oracle information management products through SunSoft's Solstice Enterprise Management framework. The initial Oracle products resulting from this agreement, for SNMP monitoring and Solstice SunNet Manager console integration, are expected later this year. With Tivoli, Oracle has a joint marketing arrangement that also involves DBMX Ltd to support Oracle customers with management of Oracle databases through the Tivoli Management Environment using DBMX Enterprise Server Manager. The Redwood Shores Californian is also offering a new systems management consulting service.

## ORACLE FILLS IN DETAILS ON ITS PROSHARE ALLIANCE WITH INTEL

Seeing no need to wait for broadband pipes to arrive, Oracle Corp and Intel Corp also expanded on their plans to exploit the growing availability of ISDN lines by combining technologies for delivering video on demand and interactive services to corporate and home computer users using ProShare videoconferencing system with the Oracle Media Server. The two showed off video-based applications such as news-on-demand and interactive weather, video electronic mail, corporate training-on-demand, on-line music CD shopping, and recording and playback of a real-time video conference. "The world has been chasing video on demand, but what personal computer users want is information on demand, which often comes in a video format," reckons Intel Corp chief Andrew Grove. The two plan to start a trial in early autumn of a service to be called something like Oracle Video Online with a variety of news, entertainment and on-line shopping options that personal computer users can click to - but neither particularly wants to be an on-line services operator, and are happy to leave that work to the likes of Microsoft Corp, IBM Corp and America OnLine Inc, although Oracle chief Larry Ellison hinted that he might be prepared to take a stake in any new service operator.

### Strategy

"The strategy is to provide the enabling technology to let that demonstration happen," Ellison said. Intel's ProShare Video System 200 was launched in January 1994 and costs \$1,000. Oracle's interest in the system is primarily to demonstrate and promote use of the Oracle Media Server and the parallel machines from Ellison's nCube Corp; Intel's is in ensuring that the personal computer using iAPX-86 chips rather than the television become the preferred delivery medium. The weakness is that images move at only 12 frames per second, half as many as for movies. Even those grainy, jerky early movies ran at 14 frames a second - but if high-quality video were sent at half speed and stored for later playback rather than being viewed on receipt, it could be played back later at full speed. Ellison later told Dow Jones & Co that he would be talking to other companies, such as the Hollywood entertainment moguls, about becoming partners in the proposed new on-line venture.

## NCD RAISES X TERMINAL BAR

Network Computing Devices Inc has raised the X terminal bar once more with a new high-end, 1600 x 1200 resolution HMX-pro24 unit using the 125MHz Mips R4600. With support for 24-bit colour and a \$6,500 tag with 16Mb RAM, 7Mb VRAM and a 17" colour screen, the terminal is being touted as cheaper alternative to Sun, HP, IBM, DEC and SGI 24-bit colour workstations and other PCs. 20" and 21" monitors are also available.

## SOME ARE BUILDING MONUMENTS, OTHERS JUST JOTTING DOWN NOTES: IBM FIGHTS FOR ITS DEATH

By Hesh Wiener

~~With the acquisition of Lotus Development Corp - a virtual certainty, despite the legal formalities inherent in such corporate takeovers - IBM Corp has persuaded the major media that OS/2 is a goner. The two most powerful voices in the American business press, the *New York Times* and the *Wall Street Journal*, quoted authorities who said that IBM's interest in Lotus Notes means that OS/2 Warp has already been given last rites or that it soon will be. The site for this sad ceremony is presumably Manhattan's St Patrick's Cathedral, where the bosses of both IBM and Lotus went, separately, to meditate during the buyout negotiations. The reasoning or, more accurately, snap judgement of such software gurus as Esther Dyson is based on a vision of computing that begins with electronic mail and may very well end there, too. This belief has more religious overtones than the financial obligato of OS/2, as *Dataquest* just published the results of its research into the modem market in Europe and concluded that not quite 12% of the installed base of personal computers has a modem now and that by 1998 only a third will be so equipped. Modems are generally held to be somewhat more popular in the US, where hardware prices and communications costs are lower than in Europe, but they are much less abundant elsewhere, even in wealthy countries like Japan. Assuming for a moment that the initial analysis of the IBM-Lotus deal is fundamentally correct, that Notes is the hot Lotus product, IBM will be embarking on a campaign that is bound to sound a lot like its ill-fated Systems Application Architecture initiative. Notes, we expect, will be positioned as the layer of software that will once and for all make all computers (or at least all IBM computers) compatible. This compatibility will be at the end-user level, where documents can be uniformly created, amended and exchanged.~~

### Hobbling their computers

There is no doubt that Notes is the foremost software product for standardising work done on disparate machines, although it is far from the only one. Complex documents are also adapted to various architectures by Adobe Systems Inc's Acrobat and by every Web browser. Moreover, notwithstanding the benefits provided by document interchange technologies, an awful lot of computer users have no interest in moving revisable data around via networks, let alone hobbling their computers with yet another layer of software. But the difficulty of making Notes a worldwide standard is the sort of problem IBM could, conceivably, overcome, at least for corporate users. The real issue raised by Notes is the way it could accelerate the changes that have already forced IBM to reinvent itself during the past few years. If Windows as a standard has made it difficult for IBM to be a leader in personal computers, imagine how much harder it will be for IBM to succeed if the price-performance of machines is compared at an even higher level, the Notes level. To the extent that IBM is right in paying three and a half billion bucks for Notes, it may be wrong about the viability of AIX, OS/400 and MVS or the future role of CICS as a front end, to say nothing of the appropriateness of DB2 as a cost-effective data management environment.

### Hyperbolic

We take IBM's statements surrounding the Notes acquisition as hyperbolic, of course, and we expect most computer users will too. But the exaggeration may not be a distortion, merely a magnification. In accepting, supporting and now preaching the message of visionaries who see the computer as a creative communications medium first and an information mill second, IBM is encouraging users to look even more critically at their proprietary software and the hardware to which it is usually wedded. Chances are, IBM's strategic decision to build a future around Notes will lead to enormous change, some progress and the further, final homogenising erosion of those portions of IBM that today still account for most of the company's revenue and pretty much all of its profit. Is anyone taking notes? (C) 1995 Technology News Ltd. All rights reserved.



## SUNSOFT SHIPS EARLY COPIES OF NEXT FLAGSHIP PRODUCT, DOE

Sun Microsystems Inc's SunSoft Inc unit has delivered an early access release of its Solaris Distributed Objects Environment - Distributed Objects Everywhere sounded much more jolly and ~~radical and buccaneering - networked object-oriented software~~ to some 100 carefully chosen customer sites including major Wall Street firms, telecommunications suppliers, and systems and software vendors. SunSoft reckons the product will enable customers to respond faster to market changes by building distributed enterprise information systems with re-usable networked objects that will be significantly easier to customise, modify, administer and maintain.

### Enterprise-wide, multi-tiered

It reckons it is the first Common Object Request Broker Architecture-compliant operating environment that is robust and scalable, to support enterprise-wide, multi-tiered client/server systems. It includes the Solaris-based environment, WorkShop-based development, and network and administration tools. SunSoft has its sights on an October date to deliver a Prelude set of Corba-compliant services - including integration with the Iona Technologies Ltd object request broker - now in beta, on top of Solaris. The full-blown OpenStep implementation of NextStep on top of these services and Solaris as DOE is being dubbed Crescendo. It goes to beta in the fourth quarter (UX No 540).

## NEW 120MHz, 133MHz POWERPC 604s OUT PERFORM LATEST 133MHz PENTIUM

IBM Corp and Motorola Inc are ready with faster versions of the PowerPC 604, adding 133MHz and 120MHz implementations. The 133MHz version is rated at 200 SPECint92 and 200 SPECfp92; the 120MHz implementation at 180 SPECint92 and 180 SPECfp92. That's well ahead of Intel Corp's latest 133MHz Pentium, also announced last week, which is pegged at 155 SPECint92 and 116 SPECfp92. The new PowerPCs are 0.5 micron affairs with dual 16Kb data caches, 3.6m transistors and measure 12.4 mm x 15.8 mm. Volumes are due next half, with higher clock versions also expected. Both IBM and Motorola will be fabricating them.

### Promises

Somerset has already promised the 604 will reach 225 SPECint92 and 250 SPECfp92 by year-end (UX No 529). The 100MHz 604 goes to 160 SPECint92 and 165 SPECfp92. The 133MHz Pentium is the second part done in its new 0.35 micron, 3.3V manufacturing process. At 155 SPECint92 and 116 SPECfp92, it's over twice the performance of the original 60MHz Pentium. Intel says Pentium revenues exceeded those of 80486 processors in the first quarter of 1995 and the company said it is on track for the volume run rate to cross over some time this year. The new part is \$935 for 1,000-up. Meantime, Apple Computer Inc is expected to reduce the speed at which the faster 604 chip runs to 132MHz in its forthcoming Power Mac 9500/132 so that it can set the processor bus to 44MHz to reduce the complexity and cost of other components on the logic board.

## HP ADDS 100MHz 2D, 3D WORKSTATIONS

Hewlett-Packard Co has bumped up the cache on its 100MHz PA-7100-based mid-range HP 9000 Model 715/100 unit to 1Mb, calling the thing 715/100 XC. It rates the 3D mechanical CAD, EDA and GIS unit at 132.2 SPECint92 and 184.6 SPECfp92. HP's also adding a 100MHz PA-7100 model to the 712 line - currently at 80MHz.

### 2D entry point

The 712/100, a new 2D entry-point, has 256Kb cache and is rated at 117.2 SPECint92 and 144.2 SPECfp92. The 715/100 XC is from \$21,000 (£17,100) with 32Mb RAM, 1Gb disk and 20" colour screen. The 712/100 is from \$15,000 with 32Mb RAM, 1Gb disk and 20" screen, or \$11,300 (£9,600) with 16Mb RAM, 525Mb disk and 17" screen. Both are due in September, with higher clocks expected by year-end.

## MICROSOFT, CA, NOVELL, ORACLE LEAD SOFTWARE TOP 100 LIST

Software Magazine's 1994 league table has Microsoft Corp, Computer Associates International Inc, Novell Inc and Oracle Corp occupying the first four places. Microsoft's \$5,000m revenue ~~accounts for one third of the total revenue of the leading ten vendors~~. However, to put the figures into context, the individual 1994 revenues of the top eight computer system vendors exceeds the combined revenues of the top ten software houses, indeed IBM Corp's own \$11,300m software business was more than the combined revenue of Microsoft, CA, Novell and Oracle. The top ten software firms accounted for \$15,100m or 64% of the revenue of the combined top 100 software concerns last year, which totalled \$24,000m, the magazine reports.

### Top spot

Still in top spot after three years there, Microsoft has widened the gap on the competition; number two CA grew 19% from \$2,100m in 1993 to \$2,500m last year, but Microsoft racked up a 29% increase, growing from \$3,900m in 1993 to \$5,000m in 1994. Novell gained 9% to reach \$1,900m. Oracle - the only other billion dollar software player - grew 40% to \$1,700m. SAP AG, at number six, grew 95% to \$807.7m. Biggest growth amongst the US houses were Next (280%), NetManage (193%), Attachmate (183%), SAP (179%) and Apertus (171%). The top 100 software houses employed 207,802 people in 1994, up 13% on 1993. Microsoft had 16,300 staff, up 11% on 1993. The 1994 top ten were Microsoft, CA, Novell, Oracle, Lotus (\$970m, down from \$981m), SAP (\$807.7m, up from \$414m), Sybase (\$615.2m, up from \$361.7m), Adobe (\$597.8m up from \$520.2m), SAS (\$472.4m up from \$420.3m), and Legent (\$470.5m up from \$416.5m).

## TRANSARC TO MARKET OPEN HORIZON'S DCE/DATABASE CONNECTION TOOLS

Transarc Corp is to market Belmont, California-based Open Horizon Inc's Connection software, which is claimed to link applications transparently to the Distributed Computing Environment services offered by Transarc, and to a slew of databases via an ODBC API. Applications created under the Dynasty Technologies Inc development environment will also now be able to utilise Connection. The Open Horizon software comes bundled with one database module, DCE Directory Module and DCE Security Module (Kerberos). Prices start at \$300.

### Plans

The company plans Corba, OLE and COM implementations of Connection. Modules to support three-tier development architectures with application partitioning are due this summer and will also include support for Encina, CICS, additional 4GLs and object programming tools. Clients run on Unix, Windows and NT. servers on Solaris, AIX, HP-UX and OpenVMS, with other Unix and an MVS port due.

## KERNEL GROUP HAS NEW AIX DEBUGGING TOOL

The Kernel Group Inc's Austin, Texas-based SevOne Software Inc subsidiary is offering a new debugging tool for AIX called SCTrace, claiming it can save large amounts of software development and maintenance time. The utility reports all system calls - including individual user and library function calls - made by an AIX process, their arguments and return values (including error numbers). It reports signals received by processes, can be attached to running processes and doesn't require superuser access. SCTrace runs on AIX version 3 and above on the RS/6000 and is priced at from \$200. The Kernel Group is a five-year-old, 35-person AIX and IBM microkernel consulting firm which claims to perform much of the AIX defect work for IBM on the Austin defect resolution team (which is known internally as The Change Team). It offers a bunch of AIX development and system administration tools as well as writing and porting software for AIX users. It did the Tivoli Systems Inc port to AIX and worked on the Prudential and Deutsche Bank AIX wins. It's looking at doing \$6m revenues this year.

### **MOTOROLA UNDERLINES ITS COMMITMENT TO POWERPC KIT**

Since its acquisition of Four Phase Systems Inc turned out not to be the breakthrough into computers that Motorola Inc hoped it would be, the company's computer group has always appeared to be hanging on by its fingernails - typically a loss-making footnote in a report of an otherwise superb set of annual figures, but ever since the company embraced the PowerPC, the Motorola Computer Group has had a new air of determination about it, and the latest example of its commitment is a multi-million dollar re-design of its Tempe, Arizona manufacturing facility. The company has just announced completion of the first phase, at the same time declaring Windows NT 3.51 for its PowerPC-based products. NT has done modestly on iAPX-86, zilch on the R-series and Alpha RISCs, but all the signs are that PowerPC will be second only to Intel Corp's flagship architecture in the NT world. Motorola is pre-installing NT and offering native versions of Word, Excel, BackOffice and Wordperfect. The Tempe facility produces Motorola's PowerStack family of boards, RISC personal computers and servers, and Motorola declares that the factory re-design is a key element in the Computer Group's PowerPC strategy "to establish a world-class facility capable of producing the high-volume, high-quality and competitively-priced PowerStack products."

### **AMDAHL SEEKS ANOTHER MAINFRAME RAID AS ENCORE DEAL FALLS APART**

The agreement that Amdahl Corp would use the Encore Computer Corp Infinity 90 RISC-based storage array as its contender for the disk subsystem market addressed by IBM Corp with its Ramac arrays, has fallen apart. The agreement was first announced last spring, but by autumn had already been amended, and the two now say they were unable to reach a final, definitive agreement resolving their differences over the reseller agreement. Amdahl had sued to block Encore from ending the agreement. It now says it remains fully committed to delivering a RAID disk array for its System 390 customers in the second half of the year. It is possible that the company may try to do a deal with Data General Corp on adapting CLARiiON disk arrays for mainframes.

### **IPL WINS ORACLE ENDORSEMENT TO HELP IT SELL ITS DISK ARRAYS**

Software is ubiquitous these days, and you can no longer just offer add-on memory or integrate disk subsystems and leave software to others - it is becoming increasingly hard to sell your products without a hardware dimension. So it is that IPL Systems Inc, now in Maynard, Massachusetts has entered into a relationship with Oracle Corp via the Oracle Business Alliance Programme. It is to be an independent software vendor for Oracle's database offerings, focusing on increased database engine performance at the storage level by virtue of its IPL's RAID-based Enterprise Storage Series of disk array subsystems. IPL claims it can improve Oracle performance by exploiting its exclusive caching controller technology, which it says virtually eliminates RAID-related performance penalties through use of independent fault-tolerant read and write caches. IPL claims to have the only RAID system whose architecture enables users to control their placement of data to improve performance.

### **US ARMY GIVES SUN ITS BIGGEST EVER ORDER: 28,000 MACHINES**

There's dancing in the streets of Mountain View as the Sun Microsystems Inc Federal unit celebrates the largest contract in its history. The contract is to supply the US Army with an estimated 28,000 workstations and servers in a new 10-year tactical command and control systems contract. The contract, potentially valued in the hundreds of millions of dollars, is part of the Army's Common Hardware-Software 2 contract, awarded to a team made up of the government divisions of GTE Corp, Sun, Litton Industries Inc and Codar Technology Inc. The award replaced a previous contract to Miltope Corp using Hewlett-Packard Co workstations, which makes the victory all the sweeter. The systems will support the Army's command and control activities, and will provide the Army with a common family of hardware, software and applications using Sparc and Solaris. Products to be supplied - many will have to be subcontracted - are workstations, servers, large screen displays, bridges, routers, printers, scanners, and secure operating systems, Department of Defense protocols and a variety of custom applications. The equipment is all going to have to be ruggedised to make it capable of performing under extreme conditions in the field without going into a terminal decline.

### **NCUBE FORMALLY INTRODUCES ITS METROMEDIA VIDEO SERVER**

Massively parallel systems builder nCube Corp, Foster City, California sees a serious market for its machines as media servers, if only it can fit them out with enough extensions to best the stiff competition for what is at present a tiny market. The company claims its new Metromedia Server is the industry's first interactive digital media server capable of delivering interactive-television content to 'metro-class' installations of tens of thousands of simultaneous users. It integrates management of video, audio, text, image, and tabular data, and claims it makes it possible to deploy interactive services such as video-on-demand and home shopping, interactive training and video annotated electronic mail for business users on a large scale. It used the next-generation nCube 3 version of the company's processor and is claimed to deliver up to 28,800 simultaneous video streams from up to 24.4Tb disk storage, or around 30,000 hours of multimedia content. The thing will be available next quarter at \$500 per video stream for a fully configured system.

### **SPIDER SYSTEMS SELLS OUT TO SHIVA FOR £50m IN SHARES**

Another fine young British company has decided to sell out rather than go through the hassle of flotation and the vagaries of operating as a public company. Edinburgh-based Spider Systems Ltd, formed a little over a decade ago by refugees from ICL Plc, is to be acquired by Burlington, Massachusetts-based Shiva Corp for about 2m new shares, valuing it at an indicated \$80m - £50m. Shiva has definitive agreement to acquire the ISDN network access systems specialist, which did \$1.2m net on sales of \$39.4m in the year to March - up 74% and 24% respectively - which makes it look as if it is getting the Scottish company fairly cheap. Such companies often go out on even higher price-earnings multiples in the US. Shiva loves Spider's technology, saying it is a recognised industry leader in ISDN tariff management, and has strong technologies in dial-up routing, X25, and Frame Relay. Spider's research and development and manufacturing will continue in Edinburgh.

### **BULL'S LOW-END POWERPC ESTRELLA TO GO VIA ZENITH**

Compagnie des Bull SA has duly launched Estrella, its entry-level uniprocessor PowerPC RISC servers aimed at the low end of the personal computer server market. It is based on the PowerPC 603 processor running at 66MHz with a 250Kb second level cache, Peripheral Component Interconnect bus and comes in desktop and minitower versions pre-loaded with IBM Corp's AIX. A Windows NT version is promised for the autumn but Solaris has been pushed back to next year, according to Didier Breton, vice-president of the Open Systems & Software Division. He declined to give a date for NetWare on the Estrella but confirmed that the company "is working on it." However, Michel Motro, European vice-president of Bull's Zenith Data Systems personal computer subsidiary, said that there were no plans whatsoever for NetWare on the machines. The Estrella will be sold under both the Bull and Zenith names, but Motro said that once the 100MHz PowerPC 604 version becomes available in July, it and all future PowerPC machines will sold as Zenith machines. This is part of a move by the Open Systems & Software Division to take advantage of what it sees as Zenith's expertise in indirect sales channels. The 100MHz PowerPC 604 model will be followed by a 120MHz version before year-end, Breton said, and PowerPC 603 machines will be upgradable to the 604. Estrella, which is ready to ship now, is more expensive than originally thought, starting at \$3,700. The Estrella 604 will start at around \$6,000 in July.

### **FUJITSU, ICL INTEND TO MAINTAIN SEPARATE BRAND NAMES IN SPAIN**

Spain will be the exception to the rule with respect to ICL Plc and Fujitsu Ltd's joint branding initiative in Europe. Director of ICL Espana's Technology Division, Miguel Guerra, confirmed to Computing Espana recently that ICL's Spanish subsidiary will continue to walk a different path from Fujitsu's counterpart in Spain, maintaining independent strategies and structures. He stated that there was no urgent need for joint branding, "since the two companies are both evolving satisfactorily in the Spanish market, although it is true that in some areas we are competing with the same products." Fujitsu Espana is the fifth-ranking information technology company in Spain on the basis of 1994 turnover figures of around \$200m, while ICL Espana ranks 22nd with turnover of \$65.1m.

## PLATINUM ADDS SNMP SUPPORT TO JOB SCHEDULER...

Platinum Technology Inc has added version 3.2 of its AutoSys job management and scheduling tool for distributed Unix environments, which now includes (Simple Network Management Protocol) **SNMP support for integration with third party network and system management environments such as HP OpenView.** Platinum says 3.2 has a utility for migrating from rudimentary Unix job schedulers such as kron to a complete job management solution via AutoSys. As well as a new AutoSys/Xpert graphical toolset - see below - 3.2 now additionally supports AIX 4.1, HP-UX 10.0 and Oracle 7.1, user-defined global variables and a one-time runtime override for job definition. AutoSys includes an event processor (scheduling server), relational database and remote agent (job execution client). The database stores all events and job information. The event processor, the brains of AutoSys, reads events and job descriptions from the database and instructs the remote agents to perform specific tasks.

### Part of Poems

After the Remote Agent performs its tasks, it sends the status results to the database. AutoSys is a component of Platinum's Open Enterprise Environment and 3.2 is out at the end of July starting at \$9,000 for the scheduling server, and \$500 for each job execution client. AutoSys/Xpert 1.0 is a new graphical front-end tool for AutoSys 3.2. It includes; TimeScape, which it describes as a time-based Gantt-chart-like view of job processing; JobScape, a Pert-chart-like picture of job-flow structures; and HostScape, which presents a view of the job stream in relation to the physical machines on which the jobs run. All three come with real-time and simulation modes. AutoSys/Xpert 1.0 ships at the end of next month as an add-on tool to AutoSys 3.2 at from \$20,000. Tivoli Systems Inc sells a version of AutoSys 3.2 as Tivoli/Workload, though AutoSys/Xpert is available only from Platinum.

## ...AS TRINZIC SETS THREE-TIER DEVELOPMENT ENVIRONMENT

With its ObjectPro PowerBuilder/SQLWindows wannabe tool out of the gate (UX No 542), Platinum Technology Inc's Trinzic Corp has turned its attention to the back-end, unveiling RuleServer, which it describes as a three-tier business rules processing engine for applications incorporating interface, data access and application components. An application's business rules and logic are stored in the RuleServer repository, which can be accessed by application clients across the enterprise. It can be used with Trinzic's ObjectPro or PowerBuilder and Visual Basic to build the front-end which calls the server. RuleServer uses OSF Distributed Computing Environment for communication, naming and security. RuleServer betas next quarter with OS/2 ships due this year, Unix at the beginning of 1996.

## IBM SCRAPPING LIST PRICES IN FAVOUR OF STREET-LEVEL PRICING

To try and make it look like it's not banging software out at knock-down prices, IBM Corp next week begins to abandon list pricing strategy in favour of suggested retail prices - closer to street prices - for large customers and resellers. Gone will be a list price of say \$229 for OS/2 that resellers get at a discount which then appears on the street for \$165, making it appear that the company is rushing to rid itself of OS/2. The IBM Software Advantage programme will create a standard two-year contract with what it calls common international discounts. The greater a customer/reseller/distributor's future commitment over the period, the greater the discount offered. There will also be a single set of terms and conditions for licensing IBM software. In addition new SystemView-based tools are being offered to allow users to manage their own software licence charges, terms and conditions. Gone are so-called use keys for IBM-owned software such as OS/400 and the International Program License Agreement for PC software is now being extended to Unix. Software Advantage starts-up on workstation software - AIX and what runs on IBM Intel boxes - other measures apply to OS/400 and MVS. The move is considered "revenue-neutral" as IBM's not changing either prices or the way it charges for software.

## AT&T GIS AFTER COMPAQ WITH NEW GLOBALYSTS

AT&T GIS is taking out after Compaq Computer Corp with a new Globalyst S40 four-way 100MHz P54-based SMP server which starts at ~~\$9,175 for a 100MHz uniprocessor with 32Mb RAM and a 1Gb disk.~~ A two-way with 64MB ECC, 8Mb drive, 1Gb tape drive and disk array adapter is \$21,545; a three-way with 128Mb RAM is \$28,600 and a four-way with 12Gb hard drive is \$37,455. It's also got a low-priced S10 single processor server based on 60MHz, 75MHz and 90MHz Pentium chips, depending on the model. Pricing will start at \$3,650 for 16Mb RAM, 1Gb disk, quad-speed 600Mb CD and software such as, Vistium Share, which manages remote users and provides for real-time collaboration, PassageWay, which connects phones and computers into a single entity, and Network Central, which are workgroup tools for accessing files. The 75MHz model for \$5,225 will offer 32Mb RAM and a 2Gb hard drive; the \$6,925 90MHz model includes 64Mb RAM and two 2Gb disks. All run AT&T MP-RAS, SCO Unix, NT, UnixWare 2.0, NetWare 4.1 and OS/2.

## ORACLE SPENDS \$100m WITH IRI TO GET INTO ON-LINE ANALYTICAL WORLD

Everyone is still waiting for Oracle Corp to go for the big one, be it Apple Computer Inc or Novell Inc, but in the meantime it is making an infilling acquisition to get it into the world of On-Line Analytical Processing, the fancy new name for what people used to call decision support or Executive Information Systems when they comply with a set of rules laid down by Ted Codd. It has agreed to buy the Express family of management information software of Information Resources Inc for \$100m cash. The Express product family includes server technology and client tools used primarily for sales, marketing, finance and management applications. About 600 software developers, sales, support, marketing and consulting staff from the IRI Software side of Information Resources are expected to join Oracle, and Oracle will create a new OLAP Products Division, based in Waltham, Massachusetts. IRI Software will retain its identity as a business of Information Resources and continue to develop and sell applications for the consumer packaged goods and retailer markets based on Express technology licensed back from Oracle; it will also act as a value-added reseller of Oracle's newly acquired OLAP products, and Oracle7.

## SOFTWARE PROFESSIONALS SHIPS ENLIGHTEN FOR SYSTEMS ADMINISTRATION

San Mateo, California-based Software Professionals Inc has begun deliveries of its Enlighten systems administration package for Sun, HP, IBM and SCO Unixes, the software it unveiled back at UniForum (UX No 529). SP, until now entirely focused on the Tandem Computers Inc Guardian market with a systems management package it claims has 3,000 licencees, says Enlighten provides 90% of what Unix system network administrators require, the other 10% being host-related. It doesn't like the way Enligten has acquired a "lightweight" reputation, even though that's the way it was touting the software when it was originally announced. The only features it considers lightweight are what it touts as shrink-wrap, easy install and quick to learn features. What it claims its got over native environments such as SunNet Manager, SystemView for AIX, SCO OpenServer and OpenView is the ability to administer heterogeneous environments, and a common graphical interface (which it admits HP has to some extent in OperationsCenter). In a mixed Sun/HP/SCO/IBM environment for example, administrators would have to use four different mechanisms to add users or greater security to the network. It claims it's smaller and quicker than CA-Unicenter, Tivoli Systems Inc TME or OpenVision Inc environments, with no framework to support and no individual point products to configure. SP reckons users evaluating one of these three options should take Enlighten and use it in the meantime. Enlighten comes with seven modules - configuration, security, users, disk, archiving, print management and system names, plus a watchdog swap space monitor - for administration, and a separate events management system. The Enlighten interface works only with the systems administration suite right now, it's being ported to Enlighten events, which currently works under native administration front-ends. SP says it's lining up OEMs and distributors for Enlighten - though its got none to speak of yet - and plans additional SGI, DEC and NT implementations, plus other stuff for administering databases. The \$9m, 60-person outfit sees 50% of its business coming from Enlighten within three years. It's not planning to move its Tandem Guardian-based systems management software to Unix.

# unigram·X

The weekly information newsletter for the UNIX™ community worldwide

**Sybase Inc's** shares put on \$3 at \$28 late last Wednesday to a crescendo of takeover gossip, but slipped back when nothing happened. The rise was as big as the one that anticipated **IBM Corp's** announcement of its bid for **Lotus Development Corp**, but the names in the frame - **Microsoft Corp, Oracle Corp, Sun Microsystems Inc, IBM Corp** - didn't make much sense and Microsoft denied any interest while Sun repeated that it never comments on such things.

What does **Gartner Group Inc** reckon will cost \$100,000m to fix over the next five years and is so serious that there is a newsletter devoted to the subject called *Tick Tick Tick?* The problem software that uses only the last two digits for the year will encounter in 2000.

**Silicon Graphics Inc** has got its proposed acquisitions of **Alias Research Inc** and **Wavefront Technologies Inc** past the US Federal Trade Commission, but not without agreeing to conditions. The Commission voted three to two to accept the settlement agreement, which requires SGI to take steps to ensure that other companies that develop and sell entertainment graphics software and the workstations to run it can compete with SGI, in particular putting the Alias Research Animator and PowerAnimator software up on the computer systems of another yet-to-be-determined computer company - DEC, IBM, HP or Sun or another company the cut of whose jib the Commission likes - for public comment; after 60 days for comment, the body will decide whether to make the settlement agreement final or not.

Analysts that have seen **IBM Corp's** Power Personal announcements that are set for today are sadly underwhelmed - several say that IBM will be lucky to sell more than 50,000 of the new PC Power Series desktop computers and the ThinkPad Power Series portables this year, and 100,000 of the things in 1996 would be going some; by contrast, the Pentium base is expected to grow by 15m this year.

Under threat of legal action, **IBM Corp's** been forced to pull an ad campaign it was about to run in UK pubs touting the advantage of its DB2 Parallel Edition for AIX over Oracle Parallel Query Option Version 7.1.3, which attributed virtually no parallel functions to the Oracle database in a comparison table.

**Sybase Inc** is readying Highgate for processing OLAP queries against SQL.

If **Next Computer Inc** reels in **Hewlett-Packard Co** for OpenStep as part of a deal it expects to be able to go public on in around six week's time, won't that rather make a mockery of HP's Taligent investment? Come to think of it, what exactly is HP's object strategy?

**IBM Corp's** readying new software for managing CICS environments next week.

**Gerling Insurance** in Cologne, Germany is Pyramid Technology Corp's first European massively parallel processing win. The company will run SAP R/3 applications on the Reliant RM1000.

**TriTeal Corp's** got a security module for its TriTeal Enterprise Desktop Common Desktop Environment courtesy of Spryus from \$200.

**Oki Electronic Industry Co** and **NK-Exa Corp** are expanding their Tuxedo middleware business into system management. Software they develop will be based on NK-Exa's network management tool, Dual Manager.

**BlueLine Software Inc** is using Oracle database to develop a version of Vital Signs' VisionNet, its network performance management system for Unix. VisionNet collects performance metrics by which systems are measured. Prices will range from \$30,000 to \$115,000, depending on platform and options selected. BlueLine will resell Oracle as part of the arrangement.

TCP/IP house **NetManage Inc** has added version 4.5 of its Chameleon/X and ChameleonNFS/X PC X server and TCP/IP stack software at \$700 and \$800 per copy respectively. Both come with Web-Surfer software. ChameleonNFS/X includes all of the functionality in Chameleon/X plus NFS client and server.

**Coda Inc**, Manchester, New Hampshire, has a new CEO. Stephen Wright is now president and CEO of the financial and accounting software company in North America. Coda Inc is a subsidiary of the UK's Coda plc in Harrogate, Yorkshire. Wright was formerly with Coda-competitor McCormack and Dodge (now part of Dun and Bradstreet) then president and CEO of performance software outfit, **Landmark Systems Corp**.

**DEC** is putting Pittsburgh, Pennsylvania-based **Management Science Associates'** Gabriel sales and accounting software up on Alpha for broadcasters and telcos.

**Hewlett-Packard** is creating an API, tools, migration, integration and testing centre in Boeblingen, Germany, for HP users running SAP AG's manufacturing software.

Although now subsumed into the RS/6000 Division under its new boss Irving Wladawsky-Berger, long-term IBMmer Jeff Mason is now heading up what used to be Power Parallel Division handling the RS/6000 SP (the old SP2). Ben Barnes, ex Teradata and Burroughs, reports to him.

As we've already said at various stages, the PCI bus will eventually take over completely from MCA in the RS/6000 range, even though it offers slightly less throughput: multiple PCI buses will be used where necessary, and of course a 64-bit PCI version is now close to being standardised.

AIX UK marketing manager Ken Batty points out that PReP is IBM's first third-level acronym: PReP stands for PowerPC Reference Platform, and the word PowerPC is itself an acronym, standing (if we remember correctly) for Performance Optimisation with Enhanced RISC. And RISC, etc, etc.

Rockville, Maryland-based **Axent Technologies**, the Unix security offshoot of **Raxco Inc**, is putting its OmniGuard security software up on AT&T GIS' OneVision network systems management package.

Brussels-based European Internet provider **EUnet** is the first to introduce a commercial 4Mbps link between Europe and the US - in response, it says, to a massive increase in demand for international Internet services. The firm plans a further doubling of capacity by end of year.

Austin, Texas-based **Scientific and Engineering Software Inc** has added a new cut of its Objectbench analysis and design toolset, which now includes a read-only query language for accessing Objectbench model data, a user-defined functions menu and improved performance. Version 2.1 is up on Sun and HP workstations.

As expected (UX No 532), **Mergent International Inc**, Rocky Hill, Connecticut, is to market the AccessMaster security component of Compagnie des Machines Bull SA's Integrated System Management suite.

**Hewlett-Packard Co** and **Arbor Software Corp** are integrating HP's Intelligent Warehouse with the Arbor multidimensional database server, Essbase. HP Intelligent Warehouse OLAP Builder, is supposed to make it easier to retrieve Intelligent Warehouse's data descriptions, or metadata. It ships in October from \$20,000.

**Globetrotter Software Inc**, Campbell, California, has got away the first production release of its Flexadmin 1.0 GUI-based licence administration tool for Unix at from \$2,000; NT and Windows cuts follow.

**Hewlett-Packard Co** has gone to the enemy and put SunSoft Inc Solaris x86 up on the high-end models in its Vectra PC line.

Customer software developer **Vantive Corp** is relocating its headquarters from Mountain View just down the road to Santa Clara.

**Forte Software Inc**, the Oakland, California company that's spent a mint getting its second generation application development environment to market, is gearing up to announce version 2.0 of its software the week of July 10.

**HP** is working on massively parallel graphics options for its OEMed PA-RISC-based Convex Computer Corp parallel processor line.

Tahoe is the name **Hewlett-Packard Co's** given the integrated microprocessor PA-RISC/P7 architecture it's working on with Intel Corp. Getting to fab will be a \$2,000m-plus outlay.

The way we hear it, an **IBM Corp** microkernel that's been created in a 'clean-room' devoid of a shred of code that could possibly have been inherited from any other product, IBM or other, has been yanked as a user process and has instead been prototyped further down in the kernel, where performance gains of up to 1,000 x have apparently been achieved. The naysayers believe that at best the microkernel will end up as embedded technology, arguing that as a vehicle for OS/2 or other personalities it is doomed, despite the wishes of its mentor, IBM fellow Larry Loucks, who also lead the failed VRM microkernel on IBM's long-since abandoned RT 6150 Unix workstation.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram · X

KBN

20 JUNI 1995

The weekly information newsletter for the UNIX™ community worldwide

London, June 26-30 1995

Number 544

## DG ABANDONS RISC FOR CISC; INTEL SMP SERVERS TO USE DOLPHIN SCALABLE INTERCONNECT AND RUN UNIXES, NT...

As we correctly anticipated (UX No 527), Data General Corp is ditching its Motorola Inc 88000 RISC architecture and making what it hopes is a safer bet on Intel Corp architecture for its next-generation microprocessor requirements. DG says it'll create a new generation of AViiON servers (and maybe desktops too) that will incorporate up to 100 P6 CPUs running multiple operating systems including DG-UX, other Unixes and Windows NT. DG, still job-cutting and losing money, admits the most significant factor in its choice was the financial community's response to studies made of the price system vendors pay to support their chosen CPU architectures. The decision to go with commodity Intel components became a no-brainer, it says. The move will see DG deploy Intel's anticipated four-way P6 SMP motherboards, with memory, cache and a PCI I/O channel across a Non Uniform Memory Architecture (NUMA) backplane architecture - another way of saying distributed shared memory. The interconnect will be provided by Oslo, Norway-based Dolphin Interconnect Solution A/S' implementation of the IEEE Scalable Coherent Interface, which effectively bridges traditional bus architectures, such as PCI, with a high-speed point-to-point interconnect protocol. It also eliminates the 32 CPU bottleneck on traditional backplanes. Dolphin's SCI technology runs at up to 200Mbps now at very low-latency - the time taken to send messages - and is expected to rise to 500Mbps (*Dolphin details, page 3*). The well-regarded 64-bit DG-UX, already up on Intel iAPX-86 - but not yet re-architected for NUMA - will be the new systems' primary operating system, though NT, SCO, Solaris, UnixWare, NetWare and others will be offered, the company says. DG, which backs Intel CEO Andy Grove's notion that a Unixification process is underway on Intel platforms (UX No 536), claims less than 5% of DG-UX code - which was developed on the proprietary MV Eclipse - is CPU-specific, hoping to position current AViiON users' not insignificant re-compilation tasks in the best possible light. However, with an installed base of AViiONs worth well in excess of \$1,000m, it's a task DG says it'll go great lengths to address, while admitting that at the end of the day the decision to move is up to the user. It promises "hundreds" of applications up on the NUMA-enabled DG-UX next year, along with Spec I170 conformance. Specific product plans aren't expected until later in the year, but the company will move to NUMA in stages. It'll introduce a standard 16-way 133MHz Pentium server by year-end, systems with quad-P6 boards early 1996, and a full NUMA/SCI implementation late next year. It says it made its decision to go with Intel nearly a year ago, and cut a deal with Dolphin for SCI just after. Other SCI users include Convex, IBM and Unisys/Vitesse Semiconductor. Current AViiON customers will be offered systems with twice the current CPU count, now at 16, in new 88110-based models later in the year, though there's no mention of a higher-clocked chip.

## PC SERVER DIVISION TO MARKET POWERPC SERVERS SANS AIX

With the dust settled on the announcement of its "super clients" and new RS/6000s, IBM Corp is still left without the PowerPC servers running Solaris, NT and other operating systems that it's been promising (UX No 489). The only place anyone could have looked up to now has been its AIX-based RS/6000 division where last year the company seconded Michael Coleman from the PC Company to organise - apparently among other things - PC-style 604 servers and multiprocessors. If anyone was going to create PowerPC servers with non-AIX operating systems, insiders had said, it was he. Coleman and what came to be the PC Server unit inside the RS/6000 division claim responsibility for the technology deployed in a new crop of AIX-run 604-based RS/6000 workstations and servers that were announced last week along with the AIX and NT Power Series desktops from the Power Personal Systems Division - half of which are, if you look closely, the same boxes in different clothing (*see page 7*). But still no hint of Solaris or NT servers, and that's because, as the RS/6000 division's new chief Irving Wladawsky-Berger says, IBM wants to keep the division an AIX-only affair. So IBM has given Coleman the job of handling foreign OS platforms and in the last four months quietly spun out his unit into a separate 200-person PC Server division reporting directly to IBM senior VP and head of its amalgamated server business Nick Donofrio as do RS/6000, AS/400s and S/390 units. Coleman, who had once been VP of marketing and brand management at the IBM PC Company and then later general manager of PC Company-Servers, a worldwide unit designed to pull together the development and marketing of all PC-based servers, has inherited some one-to-six-way PCI/MCA/EISA Intel servers from his former undertakings that are now part of the new PC Server Division. Coleman is selling these with OS/2, Windows and NetWare and will currently support - but not sell - Windows NT, SCO and Banyan Vines on them. His task appears to be to take the guts of the 604/PCI-based Power Personals, which are in fact the RS/6000 entry-level workstations, and rearchitect them into something that that looks on the outside like one of his Intel servers. When this might happen Coleman isn't saying, and why it hasn't happened yet we don't know, but these will be vehicles for Solaris and NT and other OSs. Coleman right now is also the catch basin for special bids. If someone wanted a bunch of Wladawsky-Berger's new entry-level 43P workstations, and wants to run Solaris and NT or another server OS on them, the account would be referred to Coleman to put it together. Otherwise, 60% of his current business is coming from low-end 300 series PCI/EISA Pentium boxes constructed as Novell LAN servers. Another 35% derives from one- and two-way PCI/MCA 320s and MCA-based 500s that mostly go out with OS/2 and sometimes NetWare and NT. The rest comes from an OS/2 one-to-six-way 720 PCI/MCA superserver. Other configurations are due plus a new 3.0 cut of IBM's NetFinity systems management software designed for the PC servers. Coleman's got VP, server systems Bill Hoke leading his development team.

## HP ROLLS OVER TO UNO POSITION WITH RE-VAMPED OBJECT STRATEGY

Hewlett-Packard Co appears to have resuscitated its rather sickly ORB-Plus object request broker as part of a re-vamped object campaign and now promises support for the TCP/IP-based GIOP/UNO Corba 2 interoperability specification it and DEC lobbied unsuccessfully against late last year (UX No 510). HP maintains that DCE RPC remains the more reliable communications path for the present, but says that by the fourth quarter it'll have calved a beta version of ORB-Plus supporting both DCE and UNO mechanisms. General ships of the ORB-Plus development system, which HP appeared to be cutting loose in favour of a shrink-wrapped object product strategy after the OMG vote went against it, will begin in the first quarter of next year. It isn't disclosing where it's gone for its GIOP/UNO support and says it's unlikely to reveal the source even when the request broker ships. ORB-Plus is just one component of HP's re-written object story, now endowed with a single voice via a newly-created Enterprise Object Programme unit based in Cupertino. The programme will funnel object work being carried out across the organisation into a couple of development labs. It's run by marketing manager John Whelan, plus a technical director, both reporting to Computer Systems Group boss Bernard Guidon.

### The next step

HP, which currently supports NextStep natively on its PA-RISC and on its iAPX-86-based line wouldn't comment on whether it'll upgrade its relationship with Next to include the forthcoming operating system-independent OpenStep, which SunSoft is implementing as the key component of its DOE environment. However Next already admits to having cooked-up a deal with HP (UX No 543) that should be in the window in around five weeks' time, leading observers to gossip there could be other ingredients. HP says NextStep remains a standalone solution as far as it's concerned, having yet to demonstrate how it'll dish-up a full ORB implementation. Meantime HP says its remains committed to its Taligent investment, planning to introduce CommonPoint-based products next year. It's glad Taligent no longer harbours any desire to do the TalOS microkernel - which HP had no mind to adopt in any case - claiming it lobbied hard for the IBM/Apple/HP concern to focus on the application and development environments. HP, which is porting Taligent to HP-UX, will tie its SoftBench C++ and Distributed Smalltalk development environments into its various object concerns. It had originally planned to tie its object products into IBM's System Object Model but says the notion didn't pan out and that interoperability with SOM and other object models will be accomplished through OMG IDL. HP hasn't decided whether OpenDoc or OLE will provide its document interchange requirement claiming it's still trying to understand what customers want from a market where there's currently very uneven investment.

## NEW 604-BASED RS/6000s ROLL; BUT NO SMP

As expected (UX No 543), IBM Corp's new RS/6000s models include 100MHz, 120MHz and 133MHz PowerPC 604, PCI/ISA-based 43P workstations. They are almost identical to the company's Power Series desktops - see page 7 - but have more robust SCSI instead of IDE drives and 2D and 3D graphics support. They come with from 16Mb to 192Mb RAM, 540Mb to 5Gb disk, 3 ISA and 2 PCI/ISA slots, E15 graphics adapter and 512Kb cache (256Kb standard on the 43P-100). They are rated at 128.1, 157.9 and 176.4 SPECint92 respectively and 120.2, 139.2 and 156.5 SPECfp92 respectively with their caches. With 13.6" colour screens, CD-ROM and floppy drive the units start at \$6,205 (43P-100), \$7,315 (43P-120) and ~~\$7,620 (43P-133), and ship on July 7. They come in above the existing 40P and 25T workstations. The 40P to 43P upgrade is \$2,000. The 120MHz~~ 604, Micro-Channel Architecture bus-based model 42T upgrades the existing 41T. It comes with from 16Mb to 256Mb RAM, 1.1Gb to 4.4Gb disk, 4 MCA and 1 graphics slot and 512Kb optional Level 2 cache. It's rated at 118.2 SPECint92 and 116.5 SPECfp92 (150.2 and 146.5 respectively with L2 cache). With a 16" colour screen, floppy drive, Power GXT150L 2D graphics and Ultimedia audio adapter it's from \$10,950 from July 7. Models without the adapter or screen - the 42W - is from \$9,550. New GXT500 and GXT500D 1,280 x 1,024 graphics cards are available for the 42W (no monitor or audio adapter), 42T (with adapter and screen) and 41W and 41T. The GXT500 is a double-buffered 12-bit add-on, the GXT500D is a 24-bit double-buffered system. Both support OpenGL, PHIGS APIs and are from \$5,800 and \$7,800 respectively.

### Servers

The 80MHz C10 uniprocessor server is succeeded by the 120MHz 604-based C20 with 16Mb to 256Mb RAM, 1.1Gb to 6.6Gb disk, 4 MCA slots and up to 1Mb L2 cache. It's rated at 118.2 SPECint92 and 116.5 SPECfp92 (155.0 and 150.2 with L2 cache) and costs \$11,500, also from July 7. Dual-CPU 75MHz 601 upgrade cards that turn the J30, G30 and R30 SMP servers into six- and eight-ways from the current four-ways, start at \$15,000 from the end of August. IBM reports an eight-way J30's throughput at 3,119 tpmC against the similarly-configured HP 9000 T500 at 3,118 tpmC and Sun's SparcServer 1000E at 1,204 tpmC. The TPC council says the comparison is not valid because IBM is using version 3.0 of the TPC-C benchmark and the HP and Sun figures were cut with version 2.0. Although vendors and other observers say throughput measurements using TPC-C 2.0 and 3.0 test suites are comparable, price/performance comparisons between results from the different tests are useless because 3.0 has eliminated the use of terminals. The TPC council meanwhile is struggling to eliminate confusion in TPC-C reporting and wishes to invalidate altogether the mixing of results from the different suites. Two TPC-C suites became necessary when vendors began configuring cheaper, commodity terminals in place of their own more expensive solutions to lower overall system costs and produce better TPC-C 2.0 cost of ownership numbers. 604-based SMP RS/6000s aren't now expected until later in the year - IBM says six-way 601s will perform at the same level as quad-604s.

### 604 numbers

Although IBM's new units use the latest 120MHz and 133MHz PowerPC 604 cuts, the systems don't perform as well as Somerset's processor performance marks (UX No 543). Originally the 100MHz part was estimated to reach a SPECint92 of 160 and a SPECfp92 of 165, the 120MHz to go to 180 SPECint92 and SPECfp92, and the 133MHz to 200 SPECint92 and SPECfp92. The new IBM RS/6000 models show the processors falling short of expectations. They also show the extent to which it is unwise to assign a SPECmarks to a chip, rather than an entire machine. The 43P shows a 100MHz 604 with 256Kb of async level 2 cache producing SPECint92 128.1 and SPECfp92 120.2. Doubling the size of the cache and making it synchronous improves the figures to SPECint92 140.8, SPECfp92 129.1. At 120MHz, and with the 512Kb cache, the machines manage 157.9 SPECint92 and 139.2 SPECfp92. The speediest, 133MHz part is measured at SPECint92 176.4 and SPECfp92 156.5. In summary, a 133MHz 604-based machine is carrying out floating point operations slower than the alliance suggested a 100MHz chip would, while integer figures at 133MHz are worse than we were lead to expect last week from the 120MHz part. IBM says it's all down to a first cut of memory controllers used in the machines. As for the next stop, IBMers say that 150MHz and 180MHz versions of the 604 are planned, but no timescales were given. Motorola is the one member of the alliance that has yet to announce machines using the 120MHz or 133MHz processors.

## TADPOLE SEEKS BUYER

Troubled Tadpole Technology Plc is thought to want to save itself more pain by finding a buyer for the assets of its P1000 Pentium-based portable computer line, which it had hoped to turn into a high-volume product. The problem is that a high-volume product does not fit in with its niche market Unix portable computers or its OEM boards business and requires different skills. The company has called in merger and acquisition specialists Broadview Associates Ltd to review "strategic partnership alternatives aimed at maximising shareholder value." The company tries to reassure by saying that assuming it is able to eliminate monthly losses soon, it expects to have sufficient cash resources to fund its currently projected business levels from existing banking facilities and discussions with US-based lenders.

## SOLARIS 2.5 HELD FOR ULTRASPARC, SO POWERPC EDITION MUST WAIT UNTIL Q1

SunSoft Inc's Solaris PowerPC Edition will be available for each of IBM Corp's 'super clients' from March 1996, with a beta programme set to kick in from this September. Both companies and their respective channels will supply the software; no prices have been set. Although engineering work on the PowerPC port of SunSoft's Unix is complete, the company decided against offering an interim release of what's effectively the next cut of Solaris - version 2.5 - on third party platforms so as not to risk upstaging its debut on Sparc, or more precisely UltraSparc, later this year. SunSoft had been hoping to get all three Solaris flavours - Sparc, Intel and PowerPC - which are derived from the same source code tree, on to one CD-ROM for distribution, but it isn't clear when that'll happen with the PowerPC implementation currently trailing Sparc and x86 releases by around a quarter. SunSoft's obviously keen to bring Solaris' SMP and multithreading strengths into play, but will have to wait until IBM gets the SMP "super clients" units away, now expected towards the end of the year, or until the new PC Server division gets its PowerPC tin out of the crate. IBM says there are no major hurdles it's got to clear to get the super client SMP work out, it's just a matter of tying up a bunch of loose ends. Indeed IBM's Solaris group received its first SMP 604 development units a couple of weeks ago.

### Applications

IBM and SunSoft were demonstrating Westborough, Massachusetts-based Applix Inc's Applixware suite; Danvers, Massachusetts-based imaging software; Federal Way, Washington-based Syntax Inc's TotalNet Advanced Server LAN connectivity software and Santa Clara, California-based Parallax Graphics Inc's video cards running on the desktop PowerPC Edition of Solaris they had running at last week's event. The two reckon they have 20 ISVs now porting to Solaris for PowerPC and expect to have 50 applications up and running by the first quarter of next year when it becomes generally available. The two already have 10 customers on a limited availability programme, including Scottish company Edinburgh Portable Compilers Ltd, based in Edinburgh, which will supply Cobol, Fortran and Pascal compilers for the implementation. SunSoft is offering its WorkShop C and C++ compiler and development tools. Of the ISVs IBM and SunSoft approached, ironically only Lotus Development Corp declined to join the programme, saying it already had too much Notes work on its plate. In light of IBM's planned acquisition of Lotus, the Solaris team has been encouraged to re-approach the company.

### Other OEMs

Under the current arrangement IBM has rights to offer the Solaris PowerPC Edition only on its super clients, although it says it could easily supply a large customer order for Solaris on servers under individual arrangements if required - see front page. As IBM irons out its server strategy SunSoft is confident the company will be back to extend its current agreement to include server implementations of the Solaris PowerPC Edition. Indeed SunSoft claims its got a handful of other PowerPC system vendors lined up behind Solaris that it'll publicise next quarter. Firepower Systems Inc, Menlo Park, California, says it'll have a version of Solaris on its uniprocessor and SMP 604 boxes later this year. Firepower is supplying its currently Windows NT-only systems OEM to the Costa Mesa, California-based Computer Systems Division of its backer, Canon Inc, and to IPC Technologies, the Austin, Texas-based arm of IPC Corp of Singapore. The Canon computer division which is also offering the re-badged IBM Thinkpad 820 as its PN-100 Power Notebook, says it'll also offer Solaris, AIX and the next-generation MacOS Copland release on notebooks, workstations and future PowerPC servers. Other likely Solaris PowerPC Edition partners include Compaq des Machines Bull SA, Sparc and PowerPC house Tatung Co.

### PROGRESS PREVIEW VERSION 8

Progress Software Corp is to preview some elements of Version 8 of its Progress Application Development Environment at its first annual worldwide users conference in Orlando, Florida this week. Progress Version 8 has just entered beta and is scheduled for customer availability in the autumn. The aim is to establish a reusable application component architecture for software components that Progress calls SmartObjects. Version 8 will include a development framework and on-line wizard help system to help developers produce and support SmartObjects, and will also support the integration of VBX components from the Visual Basic world, including those offered by the company's own recently acquired Crescent Division. It will also include a new Translation Manager to help with internationalisation issues.

#### Suspicious

Despite its Crescent buy, Progress remains highly suspicious of the world of Visual Basic. Gail Goodman, VP of marketing at Progress claims that, despite its apparent success, Visual Basic has been a total failure producing applications supporting more than ten users, and says that VBX "objects" are very low-level, low functionality components, responding only to mouse-click events. The easy visual interface at the front-end can also fool programmers into biting off more than they can chew at the back-end. "If you can't see the total problem when you begin, you're trapped," she says. Crescent itself is working on a Basic to C++ translator/compiler product codenamed Spitfire that should deal with some of the performance problems and help Visual Basic users avoid the awkward transition to Visual C++. But Progress is working at it from the other end as well. It views client/server architectures as a kind of iceberg, with the visual client element showing above the waterline while the bulk of the iceberg - the logic and data elements running on the server - remain hidden under the sea. These are the elements most likely to scupper the boats of unwary visual programmers, says Progress.

#### SmartObjects

Using the OMG's Business Object Model as its basis, Progress will begin offering its users and third party software developers the facility to use customisable components through Progress SmartObjects. Developers writing SmartObjects in Progress' 4GL language will be able to specify areas where future customisation can be carried out, allowing customisation at the compiled component level, with no source code involved. VBX components can be surrounded by SmartObjects in order to add the necessary logic and data layers, and Progress says that other non-Progress-built components can also be integrated (though not customised in the future like SmartObjects). Progress says it's consulted its third party developers over SmartObjects, and that they are behind the move and will support it - vital, because the company says that \$1000m worth of third party Progress applications were sold in 1994 from 2,400 applications partners. While the first SmartObjects will emerge in the Autumn with Version 8, the transition of Progress into a full object-oriented development will take place over the next year or so, with a full typing methodology and inheritance capabilities added to the Progress 4GL, and an Advanced Storage Architecture (ASA) database and active repository promised for the first half of 1996. This will support databases of 100Gb and up with high-availability features for on-line rebuilds. ASA will support third party repositories as well as its own, it says. Further applications development tools for building, customising, assembling and managing objects will also emerge next year. Progress says it has now shipped over 250,000 licenses.

### ADOBE BIDS FOR FRAME IN \$500m SHARE SWAP

PostScript House Adobe Systems Inc, which got into the desktop publishing business by acquiring Aldus Corp and its PageMaker software for \$525m last March (UX No 479), now wants to get into the Unix STP market and proposes to swallow Frame Technology Corp and its FrameMaker technical authoring software by exchanging every Frame share for 0.52 Adobe shares in a deal valued at around \$500m which will go to the Frame board in September. Adobe posted revenues of \$336.5m for the six months to June, up 18% on last year, and profits of \$68.2m up 88% on last time. It reckons the combined company will have revenues of \$725.6m. Aside from FrameMaker itself, Frame has been moving into on-line document distribution of late with its FrameViewer on-line document viewer (an Adobe Acrobat competitor) and HTML editors and conversion tools. Adobe, meanwhile, has been working closely with Internet browser company NetScape Communications (UX No 533 & 534). In the meantime, Frame is in the middle of acquiring document conversion specialists MasterSoft Inc of Scottsdale, Arizona, also by stock-swap (UX No 541).

### ORACLE'S WAREHOUSE PARTY

After splashing out \$100m for IRI Software Inc's Express family analytical processing tools (UX No 543), Oracle has announced a veritable cornucopia of data warehousing products, services and partnerships as the Oracle Warehouse, designed to put all of its products for that market under one roof. New products include an Oracle Parallel Server 7.2 release tweaked for sorting. The Redwood, California company says 7.2 will deliver twice the performance of 7.1, with drill down analysis performing at up to 10 times as fast. Release 7.3, which goes to beta next month and will ship by year-end, will provide additional parallel indexing, complex queries and drill-down analysis functionality. Adding to its 2000 series is Discoverer 2000, Oracle's answer to front end data manipulation. It comprises different levels of complex query and data retrieval tools. Discoverer 2000 is essentially designed to hide complex query structures and SQL expressions from the user, while requesting and retrieving information. The company is also shipping Oracle7 Multidimension for Solaris and Digital Unix, which is a mechanism for storing complex data types, including spatial data, such as maps, digitised images and charts, (UX No 532). Other Oracle Warehouse products include Oracle Open Gateways, its gateway product which connects the database to other data sources, such as ISAM and flat files. Oracle has also signed up more than 30 ISVs and partners for Oracle Warehouse. Members include Austin, Texas-based Evolutionary Technologies Inc whose Extract tool manages meta data and transforms legacy data for use; Andyne Computing Ltd for its Andyne GQL decision support tool for relational data sources, and Andyne Pablo, its decision support tool for multidimensional data sources; Princeton, New Jersey-based Logic Works Inc for its data modelling tool; and Sunnysvale, California-based Prism Solutions Inc.

### DOLPHIN WINS DG, SNI FOR ITS SCI INTERCONNECT

Dolphin Interconnect Solutions A/S was spun out of former Norsk Data affiliate Dolphin Server Technology A/S back in 1992. Dolphin Server was eventually sold to state-owned Norwegian telecommunications group, TBK Telematik, for an undisclosed sum back in January 1994 (UX No 469), whereafter it became a subsidiary focusing on support. Dolphin originally developed 88000-based servers using a Scalable Coherent Interface interconnect implementation that was widely admired at the time but didn't catch on. So in the sense that Data General and Dolphin were 88000 fellow-travellers, their reunion - *see front page* - makes good sense. Dolphin Interconnect Solutions meanwhile has grown to a 35-strong operation with its headquarters and development in Oslo and a five-person marketing operation in Westlake Village, California. It's "nearly" profitable, according to VP Kare Lochsen, one of Dolphin's original founders. Dolphin has implemented the 1992 IEEE Scalable Coherent Interface interconnect protocol in chip sets, adapter cards and subsystems. They can be used in SMP server design, scalable I/O system and clusters of workstations and servers. In March, Dolphin introduced a Sparc cluster interface as a single-slot SBus-SCI adapter card it says transmitted an application-to-application message in four microseconds. It says proposed cluster interconnects such as Ethernet, FDDI, ATM or Fibre Channel which rely on TCP/IP can't approach this kind of latency. This month Dolphin won Siemens Nixdorf Informationssysteme AG for a PCI-SCI bridge chip and SCI protocol engine which SNI will be using in new SMP Unix servers. SNI will integrate the SCI protocol engine in two ASICs which will be used with Dolphin's SCI link interface chip for external expansion that requires cabling. A PCI-SCI bridge chip with the engine on-board will then be used by SNI in new PCI-based I/O systems. Extensions to the IEEE SCI standard for real-time, for creating very large systems as well as performance enhancements to the transport protocol itself are said to be underway. Dolphin claims it has a bunch of NDA wins stacked up and a new line of SCI technologies ready to roll.

### X/OPEN OFFERS CDE BRANDING

X/Open Co Ltd has formally launched its branding program for GUI products conforming to the Common Desktop Environment (CDE), bringing to a close the so-called fast track adoption process begun back in November 1994 (UX No 507). The CDE brand requires adherence to the following specifications; X Window System (Version 11.5) - X Window system protocol, X Lib API, X toolkit intrinsics, X Window system file formats and application conventions; Motif toolkit API (Version 1.2); XCDE calendaring and scheduling API; XCDE Services and Applications and XCDE definitions. CDE branding is available now and starts from \$2,000 for X/Open branding program members and \$25,000 for non-members. There's no indication of when the first branded products will appear.

## 64-BIT POWERPC 620-DERIVED AS/400s ARRIVE ON CUE

The 64-bit PowerPC derivative-based AS/400 Advanced Series arrived from IBM Corp on schedule last week and users transferring existing workloads to the PowerPC AS-based machines will be able to take immediate advantage of 64-bit processing with their current applications. Current AS/400 Advanced Series systems can be upgraded to PowerPC AS, and anyone with anything later than a B Model, an AS/400 Advanced Portable or AS/400 Advanced 36 can upgrade to the Advanced Series while retaining their serial number (that way, IBM gets the used machine off the market). The RISC models are the AS/400 Advanced System models 400, 500, 510 and 530 and the AS/400 Advanced Server models 40S, 50S and 53S, each with four processor options. The 530 and 53S can have two or four processors. OS/400 Version 3.6 adds support for NetWare Loadable Modules and runs NetWare on the 80486-based File Server Input-Output Processor. Notes support is to be added shortly; it offers 450 of the Spec 1170 application programming interfaces for migrating compliant Unix applications, offers connection to the Internet via World Wide Web browsers, the promised graphical interface, new object-oriented application development tools, and parallel access capabilities are planned for the integrated DB2 for OS/400 database. Most of the features are already in OS/400 3.1, waiting to be activated. Up to 32 systems can be clustered using OptiConnect fibre optic links.

### Generic PowerPC

The PowerPC AS microprocessors currently comprise the A10 at 50MHz and 77MHz, a three-way superscalar microprocessor with 4.7m transistors in CMOS, and the 125MHz and 154MHz A30 four-way superscalar seven-chip set (which may go down to 119MHz) with 23.7m transistors in BiCMOS. Both are derived from PowerPC 620 with additional instructions and different caching algorithms. In the A10, the symmetric multiprocessing support is stripped out and it has 8Kb instruction, 8Kb data cache on chip, and supports 1Mb optional second level cache. The A30 seven-chip set does have one-, two- and four-way symmetric multiprocessing support (one-way is reminiscent of the sound of one hand clapping) and consists of two CPU chips with a total of five instruction units, one floating point unit, and four memory sharing parts. The A30 has the same 8Kb instruction cache, but the data cache is 256Kb, so no level two. IBM hopes to collapse it all onto one chip in due course but in the meantime plans clock-speed improvements and other enhancements that'll provide both a higher top-end and improved entry-level performance. As well as a single-chip implementation of its PowerPC 620 variant, Glen Van Benschoten, director of systems product management says IBM's Rochester labs will also move AS/400 on to a generic PowerPC part. He says he already knows when and on what part that will be, but wouldn't comment further.

### 300% price/performance improvement

IBM intends to provide system performance improvements for the Model 53S of up to 300% over the most powerful non-RISC AS/400 Advanced Server, the Model 30S, and to improve system performance of the 530, with its four-way processor, by at least 50% over the non-RISC Model 320 four-way. Only the 53S and 530 include symmetric multiprocessing support for two-way or four-way multiprocessors. The new line supports up to four times as much main memory, twice as much disk and over twice as many lines as current systems - up to 7,000 terminals on a high-end model, up to 16 local nets. AS/400 Advanced Series models 400, 500, 510, 40S and 50S arrive in September with volume ships in the fourth quarter. The 530 and 53S follow in November with volume in first quarter 1996. Prices go from \$9,000 for the entry-level 400 to \$195,000 for the Model 510. Details of the 530 and 53S will be announced in October.

### Easier than porting to Unix

With the OS/400 system now running NetWare on the 80486-based File Server Input-Output Processor - see above - Van Benschoten says he's got a bunch of other irons in the fire that will eventually see other operating systems, and therefore applications, up on the system. But again, he wasn't saying when that would likely be. The division could add support for other Intel-based environments to the FSIOP, including OS/2, and was dropping large hints that Santa Cruz Operation Inc OpenServer would be next up. Van Benschoten said the company is also looking at Windows NT, but had not yet made a decision about whether it would figure in its plans. Another way to get other applications over would be to follow the API route. The division is currently porting Unix Spec 1170 interfaces to OS/400 to encourage ISVs to make their Unix software available to the 300,000-odd installed AS/400 base. Van Benschoten said the objective is to make it "easier to port to the AS/400 than it is to port between Unixes." OS/400 3.6 will see 450 of the Spec 1170 APIs ported. The final iron is the microkernel route; providing OS/400 with a microkernel that could host other operating system personalities (UX No 486). IBM's experience with microkernel technology thus far doesn't inspire confidence in this solution, although Van Benschoten maintains that work is progressing on each of these fronts and that no option has yet been ruled out.

## QUALITY SOFTWARE FALLS IN LOVE WITH GRAPHICAL INTERFACES

It's amazing the difference a decent graphical user interface makes. "It is beautiful," gushed Quality Software Products Plc's chairman Alan Mordain. He and his colleagues believe that with the new release 4.3 of Universal OLAS, or on-line accounting system, they have got a truly open one, and thus a real competitor to SAP AG's R/3 system. Taking what he dubbed the "three-tier client-server" model as the ideal, the Gateshead, Tyne & Wear company has now achieved the triumvirate of success at the data, logic and presentation layers, according to Mordain. Quality has moved in the space of 18 months from what he called "a non-intuitive GUI" to a shiny new all-singing, all-dancing version, using Dynamic Data Exchange to enable users to import data into any widely-used spreadsheet or word processor running under Microsoft Corp's Windows. But at all time, security profiles of users are maintained, whether they are working in an OLAS module, or in a spreadsheet, for instance. Behind the front end, the changes have been equally, if not more, significant. Workflow and document imaging are greatly enhanced with the new version, according to the company. Documents can be captured, stored and indexed with optical character recognition, ready to be called and used by any other part of the OLAS system. A workflow product from Wang Laboratories Inc has been integrated into OLAS, enabling the automation of more mundane tasks, such as completing an invoice. Wang Workflow takes the relevant information from wherever the user happens to be in OLAS and fills in the invoice, which could be in a separate module, hitherto unexecuted by the user. Universal OLAS can also be linked to external workflow products. Another use for workflow can be seen in the new business event manager module, said the company. This is part of the wider procurement management process and can recognise pre-defined events - which can also be customised - and update the user's diary, or any other action that is required, such as the authorisation of an order. The other new module added to the procurement management software is buyer decision support. It was written using Lotus Development Corp's Notes and includes a Notes engine for issuing and receiving documents in a variety of formats, and covers the entire purchasing process from specification of requirements through to the completion of the contract. The purchase order processing, commitment accounting and accounts payable modules have been enhanced and integrated with the new ones, according to the company. Universal OLAS 4.3 is available now for IBM Corp mainframes under MVS; RS/6000s running AIX; Sequent Computer Systems Corp Symmetry machines under Dynix/PTX and Hewlett-Packard Co's HP 9000 Series 800 running HP-UX. A Windows NT version is now in beta test.

## OEC LEVERS NETWISE MAINFRAME DATA ACCESS TOOLS

Open Environment Corp, Boston, Massachusetts, has enhanced its Entera three-tier application development system with software it says will reduce the need to migrate MVS applications off the mainframe when creating new client/server applications. There's an Entera Client for Open Edition, Entera/TransAccess for MVS and an Entera port to MVS OpenEdition. OEC says the client for OpenEdition provides DCE connectivity, whilst shielding programmers from writing native DCE client code by automating the development of client communications code that links GUI development tools such as PowerBuilder and Visual C++ to DCE servers running under MVS OpenEdition. The client allows users to build desktop applications to run on Windows, Windows NT, Macintosh and OS/2, even if those systems are not running DCE. It ships in July, starting at \$2,000 per development desktop with runtimes from \$20 to \$90 per user. Entera/TransAccess for MVS will ship mid-July. It incorporates Entera integrated with Netwise Inc's TransAccess mainframe data access technologies and the company claims it will allow non-DCE mainframe environments to be integrated into its DCE-based three-tier application schema. Distributed clients can access MVS servers, and MVS servers can in turn be clients to other applications and data sources outside of the MVS environment. Entera/TransAccess for MVS can invoke CICS and IMS applications for read and write access, and utilise existing data integrity rules as part of the environment. No prices given.



## PARALLEL LINES

It looks like September's CMP/Gartner Group-sponsored Commercial Parallel Processing Conference is going to be chokka with new high-end stuff. But maybe they should be calling it the high-end SMP, SMP clustering, parallel processing, commercial MPP and supercomputer conference, judging by the folk that graced last week's warm-up event in New York city. ~~General consensus is that after decision support, warehousing and data mining, high-end and highly scalable technology will find its way into first messaging and then intelligent transaction solutions.~~ By the year 2000 parallel technology will be endemic, Gartner claims.

### HP's Enterprise Parallel Clusters

Hewlett-Packard Co has a new high-end strategy it's calling Enterprise Parallel Clusters (EPC); although there's not too much parallelism apparent in the traditional sense. Eschewing a shared-nothing approach HP will, from September, begin tying its commercial SMP HP-UX servers together for high-end customer requirements using high-speed Fibre Channel technology currently deployed on its workstations. By the way, its re-badged Convex Computer Exemplar SPP systems are strictly technical engines, it says. EPC will also employ a new programming model HP likens to auto-focusing camera techniques where the lens will automatically refocus itself to accommodate a moving target. It says its model will predict the kinds of questions users want to ask and formulate data in readiness.

### DEC Memory Channel

Like HP, DEC doesn't have a shared-nothing parallel system in its sights, planning to lever the raw speed of its 64-bit Alpha AXP for high-end requirements. The company says it's got as many as 200 people now engaged on decision support solutions and - to the horror of the TPC Council - claims its 12-way AlphaServer 8400 TurboLaser will record 9,000 tpmC by September. At that time it'll debut its 100Mbps Memory Channel interconnect it says will link SMP nodes with a latency of less than a millisecond over bog-standard SCSI cabling. Memory Channel will begin aboard a multichip set before it gets down to a single chip implementation. DEC said it went a long-way down the Non-Universal Memory Architecture (NUMA) model being employed by the likes of Data General Corp - see page 1 - before it realised the kinds architectural restraints this approach imposes on developers and just how well latency could be reduced with its home-grown technology. Both DEC and HP will leverage their existing Unixes to provide a single system image of each node or cluster, not the system as a whole. DEC says it's currently working on a deal that could result in a 1TFLOP, \$150m system sale.

### AT&T's petabyte system

Meantime, AT&T GIS is readying the long-delayed system implementation of its next-generation BYnet interconnect for announcement around the same timeframe. The project, still known internally as 3700 - though it won't come to market as that - is an MPP hardware/software development running the Teradata database with high-speed fibre links between nodes. AT&T says it's definitely not OEMing Intel Corp's SPP parallel system (UX No 536), claiming its own unit could interrogate up to a petabyte, or 1,000 terabytes of data. AT&T still claims the world's largest commercial database, the 4Tb WalMart stores system that's moving up to 7Tb.

## SMP "VERY DIFFICULT" FOR HIGH-END DATA PROCESSING, SAYS FIDELITY INVESTMENT

The view on high-end commercial SMP and MPP solutions from the customer bench is that these solutions are being employed primarily to transition businesses from a product marketing focus to doing customer-focused marketing. Doing his best not to upset, John Trustman, senior VP retail systems marketing at Fidelity Investment - also a customer of more than half a dozen of the high-end SMP/MPP vendors present at last week's parallel processing conference in New York - says that whilst SMP is very difficult to employ for most high-end requirements, every vendor Fidelity uses has some technology that is best in its field, and that no shoe currently fits all sizes. However he admitted that Fidelity had previously searched for the one perfect partner for three years without finding it. Trustman said Fidelity had already covered its two-year old investment in MPP through the savings it's made in postage and paper alone. Moreover he claimed that within a year to 18 months at least six or seven MPP vendors will have the kind of full-service solutions on offer that Fidelity could use.

## CHEN SYSTEMS OUT OF BLOCK, SMP UNIXWARE-ON-PENTIUMs DUE SEPTEMBER

Cray X/MP and Y/MP designer Steve Chen has debuted his anticipated UnixWare 2.0-on-Intel venture as Chen Systems Inc (UX No 530). The Eau Claire, Wisconsin-based company is touting its one-to-eight way servers, based upon 133MHz Pentiums running Oracle as commercial SMP vehicles for data warehousing, decision support, OLAP and video/multimedia applications. They'll ship in September. The systems, which incorporate a dual PCI bus for parallel disk I/O, are claimed to deliver better performance as 100MHz eight-ways than a 20-way Sun SparcCenter 2000, though the company was unable to supply any figures. Chen says the goal in founding the company was to design the best features of mainframes and supercomputers into a new generation of high performance servers based on core systems built from readily available standard components. The company claims its systems incorporate a new generation of parallel architecture and system management features essential for large enterprises to run strategic and mission-critical application systems in a client-server environment. Chen Systems - actually founded by CEO Chen in February 1993 - won backing from Singapore company MCSB in April 1994 and claims Oak Ridge National Labs and Mercedes as beta sites for systems it had up and running at the beginning of this year. Chen's former company, Supercomputing Systems Inc, went under in 1992 when IBM Corp funding ran out. Cray Research bought-up SSI's intellectual property. Chen claims US offices in San Francisco, Atlanta, Boston, Chicago, Los Angeles, Washington DC, Munich, Paris and Singapore, and will offer its systems through resellers and OEMs though it couldn't reveal any partners. Chen will use Citrix Systems and others for Windows NT on the boxes by year-end.

## CA SHARES RISE ON PROFIT WARNING. WHY?

Computer Associates International Inc announces that it will be taking a huge hit against its profits to account for the acquisition of Legent Corp - currently stalled by anti-trust investigations - and its shares go up. Reason, the *Wall Street Journal* explains, is that investors are warmed by the knowledge that the whole hit will be taken in one go, and will not be a damper on profits for years to come. Usually, accounting rules force corporate buyers to post any payment above the book value of the acquired assets - goodwill in other words, on their balance sheets, and have to write it off against profits for many years - but a Financial Accounting Standards Board rule from the mid-1970s called Fin 4, allows purchase costs assigned to all purchased research and development to be expensed or instantly deducted from profits, rather than amortised, or written off over a period of years. Now the accounting rule makers are having second thoughts about the rule, and may limit the Fin 4 benefit to buyers.

## MISSISSIPPI CLUSTERING SET-BACK

Compagnie des Machines Bull SA's clustering technology, code-named Mississippi, has suffered a set-back. Didier Breton, vice-president of the Open Systems & Software Division, says only four-node PowerPC 601 Escalas will be released "this summer", but will not be more specific or give a price. It was previously thought that clusters of up to eight Escala nodes would be possible by then. The company says PowerPC 620 systems are still on schedule for the first half of next year. Alain Couder, president of the Open Systems & Software Division, says the division is on target for the company-wide goal of profitability by next year.

## SCO CREATES THIRD DIVISION, FOR LAYERED SERVER PRODUCTS

Santa Cruz Operation Inc has created D3, its third development group, by spinning a new Layered Server Product division out of D1, the Server Products division. It'll develop and acquire layered products to run on SCO OpenServer, including PC connectivity services and systems management. VP Richard Treadway, formerly head of the Santa Cruz Development Center will head the unit. The Server Products division is now called the Platform Products division and is headed by Gary Daniels, formerly head of the European Development Center. Scott McGregor, senior VP and general manager of SCO's Japanese operation, will oversee D1 and D3. D2, the Client Integration Products division is still headed by senior VP Ray Anderson.

### **INFORMIX, ICL ICIM SET BIG INDIAN DEVELOPMENT BASE**

It has taken 25 years of often frustrating effort to get where it wanted to be, but India is finally being recognised as a first rank location for software development, and its latest win is Informix Software Inc, Menlo Park, which has just opened a new worldwide software development centre in Bombay - with help from ICL Plc's Indian affiliate Fujitsu-ICIM Pvt Ltd. It describes the new base as a critical extension of its research and development efforts, and will become its largest outside the US - the others are in Tokyo and Dublin. The centre will be responsible for design, development, conversion and maintenance of Informix database products and application development tools for sale worldwide. It plans to invest \$12m to \$15m in it by 1998.

### **McNEALY GETS "DEATH THREAT"**

The week before last, on the Friday morning, Sun Microsystems CEO Scott McNealy strolled into his office and stood transfixed for a moment. There on his desk, under a spray of black roses, was a small black-draped coffin. Steeling himself, he opened the lid as a dirge began to sound. Inside was a copy of Solaris and a note signed by 50 of Microsoft's "Not There" developers. Obviously such dramaturgy is a perverse kind of compliment, like some bygone salute between gallant foes. McNealy might also take a moment to reflect on the day, years ago, when Nikita Krushchev came to the UN, took off his shoe, banged it on the podium and promised "We will bury you." It was scary at the time but it's his empire that's in tatters.

### **PARAMETRIC GARNERS ISV SUPPORT**

Waltham, Massachusetts-based Parametric Technology Corp has recruited a bunch of ISVs to work with its Pro/Engineer mechanical design automation software. Arscimed SA, Paris, France, will extend its Mainstream simulation and visualisation tools to allow Pro/Engineer to test the performance of objects under anticipated physical conditions. Cadtrain, Newport Beach, California will develop computer based training. Maywood, New Jersey-headquartered Cimsotek Inc plans a a bi-directional Pro/Engineer-to-Catia translator, and Independence, Montana-based Optimization Inc will integrate automatically nested part layouts and toolpaths into Pro/Engineer.

### **QUALIX WINS \$2M TO EXPAND PARTNER PROGRAMME**

Having secured \$2m VC funding from Hambrecht and Quist, bringing its capitalisation to \$6m, US Unix software distributor Qualix Group Inc is aiming to accelerate its Qualix Partner Program by going on the acquisition trail and financing a partner program it hopes will bounce it into the system administration and Internet security market. The San Mateo, California company will continue to provide sales, marketing and support to sub-\$3m companies without the clout to push products to market, but is now also seeking to make investments. It likens itself to a software house without in-house software development teams. Qualix currently sells networking, system and databases software and claims 2,500 customers. The privately-owned company is split into two divisions. Qualix Direct sells add-on software for printers, scanners and expansion cabinets, accessories and desktop productivity applications for SGI, Sun, HP and IBM systems. The Qualix Group publishes, sells and supports products developed by small companies, offering integration, training and consulting services. "Qualix Direct accounts for 25% of Qualix business," says Rick Thau, Qualix Group Inc CEO, "with the other 75% coming from our partner program." Qualix has 40 employees and plans to go public in the next two years.

### **CENTERLINE OFFERS NEW CODE TESTING TOOLS**

CenterLine Software Inc, Cambridge, Massachusetts, has introduced QualityCenter, a new family of automated software testing tools it claims can help developers improve the quality and speed of developing software applications. There's QC/Replay, a \$7,000 GUI capture/playback tool for X Windows-based applications. QC/Coverage is a code coverage and analysis tool for test planning and measuring how much of an application was properly tested - \$6,000 for a C implementation, \$9,000 for C++. QC/Sim is a \$9,600 add-on to QC/Coverage for simulating difficult-to-test situations, such as disk or network failures. The \$3,900 TestCenter offers runtime error and memory leak detection. All are up on HP-UX, SunOS, Solaris, AIX, UnixWare and OS/2 now, with Digital Unix versions due in the fourth quarter.

### **IBM TRIES TO SIMPLIFY ITS SOFTWARE PRICING, MAKE IT FAIRER**

The thorny issue of software pricing at IBM Corp - where the most widely-used word is exorbitant - has gone through another churn and, starting with desktop and Unix software, the company has now settled on four pricing models, usually decided by IBM rather than the customer's option, but the formulae are intended to mirror the reality in the Unix world. The four alternatives are pricing by system MIPS, regardless of the number of users, by MIPS used by the specific program, pricing by the number of people registered to use the system, and pricing by the actual number of user terminals on the system. It is also basing discounts on customers' worldwide spending, so that they can sign a single contract for licensing IBM software in all eligible countries the discount size varying according to future spending levels.

### **SEQUENT IN REORG ONCE AGAIN**

Sequent Computer Systems Inc is reorganising again. It's dismantling its 18-month old Enterprise and Platform divisions (UX No 470) and going back to a simpler structure that's supposed to focus on its strengths at the high-end. All this churning is being done in the hope, it is said, of impressing the dickens out of financial analysts with revenue growth. If it bulks up, maybe it can put distance between itself and a fate akin to Pyramid's. The duties of Enterprise, which focused on large accounts and did a lot of consulting, and Platforms, which was basically development, are being divvied up between old-fashioned engineering and marketing. The company has named an acting corporate marketing chief, Sequent veteran Ross Summers, whose real job - once they find someone to fill the marketing slot - will be the director, portfolio management, a product management role. Sequent aims to focus on high-scale OLTP, decision support and business communications, the latter along the lines of multimedia and video-on-demand such as it's been doing with Oracle and Intel. It'll kill off anything that's not directly connected with these goals and the structure will be adapted to support them. People inside are going to be held accountable for the numbers generated. Meanwhile, former enterprise marketing and partner management VP Mark Miller, who decided to return to the UK earlier this month, has now up, and left the company altogether to return to his native Norway.

### **SAP SUCCESS STORY CONTINUES, BUT FIRM RISKS INDIGESTION FROM TOO MANY HIRES**

The phenomenon that is SAP AG is still skimming over the pain caused by the soaraway Deutsche Mark, and chairman Dieter Hopp told the annual meeting yesterday that its business had developed very strongly again in the first five months of the year. He said the Wall-dorf business software specialist had enjoyed impressive growth in sales and earnings so far this year, and would have been even better if currencies had been a bit kinder. The additional advance comes on top of profit growth of 92% on sales growth of 64% last year: actual numbers work out at about \$200m and \$1,285m at the current exchange rate. Nevertheless SAP is fearful that a billowing payroll will begin to sap its strength, and it wants to rein the growth of its workforce in sharply over the next 12 to 18 months - it ballooned by over 1,000 in the first five months of the year, giving a total workforce of 6,300, and Hopp said a slowdown in new hirings was necessary to ensure smooth integration of all the newcomers. In May, SAP said first-quarter group pre-tax operating profit rose 106% on sales up 72%. "The company's rapid growth over the past two years has led to permanent changes in strategy and organisation," Hopp said, and the company is giving its corporate structure, which had previously been centralised, a more regional orientation with administrative bases in Europe, North America and Asia.

### **TUXEDO 6 DUE END OF YEAR**

Novell Inc says the next release of its Tuxedo OLTP system - now in the distributed services division under Joe Menard - likely, but not necessarily, called System 6, will include Netware Directory Services, enabling LAN networks to be managed from a single workstation. It'll include SNMP for use by network management systems, and additional Access Control Lists, a security control mechanism which check access privileges. It'll ship in the fourth quarter. Novell says it's already spec'd out a Tuxedo System 7, slated for late 1996 or early 1997. It says it's got twice as many Tuxedo developers as a year ago.

## IBM LAUNCHES POWER SERIES "SUPER CLIENTS"...

IBM Corp's terrible churning launch mill that never manages to get anything out of the door in a timely fashion means that the new IBM Personal Computer Power Series of personal computers are being greeted with a yawn instead of applause, and even the fact that the machines offer software-based signal processing so that speech and music, image and video capabilities can be added to applications "virtually free," which has been in the Power plan from Day One, has been totally pre-empted by Intel Corp's Native Signal Processing. As anticipated (UX No 543), there are two laptop models - the ThinkPad Power Series 820 and 850 - and two desktop models, the Personal Computer Power Series 830 and 850. ~~The ThinkPad laptops, both are based on 100MHz 603E processors and come with 16Mb standard. The 820 is the smaller box, an A4 laptop, with up to 48Mb RAM and a 32-bit memory controller. The 850 can be expanded to 96Mb and has a 64-bit controller, it is also physically slightly larger, to allow for the optional built-in video camera above the screen. Both of the desktop models are use the PowerPC 604 processor and vary mainly in the number of PCI expansion slots and drive bays. The Personal Computer Power Series 830 is driven by a 100MHz 604 and comes with three slots and three bays. The 850 has five slots and bays and comes with 100MHz, 120MHz and 133MHz - or at least it will, eventually. At launch, only the 100MHz version is available; the company says that the faster machines will not appear until towards the end of July. Both machines have 256Kb of L2 cache as standard, expandable to 512Kb. The 820 has a 540Mb or 1Gb hard drive as standard, while the 850 comes with a 728Mb or 1Gb disk. The chassis are virtually identical to IBM's existing Pentium-based PC 700 machines, apart from a bit of aesthetic work to put a curved bezel on the front. Expected street price of the Power Series 830 is \$2,800 with 16Mb 100MHz PowerPC 604 with Level 2 cache, 540Mb disk and 680Mb quad-speed CD-ROM drive. The Thinkpad models start at \$6,000. How many of these machines do they expect to sell over the next year? US executives were reticent "we're not concentrating on market share this year," however a UK representative admitted he expected sales of the Power Series boxes to only total around 2-3% of IBM's UK PC shipments - that's around 2,000 to 3,000 units. Not bad, he claimed for the "super-client" market. But not exactly the stuff to dislodge Intel from the desktop.~~

### ...NT, AIX OR OS/2 BETA - SOLARIS AND MACOS TO COME

When IBM delayed the roll-out of the Power Series (nee Power Personal) machines last year it was adamant about one thing; "we are not waiting for OS/2, we are waiting for applications". And so it has turned out to be; OS/2 is still not ready and initially customers will get a choice of AIX or Windows NT. A beta version of the microkernel-based OS/2 will be available pre-loaded for those who want it. The company is now promising that the finished version of OS/2 Warp Connect (PowerPC Edition) will ship in the fourth quarter this year. IBM will also sell machines pre-loaded with Solaris - betas in the fourth quarter, general ships in March 1996. The most confusing disclosures however concerned the company's new plan to support Apple MacOS on the machines. Richard Thoman, executive in charge of IBM's personal computer business, told the assembled press corps that the company would indeed support MacOS on Common Hardware Reference Platform-compliant (CHRP) Power Series machines in the second half of 1996, but only if customers demanded it and the terms of a future licensing agreement were reasonable. Later the same morning at the launch of Apple Computer Inc's 604 systems, IBM executives said that there would be five operating system choices on the Power Series boxes, not the four originally detailed, and that in fact a deal was currently being struck with Apple for MacOS.

### Super clients

To drive home its point that the machines are high-end clients, not servers, IBM is not going to sell them with Windows NT Advanced Server, only the client Workstation package. However, if you sidle up to your favourite IBMer and ask nicely, they will sell you a server licence under "special bid" arrangements. In other words, the product isn't on the official price list, but you can get it. Why? IBM says that the machines simply aren't meant to be configured as servers, citing things like the lack of SCSI on the motherboard. So why not configure the new PCI-based RS/6000 43P as a Power Series - after all it does have SCSI? The answer, it seems, is that the guts of the 43P will appear (under a different name) at sometime in the future as an NT box out of the recently formed PC Server division (*see story page 1*). The operating system chosen for the 'super clients' will also determine which channel it will be sold through: Power Series machines pre-loaded with NT or OS/2 will be sold through the PC channel, AIX and Solaris-based boxes will go through the regular RS/6000 resellers. CHRP and SMP super clients are expected by year-end. IBM says the Power Series' so-called sensory suite of in-built speech recognition and video conferencing facilities marks the beginning of the its Human Computer Interface roll-out, though it's still got a long way to go.

### MOMA NOT FOR MESSAGING STANDARDS

Although its stated aim is to "shape the future of message-oriented middleware," one-year-old Message Oriented Middleware Association (MOMA) isn't about to begin treading on its sponsors toes by seeking a standard that'll govern messaging software. Introducing its white paper "Building your enterprise information infrastructure with message oriented middleware", MOMA conceded the likelihood of interoperable messaging middleware is still way off. Bob Scher, MOMA president, also director of strategic alliances at PeerLogic Inc, figures this kind of problem will be addressed by the market over time and says MOMA's task is only to "educate the industry about messaging."

### Software instructions

Messaging software has traditionally implied functions such as e-mail and fax. Message oriented middleware however supports the transmission of software instructions - rather than documents of files - which are executed on receipt by processes running on distributed systems. It enables a process on one system to instruct or address a process on another system over a network asynchronously, and - unlike remote procedure calls which invoke remote procedures onto the local system - transmits multiple messages and handles responses when they arrive. The message format can be one of several different guises and delivery of the message is entrusted to the middleware. A process could be in an application, a database management system or an operating system. In heterogeneous environments clients have to exchange information with database servers across a network, utilising different connectivity protocols and operating systems.

### ASAP

"MQSeries and message oriented middleware in general is in the business of getting this information across", says Steve Craggs, business manager of IBM's MQSeries messaging software based in Hursley, UK. "Its emphasis is on the need to ensure instructions are delivered as quickly as possible, provide greater support for guaranteed delivery and high performance as well as network protocols." The more platforms and protocols the message oriented supplier supports, the more useful it will be in the heterogeneous environment. IBM's MQ Series supports 18 different platforms and an array of protocol stacks. Craggs admits message oriented middleware vendors could do with some standards of their own, but expects them to arrive in de facto fashion, by the market's decision. IBM MQ Series, DEC MessageQ and Momentum's Message Express are just three examples of messaging and queuing that each have a different method of execution.

### PEER LOGIC AND IBM; JUST PROTOTYPES

San Francisco, California-based messaging house PeerLogic Inc says there is now a prototype version of IBM Corp's System Object Model enabled to run its PIPES messaging system. PIPES provides a dynamic naming service and cross-protocol communications for SOM. Its kernel sits between applications, operating system and network protocols on each machine, combining to form a logical network handling all network input/output. However, there's not yet a business model for taking that work to market. Peer Logic says it and IBM goofed when they told us a version would become available in the third quarter (UX No 526). In fact Peer Logic's work has resulted in a SOM-enabled PIPES rather than SOM with PIPES. Meantime, seems the prototype message channel agent that has got IBM's MQ Series talking to Peer Logic's PIPES dynamic messaging system is also complete, but like the SOM arrangement, there's not yet a business model to carry the thing forward. IBM says the prototype was a response to customers who had bought PIPES and wondered "what do you use it for?" Meantime, we've got IBM Hursley and Peer Logic waiting in the wings to strut more of their stuff, so anticipate changes to these messages. Peer Logic's also been talking to object request broker vendors about using its stuff.

# unigram·x

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**Compagnie des Machines Bull SA** says it will continue to invest in hardware and software research and development to support the long-term viability of its GCOS mainframe systems, but the French company also has plans to offer a mainframe-class Unix machines in 1997 called Madison, which will function as production servers, running in cooperation with GCOS and other mainframe systems.

PaineWebber Inc analyst Stephen Smith has raised his rating on **Data General Corp** even though his fiscal 1995 loss estimate widened to \$1.00 a share from 85 cents. His projection for fiscal 1996 losses has narrowed to 10 cents a share from 25 cents because while its "positive developments are unlikely to have a meaningful contribution for some time," DG is "surprisingly far along" with a plan to move its server business rapidly over to **Intel Corp's** architecture - see front page.

We've been saying it would do so this year for some time, and now **Hewlett-Packard Co** chief executive Lewis Platt has said he expects the company to achieve turnover of at least \$30,000m this year to October, up from \$25,000m last year, and he hopes to do \$31,000m. He told *Reuters* in Singapore that profit margins have improved to 8% this year from 6.5% last, and "business prospects are very good - we are growing very consistently and making profits as a number of our major competitors have stumbled," he said.

**Informix Corp** expects near-term revenue growth to meet or exceed the 54% pace of its first quarter, fuelled by the early stages of new product cycles both in the database and the development tools markets. For the quarter ended April 2 the company reported net profit of \$19.1m, on turnover of \$147.8m, compared with \$12.5m, on turnover of \$96.1m a year earlier. At the Bear Stearns conference in New York last week, chief financial officer Howard Graham said its database sales grew at a 60% to 70% rate in the first quarter.

We hate to have to say it, but the most interesting part of the **Apple/IBM/Novell** OpenDoc infomercial at PC Expo in New York last week wasn't OpenDoc crashing the demo, but the demo crashing the unfortunate Apple technician who collapsed to the floor mid mouse-stroke, disconnecting the Mac terminal's video hookup. Better off out of it, we thought. Apple's girl was lead off the stage and thankfully made a full recovery from her faint.

One of our Wall Street contacts claims that **Sun's** money is burning a hole in its pocket. Planets have reportedly been told to come up with wish lists that could include acquisitions.

After turning to **PostModern Computing Technologies Inc's** ORBeline object request broker for use with its Galaxy application development system (*ObServer No 1*), Reston, Virginia-based **Visix Software Inc** is also going to integrate Galaxy with **Iona Technologies Ltd** Orbix ORB so that Galaxy applications can be plugged in to Orbix environments.

**Next Computer Inc** says it's now shipping version 3.0 of its Portable Distributed Objects model, the object engine uncoupled from the Next interface which allows Unix or NextStep objects to co-exist in each other's systems, for SunOS, Solaris, HP-UX and Digital Unix. It'll be up on NT with OLE interoperability later this year. PDO is priced from \$500 per seat. It's at the heart of Next's operating system-independent OpenStep implementation of its NextStep application environment.

**Tandem Computers Inc** says it'll quadruple its decision support business this year to between \$200m to \$300m, declaring itself to be "at the chasm" in its transition from being a fault-tolerant company to decision support.

**Gartner Group** says 88% of 30,000 MIS managers it asked about parallel processing said they'd be evaluating MPP for commercial data processing this year. Mainly, it believes, because the cost of using legacy systems for stuff like decision support and data warehousing is simply too high. It reckons users can expect a return of up to seven times on their investment in MPP over a five year period - five times over two or three years.

But **Informix Software Inc** believes customers are still far more likely to choose SMP over MPP for their high-end requirements, because MPP systems represent a substantial administrative overhead.

**IBM Corp**, currently melding its parallel and RS/6000 groups, says it's got a single system image for its PowerParallel SPs in sight, but isn't saying when it'll arrive. It will use its own interconnect to link SMP PowerPC 620 nodes when they arrive, work it says is distinct from the RS/6000's anticipated clustering techniques.

The focus was meant to be on the AS/400 last Wednesday, but whenever **IBM Corp** sees some water, be it Silverlake or Rat's Mouth Bay in Florida (Boca Raton, just up the coast from Fort Lauderdale), it can't resist muddying it, and so the company's Linda Sanford was talking about mainframes at the Bear Stearns Technology Conference - she said IBM still had a big backlog of orders for its older generation of water-cooled bipolar mainframes and is already scheduling shipments for first quarter 1996 - if you order today, that's when you get it.

**Apple Computer Inc** chose the same day as **IBM** to launch its first 604-based machines; the Power Mac 9500, previously code-named Tsunami. Predictably, the first machines are aimed squarely at the power-hungry pre-press and digital-video users, the same customers who previously jumped at the Power Macintosh 8100/100 and 110. Meanwhile the company was refusing to comment on a detailed report in *MacWeek*, which laid out the company's future plans for 604-based PCI Macs, said to include four new PCI-based models to be announced on August 7th during the MacWorld expo in Boston.

**Network Computing Devices Inc** is rushing to complete its Mariner Internet package due this month and says its OpenGL graphics implementation will be ready in October.

**OpenVision Technologies Inc** has formed a new product division, under senior VP Richard Barker who recently came over from **Oracle Corp** (UX No 539), which will combine product engineering, product marketing and strategic marketing.

**SunSoft Inc** has lost director of sales John Lynch to **Ilog Inc**.

**IBM's** PowerParallel folk are having some fun at the expense of their RS/6000 colleagues, claiming to have swallowed Bill Filip's unit whole and borrowed its name into the bargain. Meantime the merged RS/6000 workstation/server/SP2 division now being run by former PowerParallel Division chief Irving Wladawsky-Berger is set for an organisational overhaul to reconcile the positions of staff from the formerly separate organisations, including the positions of PowerParallel assistant general manager Ben Barnes and RS/6000 assistant general manager Jeff Mason.

**MicroFocus** says the Unix version of its Object Cobol (UX No 510) will go to beta in the third quarter with general availability slated for the first quarter of 1996.

**IBM Corp** has AIX up and running on a 620 system internally. The company's shooting for 620-based systems by mid-1996 - "we hope" - but admits times could easily slip.

**IBM Corp** VP and general manager of the Power Personal Systems Division Nobuo Mii's plea to both **IBM** and **Motorola Inc** PowerPC fab units: "give me more chips."

Not only did customers come to the rescue of AIX (UX No 543), but we learn that the departure of **IBM** execs Ellen Hancock and James Cannavino - who were leading a high-level task force created by chief Louis Gerstner to conduct a review of operating system strategy throughout the company (UX No 471) - significantly improved AIX's life chances.

Don't ya just hate it when that happens? In a taxi leaving PC Expo last week: *Driver*: Them computers, they big business these days. Everyone got one. *Passenger*: Right. *Driver*: Then why they so expensive? *Passenger*: Errr...

Actually there were actually two coffins (is **Sun Microsystems Inc** a vampire that has to be buried more than once? see page 6) because at its analyst jolly down in Bermuda a couple of weeks ago **Hewlett-Packard Co** - described by one delegate as having now eclipsed Sun in arrogance - wheeled out a Sparc in a coffin and ceremoniously buried it on the beach. Sun's voodoo won the day though 'cos the sun didn't shine for three days after that!

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram · X

The weekly information newsletter for the UNIX™ community worldwide

UBN

02 JUL 1995

London, July 3-7 1995

Number 545

## WITH \$700m WAR CHEST, AMDAHL IS IN THE MARKET FOR ACQUISITIONS, DEALS...

The rapid metamorphosis of Amdahl Corp is to continue apace, and the mainframer is looking at making several strategic investments. "We'll likely make some acquisitions, develop some more alliances and we'll do some joint ventures," chief executive Joe Zemke told *Reuter* when he was bearded in his Sunnyvale lair by the news wire. But market gossip that Data General Corp is on his hit list looks wide of the mark: he did not dismiss the notion but suggested that the fit would not be right. "They're a minicomputer company and that's not where we are. We're at the high end moving to the desktop," he said. Asked to comment on talk by at least one investment banker close to the company that Amdahl might bid for Tandem Computers Inc, Zemke simply said "I wouldn't put them any higher on our list than anyone else." Amdahl has a war chest of over \$700m in cash, and recent investment has gone into services and software.

## ...BUT NCUBE DEAL FALLS APART, CRAY STEPS IN FOR DECISION SUPPORT

Looks like the doubts we expressed over the continued tie up between Amdahl Corp and Foster City, California-based nCube Corp (UX No 523) were right on the mark. Amdahl no longer sells the nCube hardware under its Xplorer 2000 brand name, and nCube has confirmed that it is now suing Amdahl over the aborted deal in Santa Clara county - Amdahl's home base. Under the terms of the agreement nCube was to provide the MPP technology, Oracle its Oracle 7 database and Information Builders its EDA/SQL query software (UX No 480). Amdahl added mainframe connectivity options and did the software integration. But according to one source, the agreement had barely got off the ground before Amdahl changed its mind and gone to Cray Research Inc instead. Amdahl is now positioning the Xplorer 2000 name as a hardware independent brand name, but admits it will apply the tag in the future to the Cray AS/6400, which it is already selling into the decision support marketplace against IBM's SP2, still using Oracle and Information Builders software. Amdahl spokesman Richard Williams said that the Sparc-based Cray hardware offered "parallel processing without the hassle of MPP", and said there would be a 50% increase in performance later this year (from 60MHz to 90MHz SuperSparcs) and a further performance upgrade to UltraSparcs next year. The Crays also fit more comfortably with Amdahl's lower-end Sparc-based symmetrical multi-processors it OEMs from Sun Microsystems. Amdahl sold only "one or two nCube machines" which are now being substituted with Cray hardware. It's a company that some have considered notoriously careless with its partner relationships - only last month Amdahl's Encore storage deal also fell apart (UX No 543). nCube would only say that its suit against Amdahl was "meritorious".

## SUNSOFT RESTOCKS ITS WINDOWS-UNDER-UNIX SHELF

SunSoft Inc's scatter-gun approach to running Windows applications under Unix is remarkably similar to the Hewlett-Packard Co view of the world (UX No 543) - minus of course HP's 500 series hardware/software combine - and last week it upgraded its full clutch of products in that area. First SunSoft Inc is adding version 2.1 of its Redmond-less Windows-to-Unix Wabi translator which runs on a range of platforms at from \$225. The 2.1 cut provides additional support for some multimedia functions - PowerPoint or Freelance users can add sound and video to slide presentations for example - and ODBC, for accessing Oracle or Sybase from Microsoft Access or Lotus Approach. Like HP, SunSoft bashes Tektronix Inc's WinDD performance numbers, estimating Wabi 2.1 to be at least 3.5 times faster than the rival solution which utilises extensions to Windows NT to run native Windows code over X. Wabi 2.1 supports 25 of the most popular Windows applications. Next the company has put Locus Computing Corp's Merge 3.2.1 up on its Solaris x86 Unix-on-Intel operating system. Merge creates a virtual Intel 80x86 environment on the host for running MS-DOS, Windows and their standard-mode binaries. As well as sharing data and cut-and-paste between Solaris, MS-DOS and Windows applications, Merge provides them access to Solaris printers. The two companies have also extended their development agreement. SunSoft has added a new version of its DX2 coprocessor board - the single-slot Sbus card now sporting a 66MHz Intel 80486 - for running MS-DOS and Windows applications that Wabi can't, on Sparcstations. The card supports SunPC 3.1 software for Solaris 1.x and SunPC 4.1 for Solaris 2.x, which are based upon Insignia Solutions Inc's SoftPC emulator (SunSoft also offers Insignia's SoftWindows) to which SunSoft has added its own interfaces. The DX cards are optional hardware accelerators for users that require 80486 performance. When they do, the Insignia software automatically switches off its emulation capabilities, enabling the cards to take over transparently. SunPC 4.1 or SunPC 3.1 bundled with the card are \$1,000 - the board is \$850 standalone.

## ZENITH HAS ZPOWER

Zenith Data Systems is inching toward officially announcing its line of PowerPC machines which it has been reluctant to launch out of concern for 604 chip availability - it likes to have inventory before it puts something on the market. Maybe next week it'll feel secure enough. It will be keeping the Escala brand name on the multiprocessors it's OEMing from its owner Bull. A uniprocessor version of the one-to-four-way minitower, known as the Escala MT, will start at \$16,000 with 32Mb RAM and a 1Gb disk. The two-to-eight-way desk-side, called the Escala DS, will start at \$32,000 with 64Mb internal and 2.2Gb on the disk. Shipments with AIX should start this month. It's also OEMing the guts of the PowerPC-based PC servers from Motorola which will appear as 603e- and 604-based models branded ZPower.

## CA AND LEGENT SWEAT UNDER DOJ PROBE

Contrary to Legent Corp CEO Jerre Stead's claim that he didn't talk to Computer Associates Inc or get feelers from it about a possible acquisition before April 30 (UX No 542) - indeed he said he would turn *Unigram.X* over to company lawyers if we indicated differently - papers filed with the Securities and Exchange Commission and quoted in *Computer Reseller News* last week show Stead's claim to be untrue. The SEC papers record meetings between CA COO Sanjay Kumar and Stead in Washington DC on April 26, and then again on April 30 at Kumar's request, to discuss the acquisition. Moreover, it appears CA's approach this April followed a failed attempt to win Legent's hand last summer - before Stead came on board - when an acquisition proposal, again delivered by Kumar, was rejected by Legent's board. Meanwhile, the Department of Justice, currently investigating the anti-trust implications of the proposed acquisition, has reportedly received complaints from users of IBM Corp's VSE low-end mainframe operating system - the original Disk Operating System introduced in 1965 - which some observers say Big Blue's been trying to close the lid on for the last 15 years. Their concern is that if the acquisition goes through they'll have little choice but to rely on a single supplier for much of their tape and disk management requirements. Legent's VSE customers are especially concerned they'll lose the level of support they currently enjoy. Net traffic prompted Stead to post a message to the VSE newsgroup trying to allay some of the concern. IBM claims there are 35,000 systems out there running VSE. Other attention is focused on the future of the Legent's licensing policies in a combined company which, if the deal goes through, CA will be legally bound to honour. Legent's licensing scheme grants perpetual rights to the use of its software for a one-time fee. CA on the other hand charges licence fees for a set amount of time, usually five year increments. Analysts and insiders we spoke to last week from all corners of the park concurred that if the deal falls then Legent is effectively dead in the water.

## APPLIX COVETS APPLICATION DEVELOPMENT IMAGE

Applix Inc, Westborough, Massachusetts, is readying a home-grown development environment for creating applications incorporating its Applixware office suite which includes a real-time spreadsheet, word processor, graphics, email, SQL gateway and other modules. Builder, as it's dubbed, will be out in September priced from \$2,500 per development licence with no runtimes. The move is part of a transition the newly-quoted company hopes to make from being primarily an office suite company to an application development house. Strange, because for some not inconsiderable amount of time we've regarded Applix as a real-time spreadsheet company, not an office suite provider per se. Victim of its own marketing perhaps? Meantime the Applix spreadsheet has proved something of a hit in the financial markets - and is a rising star amongst high-tech manufacturers - already accounts for around half the company's revenues, with a claimed 5,000 licencees. The spreadsheet's proven particularly suited to the 'publish and subscribe' data distribution model where information - either received from external sources or generated by the spreadsheet - is sent directly to subscribers, which could be any number of client applications, spreadsheets, databases or other programs distributed around an organisation. The data is sent to all subscribers as it happens or as it is generated, rather than to a single database or application, or to clients as weekly or monthly reports. Its attraction to Wall Street is obvious in this context - traders having their spreadsheets and applications updated in real-time from all kinds of information feeds harnessed by Applix. In manufacturing it allows different planning and production departments to keep up with events and production line movement around other parts of the organisation. Applix, which already has a bag full of financial news and information feeds integrated with the spreadsheet last week won Berkeley, California-based Financial Engineering Associates Inc (FEA). FEA has ported its Global risk measurement and Interest rate calculator derivatives tools for Applix and prices go from \$1,000 to \$20,000 on Sun workstations. FEA will also port its JP Morgan RiskMetrics-derived Outlook module for risk management to the spreadsheet. Applix has also won Dow Jones Telerate, which will sell the spreadsheet with its trading systems around the world. Meantime, under a five-year agreement, Bloomberg LP users will be able to manipulate Bloomberg data through the spreadsheet. Bloomberg will offer Applix Words and Graphics software to its customers so that data can be live-linked into their documents. Applix says the National Association of Securities Dealers has also chosen its spreadsheet running on Sun boxes for a new market surveillance solution. The Applix spreadsheet costs from \$2,700. In addition to its Builder development environment, Applix, as expected since before its IPO, is in the process of moving all of its products over to Windows NT, and will begin general deliveries from September with release 4.2 of its product set. Applix expects half of its business to be on to NT-based products within two to three years. It has 167 employees and says it's spending its revenue from its IPO on expending all of its marketing and development departments. It's got other technology developments in place with Advanced Visual Systems Inc and MPP house Convex Computer Corp.

## UNIPALM DECIDES TO MERGE PIPEX INTERNET ACCESS COMPANY

In what seems to be a case of preventing the in-fashion tail of the business from wagging the dog, Cambridge-based Unipalm Group Plc is merging its Internet access company, Pipex Ltd, with its software company, Unipalm Ltd. The new organisation, which will be known as Unipalm Pipex, will offer local and wide area network to Internet access, software, training and support, all from one source, the logic being that those eager to get on the information superhighway do not want to have to shop around for services and kit. However, the names Unipalm Ltd and Public IP Exchange Ltd will continue to exist as business entities. The holding company, Unipalm Group Plc, said at its half yearly results in January, that despite an investment of £1.5m, it did not expect Pipex to make a profit until the turn of the century. At that time, it reported a loss of £462,000 on turnover of £1.3m, while the Unipalm software business saw profit of £611,000 on turnover of £6.5m.

## UNIDATA TO EXPAND WITH SYSTEM BUILDER

Denver-based Pick-under-Unix software developer Unidata Inc has agreement in principle to acquire System Builder Pty Ltd, Sydney provider of proprietary language and application development tools for business; terms were not disclosed. Australia is one of the biggest markets in the world for the Pick database. System Builder will be subsumed into Unidata, which will grow its employee base to 335, and nearly double its roster of Unidata Value Added Resellers to more than 700 worldwide. Last month, it announced a joint product development agreement with O2 Technology SA, Versailles, France under which the two will combine existing technologies to produce an object-relational database management system, and System Builder is also active in the object world, having already developed "the first" object-oriented development environment for helping Basic-style, host-centric applications to be migrated incrementally to client-server working. It also adds a Windows and Windows NT dimension to Unidata's largely Unix focus.

## AT&T's TAILORS MASSIVELY PARALLEL TERADATA DATABASE FOR SMP

The Unix version of AT&T GIS' Teradata massively parallel back-end database server due in November on the 3500 SMP servers - and on AT&T's promised 3700 MPP equivalent due to be announced around the same time frame - is functionally the same as the proprietary implementation. Difference is in the performance of ported features. Some run three times faster, some 30 times, the company claims. Conversion for users is basically a dump and restore operation. AT&T says it's ported what remains the world's most widely-used parallel database system to Unix to reduce future development costs and to take advantage of Unix features such as memory management and large memory sizes. It hasn't decided whether it'll put the thing up under other Unixes yet. The port wasn't a huge recoding operation, AT&T claims, just a recompile under Unix, but it's done extensive work to achieve parallelism through a combination of hardware and software mechanisms. Multiple instances of the database can be run as subsets on a shared nothing memory - generic SQL gets thrown at the parsing engine which distributes it across the multiple instances. With the port, AT&T has taken the proprietary parsing engine, and implemented it as a Unix process. The Ynet interconnect is implemented in software. Ynet sits in memory on an SMP Unix node, allowing multiple copies of the database to run as if on parallel CPUs. Each virtual processor is linked to a physical set of data, creating a shared nothing architecture within a 3500 SMP processor with up to 16 Pentiums. AT&T has put Teradata version 2.0 up on the SMP box for its beta site at Boeing; it says it'll continue to maintain compatibility between the SMP cut and Version 5.0, the current Teradata version for at least two years. The SMP version will be migrated from a single SMP engine up to the promised MPP platform with multiple SMP engines (still the 3700 internally) examples of which it already has up and running.

## FORCE READIES POWERPC BOARDS FOR EMBEDDED USE

After some deliberation, San Jose, California-based embedded systems developer Force Computers Inc is entering the PowerPC market with what it's touting as the first PowerPC platforms optimised for real-time applications. There are two products. The CPU-60xRT is targeted at the high-end of the market and the IBC-60x board for applications which require lots of I/O and configuration options. With Motorola 68000 and Sparc products, plus PowerPC under its belt, Force is now aiming for microSparc-III, UltraSparc, and 68060 pastures, but doesn't have details yet. The new PowerPC boards have been developed in conjunction with Creative Electronic Systems, Geneva, Switzerland, which provided the PCI bus technology. Chris Williams, Force's European product marketing manager, says the boards incorporate a prioritized and application-dependent interrupt mechanism. According to Williams, PowerPC products have until now utilised a PC-style interrupt in which all interrupts are delivered through a single channel, meaning all sources have to be polled to detect the request source. Other features include Linked List Direct Memory Access, providing high speed transfers between local PCIbus and VMEbus, a dedicated I/O coprocessor for handling tasks such as VME data transfers, plus the use of ECC (Error Correcting Code) memory. Both boards support PowerPC 603 or 604 processors running at 66MHz and 100MHz respectively and support VxWorks, pWSOS+ and LynxOS real-time kernels. The CPU-60xRT and IBC-60x perform at 55 SPECint92 and 65 SPECfp92 respectively configured with a 66MHz 603, or 140 SPECint92 and 145 SPECfp92 with a 100MHz 604. Force expects the boards to find their way into industrial control, telecoms and aerospace applications. The CPU-60xRT VME board is a single slot, single board with from 8Mb to 128Mb RAM and 512Kb of optional L2 cache which can be plugged onto a base board with a 10baseT Ethernet interface, 16-bit fast wide SCSI-2, a IEEE1284 parallel port, direct PCI-to-VME64 interface and a PMC (PCI Mezzanine Card) expansion slot. The PMC slot enables PMC I/O to be taken out via the P2 VME connector on the board, easing system integration and enabling PMC modules for secondary bus systems. General availability is scheduled for September. The IBC-60x board is a dual PMC platform meant for applications that require maximum I/O flexibility and configuration options, with from 8Mb to 128Mb RAM, up to 8Mb of flash memory, two RS232 serial I/O ports, Ethernet interface, direct PCI-to-VME64 interface and two PMC expansion slots. The IBC-60x ships in the fourth quarter. No prices available.

### TIVOLI HAS TME UP ON DIGITAL UNIX...

Tivoli Systems Inc, Austin, Texas, says it has finished the 64-bit port of its Tivoli Management Environment and application suite to DEC's Alpha AXP running Digital Unix and that both it and DEC will sell the product. The implementation, due last month, took longer than expected - it is Tivoli's first 64-bit port - but oddly Tivoli, never usually shy of trumpeting its achievements, says it simply hasn't bothered publicising the fact that the Alpha version now generally available. Tivoli charges between \$150 and \$350 per node for its Admin, Courier, Print, FSM and Sentry applications. Workload, Epoch Backup and Enterprise Console are from \$9,000, \$5,000 and \$25,000 respectively. TME components - Tivoli/ADE, /AEF and /EIF - are \$25,000, \$6,000 and \$6,000 per developer respectively. TMF, required for using TME is \$125 per node for clients and servers.

### ...WINS SUPPORT FOR API SPEC BASED UPON DESKTOP MANAGEMENT STANDARD

Meantime, Tivoli has garnered new support for its Application Management Specification (AMS), a set of APIs it's trying to get ISVs to adopt so their applications will connect with the Tivoli TME distributed management environment (UX No 536). Tivoli's got Forte Software, Informix, Intersolv, Oracle, Softool and Unify to join original collaborator, PowerSoft. A preliminary spec is due this month - the final set is due in the fourth quarter after all the partners, plus some of Tivoli's first-tier customers, sign-off on the thing. AMS will be based upon the Desktop Management Interface (DMI) standard for managing desktop hardware and software created by the Desktop Management Task Force. Indeed AMS will provide an extension a particular management information format defined in DMI, meaning DMI-compliant tools will be able to manage AMS-compliant applications.

### INTEL READY WITH AN 80960 RP RISC-BASED INPUT-OUTPUT PROCESSOR CHIP

Whenever Intel Corp adds to its 80960 RISC family these days, it always seems that one hears about it not from the company but from someone planning to use it - in this case Fremont, California-based Mylex Corp, which says it plans to offer a suite of RAID disk array software and firmware to be used with the new 80960 RP input-output processor. It appears that the 80960 RP uses a RISC core called to 80960 JF and kits it out with on-chip support circuitry to create a single-chip input-output processor designed for use in servers; the part, which sounds like the RISC successor to the 80186 and is designed to give a big increase in input-output bandwidth, will sample in the fourth quarter at \$48.85 for 10,000-up. Boards and systems using the processor are expected early next year.

### UNISYS EXPANDS PW2 INTEL SERIES OPTIONS WITH PCI BUS, MORE CPUs

Unisys Corp has two new PW2 Advantage Series SFR rack-mount servers which can accommodate up to three quad 100MHz Pentium CPU-units server modules in a single cabinet. There are mid- and full-size rack models with five EISA slots, four PCI slots (one shared), up to 1 Gb of RAM, 512 Kb or 2 Mb of L2 cache nine 5 1/4" drive bays for up to 24Gb disk, one 3 1/2" drive bay and redundant 600-Watt power supplies. The company has also added an entry-level 120MHz Pentium PCI bus SVD server with up to 256Mb RAM and 24Gb disk. A ZIF socket upgrade will stretch the unit to a two-way. All can be pre-loaded with Windows NT, MP (when available), OS/2 SMP or SCO OpenServer. Unisys' current line of dual and quad-processors servers in the SSE, SME and SFE lines have also been upgraded to 100 and 133 MHz Pentiums. The SME and SFE have been redesigned for PCI. A new, single processor tower server, the SPE, comes with a 100MHz Pentium using PCI. The SFR rack-mount server is available with 100 MHz CPUS now and 133 MHz in August 1995 and is priced from \$14,000. The SVD server is priced from \$4,800 to \$6,000 and is available now. 100 MHz CPUs for the SSE/SME/SFE are available now; PCI bus SME/SFE systems will be available in August 1995. The new SPE single CPU server is available now and is priced from \$7,200 to \$9,200.

### NOVADIGM MOVES EDM SOFTWARE MANAGEMENT REPOSITORY ON TO UNIX

Mahwah, New Jersey-based Novadigm Inc is widening its base for its distributed applications management software with a new 3.0 release of Enterprise Desktop Manager (EDM) which includes the ability to host the currently MVS-only repository on Solaris, with AIX, HP-UX and NT ports in the pipeline. The repository maintains application version information which is used by the EDM to synchronize the distribution of software upgrades other version changes and content across mixed client/server environments. EDM 3.0 includes a new Version Management module Novadigm says enables system administrators to manage multiple versions of the same applications in development via a Package Version Control System, which automatically updates EDM configuration models when new versions are promoted to production by development teams. It also checks the related application version components prior to execution.

#### Four components

EDM 3.0 can be used to manage software running across mixed HP, IBM, Sun, AT&T GIS, NT, OS/2, NetWare, Windows and Macintosh environments. It continuously configures client/server application content across distributed desktops and servers and has four components. EDM:Manager, on MVS or Solaris, is the object-oriented repository of application information. EDM:Client manages application execution on the desktop. An EDM intermediate server coordinates the management of EDM:Client desktops. The systems manager, EDM:Administrator, configures and manages the application versions and desktop content in EDM: Manager. Novadigm has expanded EDM:Administrator to enable administrators to identify the impacts of deployment prior to deployment and execution across a distributed system. EDM 3.0 starts at \$20,000. The EDM:Manager repository goes from \$2,000, the EDM:Administrator is \$1,000 and clients are \$100 each. Novadigm claims \$10m in revenue last year.

### LEGATO EXPANDS INTO EUROPE, PROMISES HSM, NT SERVER "BY YEAR-END"

Network backup specialist Legato Systems Inc is making a renewed push into Europe with the opening of offices in the UK, France and Germany. Some 16 % of Legato's business last year was non-US, up a single percentage point from the previous year, but the company, which filed to go public back in May, expects more impressive growth from now on. It already has a centralised European support office in Amsterdam. Over in the UK for the Networks show in Birmingham last week, Legato said that its expected Hierarchical Storage Management extension to its flagship NetWorker network backup product, was not likely to appear until late calendar 1995. It's also preparing an NT Server option (it already has a client) for around the same timeframe, and is looking for further database backup support beyond the current Oracle, Informix and Sybase options. Palo-Alto, California-based Legato now has 125 employees worldwide, and ships NetWorker through 14 OEMs as well as direct on Solaris, SunOS, AIX, SCO Unix and NetWare servers. PC, Unix, NetWare and Windows NT clients are supported, and mainframe access is now available through third parties. It says the capital gained from a public offering - estimated at around \$30m - will allow it "lots of flexibility in terms of expansion - we believe it's needed".

### SEVONE SEEKS BETA SITES FOR AIX MEMORY ERROR DETECTION TOOL

The Kernel Group Inc's SevOne Software Inc is looking for beta test sites for a new memory debugging tool it's developing for AIX on the IBM RS/6000. It says the tool will provide a range of memory error detection services for unstripped executable code without recompilation, relinking or creating a new executable image. Neither source nor debug symbols are required, the Austin, Texas company claims. It dynamically determines the shared libraries used or loaded by the executable and checks all memory accesses within those as well.

### IBM DIGITAL LIBRARY TO SHIP EMI MUSIC CLIPS TO AD-MEN

Thorn EMI Plc's EMI Music Publishing has gone for IBM Corp's Digital Library as a method of distributing its catalogue electronically. ~~KPM, the EMI division that handles background music favoured in corporate presentations and the like, as~~ opposed to the company's commercial roster of stars, will use IBM's kitbag of database, server and network technologies, which IBM grandly describes as "a historic turning point in the multimedia revolution," to sell its music to video and film producers. The system has already been used by the Vatican Library, the Indiana University School of Music and Dream-Works SKG. Digitisation of KPM's 300 hours of music is being done by Richmond, Surrey-based Multimedia Archive & Retrieval Systems Plc, MARS, which has been working with IBM for a year. It hopes to sell the Windows or OS/2 software it has developed to front end the Digital Library to other companies wanting to sell copyright material electronically.

#### Digital technology

It is using VisualInfo, a product spun out of IBM's image processing work, to which it has added audio and video digitising technology, to capture the music. The data will be held compressed on Ramac disk array and uncompressed on a 3494 tape library at IBM's giant service bureau in Warwick. Users can 'preview' music, the compressed tracks, then download broadcast quality music from the tape library via the IBM Global Network. The actual server for the system is a 9672 CMOS mainframe running DB2. The Digital Library is another of IBM's airy-fairy concepts rather than a specific product, but can comprise digitising technology to capture images or sound; storage and management; search and access with IBM's textual, image and contextual engines; distribution via IBM's network or other links; and - the key capability in this case - rights management for content providers. KPM's rights are protected by limiting end user access to the system: music is downloaded only when a copyright form, detailing what music has been selected and for what purpose, has been completed. MARS has not fixed a price for users but it said that there will be a "friendly subscription," and it is pay as you play thereafter.

### ASCII CORP TO MARKET XALT IN JAPAN

Thuridion, a Scotts Valley, California company, has licensed its Xalt Office workgroup software to ASCII Corp which will market and distribute the office suite exclusively in Japan for the next two years from 1996. ASCII Corp, the Japanese publishing and software house, gets Xalt Desk, the application interface for Xalt Office which allows Xalt applications to interact with each other; Xalt People Manager, which acts as a directory and organiser, storing information accessed from the Internet; Xalt Calendar; Xalt Mail, an Internet e-mail application which supports MIME attachments and Xalt Notes, an application which creates electronic stickies notes and can send them to other users in a workgroup. Thuridion will develop a Japanese language version of the software in conjunction with ASCII. Xalt is up on Unix at \$200; NT is at beta, set for delivery in the first quarter of 1996.

### TANDEM GOES TO EMC FOR DISK ARRAYS FOR INFINITY NR UNIX LINE

By convincing a big majority of one of the most demanding audiences in the world - the high-end IBM Corp mainframe base - that its technology is the answer for fast, secure high-volume disk array storage, EMC Corp has little left to prove, and Tandem Computers Inc sees no point in re-inventing the wheel. Doing the Hopkinton, Massachusetts company's reputation no harm at all, the Cupertino fault-tolerant systems pioneer has given EMC an OEM contract for its new ModArray series of storage subsystems, and Tandem will offer it as a fully redundant, low-cost-per-Megabyte RAID storage subsystem for its Integrity NR line of scalable, high-availability Unix servers. Tandem is offering the arrays at between \$1.50 per Megabyte when you want a fully populated 206Gb subsystem, \$2.50 per Megabyte when your requirement is a more modest 4Gb or so.

### MASPAR GETS \$3.6m FROM UNCLE SAM TO ADD PROCESSORS

Subsidising industry's research and development costs is a very unfashionable thing for a government to do these days, but the US Advanced Research Projects Agency is pumping \$3.6m into Sunnyvale, California-based MasPar Computer Corp to enable the company to see through to the finish a three-year project to extend its scalable parallel system up to 262,144 processors and provide sustained TeraOPS performance. Under the contract, MasPar will increase the number of processors available to work on a single application by a factor of 16 from the current 16,384. The Agency has also bought the largest current configuration of MasPar's machine, with 4Gb of processor data memory using 16M-bit chips, and wants it for solving very large defence problems. The system is valued at \$4m, although it is not clear that that was the price the Agency paid for it. The 16,384-CPU system is claimed to be capable of delivering 68,000 MIPS and 6.3 GFLOPS, and supports 66Gb of RAID storage.

### HP FORMS NEW DEVELOPMENT CENTRE WITH TATA IN MADRAS

Hewlett-Packard Co is just about the straightest company in the business but one activity that has caused some controversy back home is its perfectly legitimate use of the vast springs of barely-tapped programming talent in India. Undaunted, the company has further strengthened its ties with Tata Consultancy Services Pte Ltd, the big Bombay-based software and services arm of conglomerate J R Tata Sons & Co, signing the company to provide custom software services to its worldwide customers and channel partners in vertical market segments; the two have also opened a second software development centre in Madras, capital of the south-western state of Tamil Nadu. The Madras centre is intended to combine Hewlett's technical strength and experience in implementing open client-server architectures and Tata Consultancy's strength in mainframe application development and large-project implementations. The sectors covered are financial services, telecommunications and manufacturing.

### ORACLE FLATTERS NEC WITH A NEW NEC PRODUCTS DIVISION

NEC Corp has been accorded the privilege of becoming the first non-US company for which Oracle Corp has formed a Products Division. The Redwood Shores, California headquarters-based NEC Products Division is in response to the increasing demand by major Asian corporations for high-performance client-server systems "addressing their unique market requirements." It will expand the existing alliance between NEC and Oracle in Japan to the worldwide marketplace. NEC has been reselling Oracle's products in Japan since 1989 and is currently the leading channels partner for Oracle in Japan. Its Compagnie des Machines Bull SA affiliate is also bes' friends with Oracle. Jointly staffed by Oracle and NEC, the new division will focus on timely delivery of Oracle products on NEC hardware, optimal client-server systems performance; development of mission-critical products and services; and expansion of joint Oracle-NEC worldwide marketing via new and existing distribution channels.

### TADPOLE WINS SIGNIFICANT AMERICAN AIRLINES PACT

Tadpole Technology Plc last week announced the potentially substantial contract that could put a floor under the Cambridge company's incredible shrinking share price. It has won an agreement with the Sabre Decision Technologies Inc arm of AMR Corp's Sabre Group, which handles the air reservation system. AMR is the parent of American Airlines Inc and under the agreement, Sabre Decision is to buy Tadpole's Sparc- and Pentium-based notebook computers for end use and resale with its decision support software.

### ICL IN HUMMINGBIRD PC-X DEAL

ICL Plc's ICL Volume Products - a part of Technology - is to market and distribute Markham, Ontario-based Hummingbird Communications Ltd's eXceed PC-X server software worldwide. Hummingbird looks for the pact to strengthen its position in strategic markets, such as central and local government, in which ICL has a strong presence. The eXceed products will be sold in the original Hummingbird packaging, and will be available next quarter from ICL.



## IBM ADDS SYSTEM MANAGEMENT TOOLS FOR CICS-ON-UNIX

As expected (UX Nos 544, 524), IBM Corp's Hursley, UK labs has created a new systems management suite for managing CICS on AIX, revamped CICS for AIX, DCE and Encina to support multithreading AIX and developed a CICS internet gateway for processing queries from Web browsers (UX No 542). As well as providing a single system management point of view, IBM says CICS Systems Manager for AIX V1.1 (.1 products are IBM's first production releases) it also delivers a single application image for grouping together and managing applications, processes and other programs associated with a logical application - such as inventory, or billing - that may be distributed around and organisation's IT infrastructure. As well as workload management, the software also keeps, on the client, a cached map of servers and their data partitions so that query components can be routed to a particular destination rather than addressed to the system as a whole, saving network traffic and CPU time. (In traditional OLTP environments relatively small amounts of data are accessed a large number of times). Indeed, IBM has essentially moved many of the features found in its CICS for MVS systems manager over to the AIX version - an OS/2 agent is promised.

### Multithreading support

IBM has also completely re-worked CICS for AIX to support the new multithreading features in AIX 4.1 and upwards. CICS for AIX 2.1 requires AIX 4.1 to run and also supports the new PowerPC-based systems and PowerParallels. The release works in conjunction with a new 2.1 cut of IBM's DCE implementation for AIX enhanced to take advantage of the merging of DCE and AIX threads under the recent operating system release. IBM's also tinkered with release 1.1 of its Transarc Corp subsidiary's Encina TP monitor for SMP AIX, dubbing the new release version 2.1. Customers will have to recompile existing CICS for AIX applications for the multithreading-enabled CICS for AIX 2.1, which will also be available for IBM's OEM CICS Server-on-Unix customers, DEC, HP and Siemens Nixdorf, as well as NT. There's still no time frame for the port of CICS Server to SunSoft Inc Solaris - the forthcoming implementation for SNI's Sinix Unix has been designed specifically to take advantage of business opportunities in Germany, the company says.

### Internet

The CICS Internet gateway, unveiled as part of IBM's Internet product blitz a couple of weeks ago (UX No 542), delivers data from a CICS server over CICS ICS communications to a WWW server running the WWW-CICS interface and CICS client application. The data is converted to HTML format and supplied to end-user browsers by the WWW server. Initially up on OS/2 - AIX and MVS versions of the WWW-CICS interface will follow. Universities are said to be particularly interested. Use and application of CICS data retrieved by a browser is restricted to the browser's functionality, ruling out, under current technologies at least, the subsequent customisation and manipulation of that data. Given the majority of WWW servers in the market are run on Sun boxes it makes even more sense for IBM to make the gateway available for distributing data from CICS clients under Solaris, however what the company's got already is only four months old and it says it hasn't thought that far ahead yet. IBM plans to begin bundling the WWW services with CICS clients sometime in the future and is eyeing a dial-in service. The WWW-HTML-CICS initiative is part of an on-going plan to convert CICS' platform-dependent and proprietary communications infrastructure over to a message-independent architecture. The plan is to create a standard set of forms specifications and APIs which will be common to the various CICS implementations, making development and querying a more platform-independent task. HTML could form at least part of that link, the company says. The model is analogous to IBM's Lotus Notes link, where a CICS Server pushes data out to CICS Link and Client modules residing on a Notes Server, which in turn distributes query data out to Notes clients in a form that means users don't have to know they are accessing a CICS server.

### CICS upgrades

New also is CICS for OS/2 version 2.01 with TCP/IP connectivity for CICS clients, C++ and PL/1, and its availability with MicroFocus Workbench. A new 3.1 implementation of LANDP/2 now supports OS/2 Warp, DOS and Windows. CICS for AS/400 3.6 supports the new PowerPC boxes; CICS for VSE/ESA 2.3 supports Cobol and PL/1, and other security and migration features are due later this year; CICS for MVS/ESA 4.1 supports N-way data sharing for DB2 and IMS/DB on the the ES/9000 parallel transaction server, workload management via CICSplex SM, DCE and ONC RPCs and C++; CICS Client for OS/2 1.0 has new TCP/IP and SNA connectivity. All CICS products are now priced on a per-user basis. Meanwhile, the latest Standish Group numbers show the Unix OLTP monitor market reaching \$547m in 1998, up from \$109m in 1994. The research company figures Tuxedo led the market in 1994 with a 32% share, followed by Top End with 17%; Encina 15%; CICS (which shares Encina's structured file server and toolkit) 11%; UniKix (Bull's CICS-compatible system) 6% and other 19%. In 1998 it estimates Tuxedo will have 29% of the \$547m market; CICS 20%; Top End 14%; Encina 12%; UniKix 9% and others 16%.

## DIGITAL WAVE MODULATION THREAT TO TODAY'S CARRIERS

Sell your telecommunications company shares! First we had the threat of the Internet Phone, now an American Fork, Utah company claims to have a wireless transmission technology so efficient, capacious and cheap that it says a major telecommunications company has offered it \$500m for any patents awarded - just so that it can kill the thing. The company is International Automated Systems Inc, and it calls its technology Digital Wave Modulation, although unfortunately, since it is still waiting for patents, it is not prepared to say much about it, although it sounds like a variant of phase modulation in which both amplitude and frequency are modulated: at the GigaHertz speeds of cellular systems, an awful lot of digital traffic could be carried on each subchannel in even a fairly narrow band. The company, which developed a system for retail grocers and then developed a fingerprint identification system from it, says the system needs no interface, something that appears to be crucial to its operation, and cellular base stations would only need an add-in board costing as little as \$6,000, and something as simple as a PC Card could be used at the receiving end. It runs at 1.8G-bytes per second - does that mean it operates in the 14.4GHz band? - and the company claims a single Pentium personal computer could switch 150,000 phone lines, and over 1,000 personal computers could communicate with each other concurrently on one band. It is also claimed to use bandwidth 1,000 times more efficiently than Time or Code Division Multiple Access digital cellular, while a single analogue broadcast television channel could carry 900 Digital Wave Modulation channels. Vice-president of sales and marketing Curtis Snow said the company would not sell the technology, but wants to work in partnership with interested firms. The company says it's getting \$8m to develop a prototype system that will link schools, colleges and universities in the Utah Valley. According to International, a group of private investors had planned to link 10 schools via fibre optics but when it heard about the new technology it cancelled the wired project and started negotiating on Digital Wave. Details of a deal have yet to be agreed, but if it goes ahead the links will be for television, video, radio and digital data. The company is already working on the designs and says it can link the entire population of the Utah Valley (not too many souls) for what it would have cost to link 10 schools using optical cable, \$1.5m; the remaining \$6.5m is the cost of getting the equipment manufactured.

## ORACLE JUST MISSES THE \$3,000m MARK

Oracle Corp was cooking all through its fiscal year just ended, and the Redwood Shores database king just failed to make the 50% growth in annual turnover it needed to make it through the three billion dollar barrier. The \$1,020m of turnover for the fourth quarter represented a new record. The split of business was 58% for licence revenues, which grew by 46%, and 42% for services, which grew by 54%. The company said it experienced strong performances in all its overseas operations, and that currency translation had a positive impact of eight percentage points on its worldwide revenue growth during the fourth quarter. Fourth-quarter product revenue growth was led by a 115% surge in its applications licence sales, a part of its business that had been lagging earlier in the year. "We believe our competitive position will continue to improve in fiscal 1996 due to a robust product cycle," president and chief executive Larry Ellison said. "In the fourth quarter our Server business had its best growth this year at 70%," he added. Americas business rose 57% in the fourth quarter, Oracle Europe grew at 42% and Oracle Asia Pacific grew a storming 69% year-to-year in the quarter. Oracle says its consulting and professional services unit, Oracle Services, grew by more than 60% in the fiscal year to May 31, generating turnover of \$530m, up from \$330m for the previous fiscal year. The company credits the strength of its own products for the sterling performance.

# unigram·x

The weekly information newletter for the UNIX™ community worldwide

Eden Prairie, Minnesota-based **Apertus Technologies Inc**, developer of **IBM Corp's** MQSeries, has a letter of intent to acquire **BlueLine Software Inc** on undisclosed terms: Minneapolis-based **BlueLine** develops and markets a suite of products for centralised management of enterprise networks, including the **Vital Signs VisionNet** distributed performance management system for enterprise networks, and **Vital Signs LOCKout** network security product that ensures secure access between network-attached host resources and distributed users; it employs 70.

Lyon-based **Infogrammes Entertainment SA** has selected **Philips-TRT SA** to manufacture the special modems for its **Infonie** on-line service, which is due to launch in October: its multimedia content is stored on **Sun Microsystems Inc** servers, "the biggest multimedia servers in Europe," **Sun** tells **Infogrammes**; the servers hold 55 hours of video and handle 1,000 simultaneous calls.

**Hewlett-Packard Co** and **Arbor Software Corp** are integrating the former's **Intelligent Warehouse** with the latter's multidimensional database server, **Essbase**. **HP Intelligent Warehouse OLAP Builder** is said to make it easier to retrieve **Intelligent Warehouse's** data descriptions or meta data. It ships in October from \$20,000.

In honour of Network, **Sun Microsystems Inc's** new spokesdog, **Sun CEO Scott McNealy** is sporting a new baseball cap that reads "Don't even think about a leash." Sounds like a position statement to us.

Well, we have made a tiny bit of progress trying to get public access to the key documents in the **Addamax Corp** antitrust suit against the **OSF**, **DEC** and **HP**. The federal court in Massachusetts has scheduled a conference on **Unigram's** petition to intervene for Friday August 4.

**Novell Inc** is abandoning the Unix headquarters in Summit, New Jersey, that it inherited from **AT&T Co** and moving the development unit now responsible for **NetWare**, **UnixWare** and the ill-named **SuperNOS** to larger quarters in **Florham Park**. **Novell** campfollowers at the **UnixWare Technology Group** go along with them.

**Apple Computer Inc** has moved **MAE**, the **Macintosh Application Environment** that runs Mac programs on Unix machines, over to **Claris** to manage along with the **MacOS** itself - though not its **OEM** licensing - that remains with **Apple** under recently ordained **VP**, licensing technology **Lamar Potts**.

The next **Microprocessor Forum** is set for October 9-12 at the **Fairmont Hotel** in **San Jose, California**.

**Gradient Technologies Inc**, **Marlborough, Massachusetts**, is shipping its **EZ-Lok** software licensing application development kit at from \$4,500 on **Sun**, **IBM**, **HP** and **SGI Unices**.

**SunSoft** is shipping version 1.5 of its **SolarNet PC-Admin TCP/IP** software for administering PC networks for \$2,250 with one server and one administrator client licence. Additional clients are \$3,000 per ten pack. It's also offering version 1.1 of the **AGE Logic-based SolarNet PC-X server** (\$200 until September); and a new **SolarNet LAN Client** for accessing **NetWare** and **LAN Manager** applications, files and print services from **Solaris**. It is priced from \$300.

**Vector Network Computers** has donated a **Sun SparcServer** to the **South African Constitutional Assembly** which will store and provide Internet access to all constitutional data during the creation of the new constitution for **South Africa**.

**HP** says to expect to see **HP-UX 10.0**, the general business release slated for mid-year, coming to a theatre near you, soon.

Meantime, **HP's** annual user jamboree, **Interex**, where **CEO Lewis Platt** will keynote, is in **Toronto** the week of **August 14**.

**DEC** would be way behind the pack if its **Memory Channel latency** was really as long as a millisecond (**UX No 544**), we should have said microsecond, of course.

**SAP AG** says **R/3 version 2.2** will go up on **IBM Corp's PowerParallels** running **Oracle7 Parallel Server** from **September**. **R/3 3.0** will go up under **AIX 4.1**, with pilot sites expected at the beginning of next year.

13 companies have said they'll submit specifications for interfacing **OLE 2** clients to distributed **Corba** servers by **August 22** in response to **Part A** of the **Object Management Group's COM-to-Corba RFP (UX No 532)**. The 13 are **Microsoft**, **Iona**, **IBM**, **HP**, **Sun**, **Sybase**, **Oracle**, **Genesis**, **Digital**, **Fujitsu**, **Siemens-Nixdorf**, **Taligent** and **Visual Edge**.

**MARC Analysis Research Corporation** and **Sun Microsystems Computer Co** have created a parallel processing implementation of the **MARC** and **Mentat II** structural analysis software. It's taken them two years, but they say that performance has more than tripled on a four-CPU **Sun** system utilising **Domain Decomposition** to map structural domains to CPUs, achieving 85% linear performance scaling across four processors. The software ships at the end of July on **SparcCenter 2000s** and **SparcServer 1000s**.

**AT&T GIS** says it doesn't know where we got the idea it would be re-branding and face-lifting its 3450, 3500 and 3600 **SMP** and **MPP** systems this month (err, that's what you told us guys), but the makeover is now set for the **Autumn**, presumably around the same time it unfurls its re-worked **System 3700** strategy.

**Transarc Corp** promises a new cut of its **Encina OLTP** monitor technologies in a couple of months.

**Computer Associates International Inc** says it's now shipping the delayed version 1.1 of **CA-OpenIngres** on most **Unices** and **OpenVMS**. Upgrades are free, new licences begin at around \$1,000.

**Atlanta, Georgia based Client/Server Labs**, a spin out of **Enabling Technologies Group**, will publish its first **RPMark** benchmark test report (**Reference Platform Mark**) (**UX No 533**) on **July 10th**. **RPMark** was developed by **IBM's AS/400** division to evaluate overall client/server performance and is based on a composite rating of transaction, file serving and decision support. **IBM** turned the test over to **Enabling** realising no-one would take a big blue benchmark seriously.

**San Diego, California-based Template Graphics Software Inc** is launching **Open Inventor** and **OpenGL for PowerPC**. **Open Inventor** is a **3D C++** graphics toolkit up on **AIX** now, with **NT** due next month and **Solaris** by year-end.

Funny that: **Chen Systems Inc** swore to us it didn't have specs or pricing for its anticipated **Intel-based SMP Unix** boxes (**UX No 542**). Apparently an administrative error led to model numbers, specs and pricing finding their way to **Information Week**. The **CS-1000 Model 10** comes with two-to-eight **Pentiums**, **64Mb RAM**, **1Gb disk**, three **PCI** and four **EISA** slots and goes from \$75,000 to \$142,000. The **Model 50** has **128Mb RAM**, six **PCI** slots, four **EISA** slots and goes from \$120,000 to around \$200,000.

**Next Computer Inc** is shipping Japanese versions of **NextStep 3.3** and **Enterprise Objects Framework 1.1** on **Intel**, **HP**, **Sun** and **Motorola 68K** platforms.

Now **AGE Logic Inc** has won **Novell Inc** for its **PC X server**; **AGE** will ship its **XoftWare PC-to-Unix** mechanism for **Novel LAN Workplace 5.0** users.

**DEC** is to begin selling the **OpenGL 3D Action-Graphics accelerator cards** for **3D** and **CAD** **Kubota Graphics Corp** spin-out **AccelGraphics Inc** on its **Alpha workstations**.

**Phase X Systems**, **Beaverton, Oregon** is offering a new **Intel i960-based S+ series** of **X terminals** with from **4Mb** to **64Mb RAM**, one **Sbus slot**, **audio**, **video** and **telephony options**, resolutions from between **1024 x 768**, to **1280 x 1024** and **15"** to **21"** colour screen sizes performing at **1.9 Xmarks** to **3.2 Xmarks**. A **33MHz 17"** colour model costs from \$2,700 - with the **CF processor** it's \$2,900. **20"** versions are \$3,300 and \$3,500 respectively.

**IBM Corp's** taking aim at the high-end graphics and low-end **CAD** market currently dominated by **Silicon Graphics Inc** and **Sun Microsystems Inc** with its new low-price **RS/6000 workstations**, signing **US HP** and **DEC VAR Hall-Mark Computer Products** to market the boxes.

**Ray Noorda's** latest venture, **Canopy Technologies Inc**, an investment firm that'll help finance marketing and channel costs for start-ups, has already partnered with some of **Noorda's** other investments, including **Caldera** and **Willow Software**, plus **Vinca** and **Compulink Management Center**.

**Japan Computer Corp** is of course already offering a port of **BSD 4.4 Lite** on its **JP4** and **JP3e** systems - **FirePower Systems Inc's Powerized ES4100 (604)** and **ES3100 (603e)** - in **Japan** only at present.

**Visix Software Inc's** **Galaxy** application development environment has been integrated with **Mercury Interactive's XRunner** and **WinRunner** code testing software.

**Novell Inc's** fourth cut of **UnixWare 1.1 - 1.1.4** - will be available within 90 days, the company says.

Although the price/performance of its so-called "super clients" come off looking pretty unattractive, the **Microprocessor Report** figures **IBM Corp's** new **AIX/604-based RS/6000 43P workstations** - which are just more robust versions of the super clients - are pretty competitive compared to other workstations. The high-end **133MHz** version goes for almost \$8,000. By comparison, a **DEC** machine - which is faster - costs well over \$20,000. **HP's** boxes, with comparable integer performance, are over \$40,000. As a result, the newsletter figures, "the severe price compression represented by these hybrid PC/workstations will cause other workstation vendors to rethink their product strategies."

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram X

KCN

10 JUL 1995

The weekly information newsletter for the UNIX™ community worldwide

London, July 10-14 1995

Number 546

## SEQUENT'S INTEL DESIGN WORK WILL PROVIDE IT WITH A STING

Data General Corp's obviously not the only Unixer that's going to leverage Intel Corp's quad-CPU P6 boards in large-scale system designs. Sequent Computer Systems Inc, still apparently cleaning out its nest under new president and COO John McAdam, has been muttering about shared memory architecture and large CPU counts for some time (UX No 534). It's looking to utilise the P6 boards in high-end systems it's dubbed Sting, due late next year. Like DG's next-generation AViiONs they'll be tied together with a Scalable Coherent Interconnect (SCI) technology which overcomes current bus/backplane limitations, though whether Sequent has also turned to DG supplier and SCI specialist Dolphin Interconnect Solutions A/S isn't known. Sequent is likely to bring the stuff to bear sooner on its Pentium servers. Current operating systems and applications should run without too much dickering, Sequent says. It expects to have its head above the rest of the crowd heading down the P6 board-based enterprise system route - including AT&T, ICL and Unisys - by dint of the co-design work it has done on the board with Intel - providing SMP input Intel lacks - that makes implementation for it already a well understood task. It might even licence its architecture or design to others. With four CPUs the price/performance of even single board solutions from the likes of Compaq is likely to eat into some of these vendors' markets, though Sequent will aim Sting towards its current 12-way sweet spot - a three-board solution - touting other new fault-tolerant components and a more robust implementation of the boards claimed to eliminate interference.

## SYNON MOVES ITS UNIX GOALPOSTS OUT TO 1996

Larkspur, California-based AS/400 house Synon Corp is still just that, an AS/400 house. It was supposed to have shipped a Unix implementation of its C++ Obsydian object development toolset in the first quarter this year as part of its plan to storm the Unix client/server 4GL and second-generation application development markets. Lack of a Unix engine also means Synon's much-vaunted relationship with Reston, Virginia-based methodology merchant James Martin & Co is currently floundering like a fish out of water. If and when the agreement comes to pass - the two are still talking - Synon believes Obsydian will be propelled into large-scale information engineering accounts - the top-dollar business it covets. Synon, which has moved its Unix goalposts out to the first quarter of next year, claims the current hustle and bustle in the AS/400 world - new PowerPC units, new operating system - has put it off its Unix stroke. Insiders say the project was simply under-resourced. Synon admits its likely to top-up the \$4m funding already committed to the project.

## SNI, ORACLE MOVE MEDIA SERVER ALLIANCE ON

Siemens Nixdorf Informationssysteme AG and Oracle Corp are now ready to put some flesh on the bones of the video-on-demand collaboration they announced in April (UX No 533). The aim is to deliver highly scalable video servers to the emerging global market for multimedia services by putting Oracle's multimedia software up on the SNI and Pyramid Technology Corp families of Unix systems. Oracle already had a long-standing alliance with Pyramid, now an SNI company. The Oracle Multimedia Server comprises two parts: application server and video server. The application server already runs on the RM family of systems. The next step is to develop a version that will run on the RM400 and RM1000 systems. The RM1000 is the Pyramid system architecture that combines the strengths of both symmetric multiprocessing and massively parallel processing. For applications that involve up to 300 video data streams, a cluster of RM400 systems can be used. The RM1000 covers applications involving several thousand parallel video data streams, says SNI. The two companies also plan a number of interactive television and multimedia joint projects in a broad range of areas including computer-based training. These field trials are planned to begin by next quarter.

## ZPOWER IS NOT Z ESTRELLA, SAYS ZENITH

Separate the two by a language and an ocean and all kinds of confusion sets in. Compagnie des Machines Bull SA's Zenith Data Systems subsidiary tells us that its latest ZPower units (UX No 545), utilise the guts of Motorola Inc's PowerStacks - OEMed 100MHz 603e and 100MHz 604 motherboards - cloaked with Zenith's own components, peripheral set and cabinetry running AIX and NT. They are not, it says, re-packaged versions of its parent's 66MHz 603-based Estrella (UX No 544). Meantime, Bull whose anticipated Mississippi clustering technology has been pushed out to next year (UX No 544), has won Japan Computer Corp for its SMP PowerPC servers. Bull says JCC will sell Escalas, future clustering and PCI bus technology running AIX throughout Asia from September, maybe under a localised name. Tokyo-based JCC which already offers FirePower Systems Inc's Crusader desktops running a PRep-compliant version of the University of California's 4.4 BSD-Lite freeware Unix. The company reckons it has at least 100 public domain software packages running on the Unix platform, including. Mosaic, a WWW creation package, the LaTeX text editor and X11 release 5. JCC was founded in 1977, has a turnover of around ¥3,000m and until now has mainly designed Sparc-based workstations, X terms and network servers.

## OPEN LOOK TO REMAIN SOLARIS DEFAULT INTERFACE

Common Desktop Environment (CDE), the supposed definitive graphical user interface for Unix received another knock last week with news that perhaps its most reluctant champion, Sun Microsystems Inc, will not, as it had originally planned, offer CDE as the default interface in the forthcoming 2.5 cut of its Solaris operating system (UX No 530). It will bundle CDE, but the default will remain Open Windows, aka Open Look, the interface which is partly responsible for the Unix GUI war CDE was supposed to quell. It's by no means certain that CDE will even be the default for Solaris 2.6; the company claims its CDE plan is a "pull not push strategy." Meantime SunSoft is expected to offer an unbundled CDE for the current Solaris 2.4 as soon as this month. On the flip side, IBM Corp last week began to deliver its latest AIX 4.1.3 cut - default CDE interface and all.

## SGI TO TWEAK INDIGO2 EXTREME 3D GRAPHICS

Silicon Graphics Inc will this week hit back at the recent crop of graphics workstation enhancements being offered by the likes of Hewlett-Packard Co and Sun Microsystems Inc with an upgraded version of its Indigo2 Extreme three-dimensional graphics workstation package said to deliver between two and four times the performance of existing models. SGI will begin to press the MCAD system into use in less traditional simulation, visualisation and imaging roles.

## DEC FINALLY GETS ALCOR OUT OF THE DOOR

DEC's expected Alcor workstation (UX No543), the first to use its bleeding edge 21164 microprocessor, now looks like it might make it out the door on Monday July 17 despite the fact that DEC is believed to be siphoning off chips to feed its rumbunctious Turbo Laser business. Only initial quantities of what will apparently be called the AlphaStation 600 5/266, a model using the 266MHz version of the chip, are expected to be available, pegged at around 288 SPECint92 and 428 SPECfp92. An entry level unit of the PCI-based machine should go for close to \$32,000 with 32MB internal, a 1GB drive and a 17-inch screen, 300MHz versions should cost about \$10,000 more. Initial deliveries will reportedly only carry Unix or OpenVMS. DEC is also expected to cut prices of its existing AlphaStation 200 4/166 and 4/233 by 10% and its 200 4/100 by over 15% sending out one of the latter at \$4,995 with 24MB internal, 535MB drive, a 15-inch screen and stripped-down version of Digital Unix. It should take the opportunity to wheel out the Evans and Sutherland Computer Corp Freedom Series high-end 64-bit graphics accelerators it was expected to add priced at \$65k.

## AMDAHL's ANTARES GETS ITS RAPID APPLICATION DEVELOPMENT TOOL ONTO THE DESKTOP

Antares Alliance Group, the joint venture between Amdahl Corp and Electronic Data Systems Corp, has brought its Huron development tool to the desktop with Huron Object-Star 3.0. The high-end rapid application development and deployment tool has, until this version, lacked a popular desktop environment; it supported only Motif in previous versions. With Objectstar 3.0, however, client/server applications, with graphical interfaces, can be written that incorporate legacy systems, the company claims. It is now a "three-tiered" system, said Oliver Thierry, marketing vice-president of Antares. The tiers are the mainframe, the data object broker; the server, the execution environment; and the desktop personal computer, which handles the presentation of the data through its various client operating systems. Scrapping enterprise-wide legacy systems and starting again is obviously too time-consuming and costly, so ObjectStar enables developers to re-develop parts of the system selectively, where needed, and re-deploy them across the appropriate operating systems at the presentation, logic and data layers. The logic of the code and the interface can be updated, while still having access to the original legacy data, claimed the company. The tool incorporates a proprietary rule-based language that translates business processes into objects. The processes are described using a set of 17 verbs that define all the elements.

### Rules as objects

At the data layer, the MetaStor repositories enable developers to make the logic of the system run at the front, middle, or back-end of the hardware - and any combination of the three - using what is known as 'dynamic partitioning'. This links the objects dynamically during execution, making the eventual system scalable across the range of client-server architectures, the company said. "Any object developed in any Huron system will execute on any other Huron system," said John Paton, European director of sales and marketing at Antares. The distributed MetaStor repository is used to store tables, interfaces, reports and the rules as objects, rather than having them embedded in code, thus making the development and deployment process much faster. Huron dates back to 1991 as a commercial system Amdahl took 10 years to develop. Paton said the architecture of the original Huron did not have to be adapted for client-server as it already had a peer-to-peer model in the engine. All that has been added is openness and the compatibility of legacy systems with desktop environments, he said. With the original version Amdahl signed up General Motors Co's Electronic Data Systems Inc, American Express Co, AT&T Corp, Citicorp and "the spies", as Paton referred to the Central Intelligence Agency and Federal Bureau of Investigation. Of those, EDS decided to get involved and Antares was born, headquartered in Dallas, Texas. EDS currently holds 20% of the venture and has an option to take a further 10% should another partner join the fray. Thierry said the name 'Huron' would be dropped after the next release, because of its mainframe-only connotations. ObjectStar will support Microsoft Corp's Windows95, Windows 3.1 and 3.11 at the desktop.

### The server level

At the server level, Windows NT, HP-UX, AIX, OS/2 and Solaris are supported, in addition to mainframe operating systems. It incorporates a C/C++ application programming interface, which means that it can be invoked by, and incorporated into, any tool that recognises such code. It also supports Object Linking & Embedding 2.0 and Open Database Connectivity, giving SQL and other such links into ObjectStar. Price is dependent on customers' requirements, but the company said the price per user is the same, irrespective of the operating systems deployed. Huron ObjectStar will be available at the start of October.

## FIREWALL SERVER FROM BORDER NETWORK BRINGS INTERNET SECURITY

An Internet gateway in the office used to be confined to universities and major corporations. But prices are coming down as usability rises, and Border Network Technologies Europe Ltd has launched an off-the-shelf Internet firewall server that runs on a desktop personal computer using Unix, with a graphical front-end, and starts at £4,000. Border, based in Slough, Berkshire, is a subsidiary of 18 month-old Toronto-based Border Technologies Inc, a network products and services company, which changed its name from Seachange Inc. The Borderware Firewall Server is an Internet gateway and security system with a tweaked version of Berkeley Software Distribution Unix thrown in. Peter Cox, managing director of Border Europe, said that it was designed to "protect an internal network from the Internet; not the other way round." Somewhat unusually, Borderware runs on Intel Corp 8086-based systems. This was chosen because of the relatively low cost of such machines and the availability of local hardware support, according to Cox. The server offers Simple Mail Transfer Protocol mail, World Wide Web access, domain name services - which converts network names to network addresses - file transfer protocol, Telnet and news services. As security is one of the main selling points, Cox believes that the system employed is totally hacker-proof. To prevent unauthorised remote access, Borderware uses an encryption system from Crypto-Card Inc of Toronto. The system also comprises what Cox called a "hardened Unix," a security system on top and the proxy server with all the applications on top of that. The Unix is hardened because the IP forwarding code has been removed - "it's not just a router," said Cox. It is not enough simply to disable it, as that could easily be reversed by a hacker. Similarly, the source routing code, which tells IP packets where to go, and the Internet Control Message Protocol re-directs that suggest different routes for packets, have also gone. This is to prevent outsiders from changing the internal network configuration, Cox said. Two versions of Borderware are available on either CD-ROM or Digital Audio Tape, although the system specifications are identical.

## HOW IBM's LICENCE AGREEMENTS SELL YOU THE CAR BUT ONLY LOAN YOU THE KEY

The United States Copyright Act says: "made under this title, or any person authorised by such owner, is entitled, without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy". However, the law qualifies its broad statement: "...unless authorised by the owners of copyright in...a computer program (including any tape, disk, or other medium embodying such program)...[no] person in possession of a particular copy of a computer program...may, for the purposes of direct or indirect commercial advantage, dispose of, or authorise the disposal of, the possession of that...computer program...by rental, lease, or lending, or by any other act or practice in the nature of rental, lease, or lending". And further deals with the issue of microcode: "This subsection does not apply to a computer program which is embodied in a machine or product and which cannot be copied during the ordinary operation or use of the machine or product". If you buy a copyrighted book, you can resell it as you please. Similarly, when you buy Microsoft Corp's Windows, the licence agreement states: "You may not rent or lease the software, but you may transfer your rights under this Microsoft Licence Agreement on a permanent basis provided you transfer all copies of the software and all written materials, and the recipient agrees to the terms of this agreement". You can sell your personal computer with Windows on it. But you cannot sell an AS/400 with OS/400 on it, even though you paid IBM Corp for a permanent software licence, nor can you sell a 9021 with MVS. IBM (and every other vendor with a similar practice) has exploited a loophole in the law by retaining ownership of the systems software code and only renting it. Yet to use a computer, you must have an operating system. In effect, IBM has sold you the car but kept the keys. There is a direct economic impact of this practice: users get to buy the rapidly depreciating portion of the asset, computer hardware, while vendors retain the necessary component that retains its worth and, if software prices rise, actually increases in value. This practice is not merely exploitative, but for IBM, still governed by the 1956 anti-trust consent decree, it may in fact be illegal. Yet nobody is raising this issue as the courts blindly weigh IBM's plea to vacate the decree. - by Hesh Wiener From *Infoperspective International*, June 1995 Copyright (C) 1995 Technology News Ltd.

## UNIFIED MEMORY ARCHITECTURE REDUCES PC COSTS, SAYS MICROPROCESSOR REPORT

As vendors begin to rally around a new memory architecture called NUMA for future distributed SMP system design (UX No 544, and *see page 1*) so a new topology, UMA, or unified memory architecture, is set to storm the PC world and cut the cost of the next generation of desktops. According to *Microprocessor Report*, a unified memory architecture PC combines main memory and frame buffer on a single DRAM array, eliminating the traditional standalone buffer and producing a saving of between \$30 to \$60 per PC. Several companies are now working on UMA chipsets. In the UMA scheme, the system can allocate the exact amount of DRAM required for the frame buffer, assigning a block for the frame buffer and whatever remains for main memory.

### Vendor enthusiasm

However, the savings, the Report observes, do not come for free. For example, if a PC with 8Mb RAM, a separate 1Mb frame buffer, and a 1024 x 768 display with 8-bit colour is redesigned with UMA, its graphics subsystem will require - in this configuration - 768Kb of the 8Mb RAM ordinarily devoted entirely to the main memory subsystem. That leaves 7.25Mb for the operating system and applications, a 9% shortage meaning more disk swaps. The Report suggests this loss of main memory wouldn't generally cause performance problems because most graphics applications are written for 8-bit colour and most screens are 800 x 600 or 1024 x 768, and says "the \$30 saving is substantial in today's mainstream desktop market, where system OEMs negotiate over pennies. This explains why most OEMs are enthusiastic about UMA." Savings will, however, also be implementation-dependent. Options include adding the memory for the frame buffer to main memory, resulting in 9Mb systems with 8.25Mb for the operating system and applications. Or adding an L2 cache to reduce disk-swaps. Whatever the implementation details, the Report expects UMA to trigger a new round of consolidation in the core-logic and graphics markets, describing the technique as a paradigm shift from the 16-year-old PC architecture originated by IBM. Coupled with a move to get rid of the 13-year old ISA bus - the forthcoming distributed DMA standard will allow manufacturers to support ISA devices on PCI - UMA, it believes, leads to a new level of integration; more functions and features packed into PCs without significant price increases.

## MDI OFFERS REPLICATION FROM ORACLE, AS SYBASE RE-WORKS GATEWAYS AS OPEN ACCESS SERVERS

Sybase Inc's reseller outfit MDI is offering a Sybase Replication Agent for Oracle which it says allows users to replicate changes in Oracle data out to Sybase and mixed database environments. The agent monitors the Oracle database log for event information required by non-Oracle subscribing sites and passes it on to the Sybase Replication Server which in turn distributes to those sites. The agent is from \$10,000 depending on the number of users per Oracle server. A version for DB2 is already available; a Replication Driver for ODBC is due this quarter, a Lotus agent is due by year-end. MDI says version 10.5 of its OmniConnect gateway (formerly OmniSQL Gateway) is in beta and will ship late next month. OmniConnect allows users to access a variety of databases using front-end tools which are shielded from the different SQL dialects the target databases employ. It works in conjunction with OmniSQL Access Modules, which are available for Oracle, Informix, DB2, Ingres, Rdb, IMS, IDMS, VSAM and Adabas. The modules are currently being overhauled together with Sybase's Enterprise Connect gateways, all of which will appear as Open Access Servers during 1996 (except AS/400 and DB2 modules which are due by the end of this year). Version 10.5 includes enhanced performance and optimisation, support for the Open Access Server gateways, unbundled Oracle and Ingres implementations and SQL Server System 10 compatibility.

## DATA GENERAL SAYS IT'LL BE FIRST OUT WITH NUMA BUT IS MUM ON MORE DETAIL

Although a bunch of vendors are moving in that direction, Data General Corp claims it'll be first out with a Non Uniform Memory Architecture (NUMA) system. NUMA, a method for sharing a single memory between distributed - but closely-linked - systems was conceived at Massachusetts Institute of Technology. DG says it's already got 88000-based NUMA AViiON servers close to beta. It plans to move the solution over to P6 systems it'll create next year as part of its transition to the Intel Corp microprocessor architecture. DG says it's not using the PCI/SCI bridge chip its connectivity partner Dolphin Interconnect Solutions A/S is designing for Siemens Nixdorf (UX No 544), but won't talk about the exclusivity of what it actually has got underway. Meantime, given the anticipated rush towards P6 board-based large-scale systems - see front page - and the plans DEC, HP, IBM, Siemens, Sun, Tandem and other vendors have already delineated publicly or privately for their respective high-ends, more than one eyebrow has already been raised questioning DG's likely chance of success against other high-end vendors which aren't also trying to jump chips at the same time.

## NEC JOINS BULL AS 19.9% PACKARD BELL SHAREHOLDER

The web of links between NEC Corp and its long-time partner Compagnie des Machines Bull SA became a little more complex last week when NEC announced that it would follow Bull's Zenith Data Systems and also buy a 19.99% stake in big US retail personal computer manufacturer Packard Bell Electronics Inc, now of Sacramento, California. NEC is paying \$170m for the stake, a fairly low price for a company with \$2,800m of sales in 1994, but the low price reflects the desperately poor quality of earnings in the cut-throat personal computer business. Bull is taking up its pre-emption rights, paying about another \$30m to maintain its own stake at 19.9%, so Packard Bell gets some \$200m all told. It marks the second time that Packard Bell, which aborted a flotation a couple of years ago, has raised money by selling a stake to a would-be strategic partner rather than going public. Before the sale to NEC - which will be buying new shares, and will hand over the cheque in August, the three founders of the company - who bought the name for its historic resonances - still hold more than 70% of the equity. The company is valued at a fair bit more now, because Bull paid only \$40m for its original 19.9%. NEC says combined sales of personal computers by itself and Packard Bell this year will come to 7.3m, but since this is now a three-way alliance, sales by Zenith should really be added in too. The deal looks like grim news for the employees at NEC's remaining plants in Japan, because company president Hisashi Kaneko said the tie-up would help sales of NEC's proprietary architecture personal computers in Japan, and help NEC cut costs in computer production. NEC will develop home computers with Packard Bell, and supply more CD-ROMs and memory chips - to Packard Bell; NEC is also hoping that the alliance will serve to promote its own technical standards for future multimedia products such as games, interactive television products and other software. NEC also looks to supply Packard Bell with three-dimensional graphics chip sets and colour liquid crystal displays - a key part of the Packard Bell-Zenith alliance was that Zenith would contribute a notebook dimension to Packard Bell's product line. The two may also work together on television set-top boxes, but it looks as if the collaboration will be strictly on the iAPX-86 family, because NEC is very firmly in the R-series RISC camp while Zenith is toying with the PowerPC.

## UNIKIX BEARDS IBM IN ITS LAIR WITH CICS EMULATOR ON SYMMETRIC RS/6000

UniKix Technologies Inc, the CICS emulator for Unix developers based in Billerica, Massachusetts and owned by Compagnie des Machines Bull SA, is challenging IBM Corp right in its home territory by coming out with UniKix 4.1 for IBM's own symmetric multiprocessing RS/6000s and - of course - Bull's Escala symmetric multiprocessors, both of which use the PowerPC RISC. The aim is to make it easier for companies to migrate their mainframe CICS transaction processing applications to PowerPC-based servers with the advantages of scalability and openness.

### CA WANTS FAME AMONG PEOPLE WHO WRITE FIRMS' CHEQUES

In an effort to get its name tripping off the boardroom tongue, the UK arm of Islandia, New York-based Computer Associates International Inc has published the results of a survey that concluded that corporate and information technology managers do not communicate - in particular, it would seem, about Computer Associates itself. The survey, entitled IT And Corporate Strategy - Towards A Common Goal, was carried out by Spikes Cavell & Co, a Newbury, Berkshire-based information technology research company, and shows that there is a difference in the way data processing managers and business managers view information systems within their company. However, the research concludes that there is a willingness to develop better communication in order to help technology serve the needs of the business, which should be good news for Computer Associates. The company, which supplies integrated systems management, database management and business applications software, claims to have more than 200,000 mainframe and mid-range customers, and said it is committed to protecting clients' investments in their information systems by "providing solutions to users across virtually all hardware boundaries".

#### Brand names

Marketing director Jay Huff said Computer Associates was a name well known among information technology managers, but that few board directors had heard of it. He explained that with companies incorporating technology into their overall business strategy, purchasing decisions for integrated computer systems were shifting from the information technology manager to the boardroom. So to plant its name firmly in the mind of board-level decision makers, and, the company claims, to help computer and business managers speak the same language, Computer Associates runs what it calls CEO Technology Retreats, intensive four-day courses where chief executives are taught everything from keyboard skills to speaking and understanding computer jargon. They are also given their own notebook computer, printer and modem, as well as being encouraged to take part in golf and tennis tournaments in their leisure time. Having started these retreats in the US in 1993, the company will run its first European retreat in Montreux, Switzerland at the end of October.

### VREAM DEMONSTRATES WORLD WIDE WEB VIRTUAL REALITY KIT USING ITS SOFTWARE AND MICROSOFT'S REALITY LAB

Chicago-based Vream Inc used the VRWorld '95 conference to hold what it said was the first demonstration of immersive virtual reality on the World Wide Web. The company's new browser, dubbed WIRL, a tortuous acronym for Web Interactive Reality Layer, implements the standard Virtual Reality Modelling Language, but adds a number of extensions. The company has its own VreamScript Text scripting language, which is generated by its own virtual reality authoring software, its existing Virtual Reality Development System and a forthcoming product called VRCreator. The high-level language is used to transmit compact virtual reality descriptions across the Net, which are interpreted and rendered in real-time by the browser. The browser is built on Microsoft Corp's Reality Lab rendering engine and is claimed to run at "approaching" 120,000 polygons per second on a standard Super VGA 90MHz Pentium. WIRL will first appear on Windows 3, Windows95 and Windows NT. No news of Mac or Unix versions. Users will interact with the virtual world using all the standard immersive gear, including head-mounted displays, and three-dimensional tracking systems, mice, gloves and ball controllers. Explaining its flexibility, Vream president Edward LaHood said "You can pick up a cube that has video playing on all six sides and throw it against a wall in a virtual room. It can have weight and elasticity associated with it so that it bounces off the walls, and you can catch it with your virtual hand." Presumably it has other uses.

### VOCALTEC MAKES LONG DISTANCE TELEPHONE CALLS OVER THE INTERNET

Internet telephone technology - still in its infancy - has received a shot in the arm with the announcement by VocalTec Inc of a full-duplex version of its Internet Phone software product which was launched last February. Now, users who choose the Internet to make long-distance calls can speak concurrently without the speech delays associated with half-duplex Internet phone systems. Market size for Internet telephone service is not known, and Israeli VocalTec, with a Northvale, New Jersey base, isn't revealing the size of its customer base, said Tom Maresca, analyst for Jupiter Communications. Not that many individuals at home have the standard C-SLIP, PPP or SLIP interfaces necessary for telephoning into the Internet. The software also requires users to have full-duplex sound boards in their computers capable of recording and playing back at the same time, reducing the potential customer base.

#### Big possibilities

However, Maresca said the market possibilities are tremendous with more than 25m Internet users and one node being added every 20 minutes. A half-duplex phone works like a walkie-talkie: only one person can be heard at a time. A full-duplex phone lets both parties speak simultaneously as with a regular handset. Existing VocalTec customers will receive a free upgrade package. Both half-duplex and full-duplex versions are compatible with each other. Retail price of the upgrade is \$100, but the street value hangs at \$70. The new version can be downloaded from VocalTec's home page on the World Wide Web. VocalTec has also announced a marketing alliance with Internet access provider Netcom Corp, which supplies the NetCruiser graphical interface to the Internet. Netcom will sell the Internet Phone as part of its NetCruiser package. The company's move to full-duplex comes, in part, in response to market pressure from competitor Camelot Corp, whose full-duplex Digiphone is expected to hit the shelves of most US computer stores by mid-July. Camelot has just signed Ingram Micro Inc, the big computer software distributor in southern California, with revenues of more than \$4,000m, as the first of several planned distributors of the product.

### ORACLE ACCELERATES ITS STAMPEDE INTO MULTIMEDIA

Oracle Corp is placing the highest priority on the multimedia extensions to its database technology, and has signed a letter of intent to develop interactive television applications for deployment on set-top devices with Sanctuary Woods Multimedia Corp, a San Francisco developer of entertainment and education CD-ROM titles. It is also putting its Media Objects up on the Internet. In the agreement with Sanctuary Woods, the multimedia content of the applications will be combined with Oracle's New Media software to turn the titles into interactive television applications. Oracle will provide access to a fully functional Oracle Media Server development facility, consulting services and technical support to Sanctuary Woods, and the resulting interactive television applications will form the basis for a new Sanctuary Woods Channel. The Oracle Media Objects interactive multimedia authoring tool is being made available on the Internet in the US and offered at a special introductory price of \$100, and is now supporting the software with an Oracle Media Objects Developer Programme, with a charter membership fee of \$100 in the US. Developers can receive a 90-day free trial version of Oracle Media Objects for Macintosh on the World Wide Web at <http://www.oracle.com/> with the Windows version to follow. Developers that want to keep the thing call a toll-free number to buy a full-use licence. And credit card originator MasterCard International has joined the Oracle Set-Top Alliance, formed to exchange information on technology, business and standards issues, saying that it wants to help speed the delivery of services through the embryonic medium of interactive television.

## NEURON DATA HEADS FOR SECOND-GENERATION APPLICATION DEVELOPMENT WITH MODULUS SOFTWARE ROUTER

Installed in its new Mountain View, California, headquarters, Neuron Data Inc has turned to Houston, Texas company Modulus Technologies Inc to propel it towards its latest incarnation as a distributed enterprise application development house. It's a world already populated by the likes of Forte Software, Dynasty Technologies, Texas Instruments, Progress Software and Uniface with others leaping aboard by the minute. Neuron Data knows it's a late-comer, but claims Modulus' protocol-independent software router, a distributed messaging technology anchored to the heart of its Elements Environment development packages, has other techniques bang to rights. After an 18-month, 10-stop tour of potential middleware providers, Neuron Data arrived at Modulus' door and licensed the company's software router as part of an exclusive relationship they're now looking at to expand. Neuron Data re-fashioned the software to suit its own requirements and is positioning the mechanism as a tier-less, multi-point and multi-network component delivering its application development and interface building tools into the distributed system world.

### Message-based inter-process communication

Neuron Data describes the Distributed Communications module as a message-based inter-process communication (IPC) abstraction which creates routing processes on the node. It touts its natively multi-point architecture and "non-directed messaging" which apparently allows developers to write multi-process communications programs without having to specify point-to-point addresses and platforms in the code. It supports on-the-fly or dynamic configuration of distributed applications by having developers write IPC code based upon data object types rather than static addresses. Neuron Data doesn't have - nor does it envisage offering - the kind of graphical tool featured in other environments that allows the developer to drag and drop parts of an application on to different nodes for processing, although it will offer a graphical manager as an add-on by year-end.

### No more tiers

Distributed Communications allows connection patterns to be changed while the application is running via APIs and is said to eliminate the need to recompile the original application all over again; only the piece that is moved has to be recompiled on the node. Neuron Data says each application component - GUI, data rules, application logic - can now be partitioned and dynamically reconfigured via a tier-less architecture. It describes the component - which supports TCP/IP, NetWare, SLIP/PPP and other protocols - as a network optimiser which delivers a sophisticated publish and subscribe mechanism requiring no central repository because individual routers describe the addresses. It plans gateways to DCE and Corba systems - it'll describe a complete set of object technologies and integration plans within 60 days - and thinks even the Corba crowd may eventually move over to a software routing system over time.

### Distributed versions

Using the messaging technology and customised toolkits developed with Modulus, Neuron Data has created distributed versions of its existing Open Interface, Smart Elements and C/S Elements software development packages, all now housed under the company's Elements Environment umbrella. The packages deploy a mixture of user interface technologies, data access and business rules modules, portability layers, drivers, editors and debuggers. Available standalone or bundled with the packages, the Distributed Communications component starts at \$7,500 per development licence for Unix, NT, OS/2, Mac and Windows. There are no runtime fees. The ten-year-old, \$28m company with 155 employees began life as an expert system house peddling the Nexpert Expert system it still has on its books but which it expects to re-cast in the near future. In the late 1980s and early 1990s it created a set of technologies for adding multiple user interfaces to applications.

## VERITAS UPGRADES HIGH-AVAILABILITY SOFTWARE

Mountain View, California-based Veritas Software Inc has announced FirstWatch 2.2, an upgrade to its high-availability failover management software for mission critical applications. 2.2 provides an alternative Heartbeat channel option, a GUI script builder, enhanced security and memory management, support for FDDI and Token Ring networks. Heartbeat enables FirstWatch servers to send status information back and forth between servers. San Mateo, California-based Qualix Group Inc will resell 2.2 and provide support. Up on Sun and HP, prices go from \$15,000 for a server pair and is due in the third quarter.

## HITACHI'S UK RESEARCHERS REPORT NEW CHIP BREAKTHROUGH

The quest to develop a single electron memory chip has moved one step closer with the announcement of a technique to manipulate specific numbers of electrons to perform present-day semiconductor logic functions. The development comes from researchers at Hitachi Europe Ltd's Cambridge Laboratory, who have been working with Cambridge University's Microelectronics Research Centre to develop a single electron circuit since 1991. The first major breakthrough came in 1993 when the research partnership produced a memory cell with a single electron which could store one bit of information. By adding logic to the memory cells the group developed the first single electron processor but the device could only be controlled at minus 269.8°C - which was of little commercial use as such devices need to operate at room temperature. Present-day semiconductors use an operating principle based on the average behaviour of a large number of electrons. If the number of electrons is reduced the semiconductor loses performance. But the number of transistors within one chip is rapidly increasing and the group estimates by the year 2015 there will be 10,000m transistors per chip. To achieve this, the number of active electrons in one transistor will need to be reduced to 10 to avoid excessive heating. The group has now developed new fabrication techniques to increase the temperature at which the device would work to minus 196°C. The new techniques enable the fabrication of nanostructures - minute metallic structures two nanometres in size, which enable the behaviour of single electrons to be closely observed. From such observations researchers observed the Coulomb Blockade effect - the principle by which an isolated area of a conductor is made small enough so that the change of stored energy from the loss or addition of an electron prevents further electrons from leaving or entering the area. To increase the temperature at which electrons work effectively, the group found they need to decrease the conductor space by developing new materials capable of containing electrons within a smaller area. Such material has now been found and the research group is now carrying out the first tests using silicon structures. The researchers expect to produce a device that can fully function at room temperature by 2010. The joint development project has received £1.5m from Hitachi Ltd this year, £350,000 of which has gone towards an extension of the Cavendish Laboratory, which will open on July 6. Japan's Ministry of International Trade & Industry has also invested £1m in the project which is scheduled to run to the year 2000.

## SOFTWARE AG PUSHES OBJECT TECHNOLOGY OUT TO MARCH 1996

Software AG has pushed back the release of a full-blown object-oriented implementation of its Natural 4GL application development environment originally due now, until next March, claiming it's taking longer than it thought to get the methodology of the thing straightened out (UX No 510). To try and make amends, it has penned September as the launch date for a version of its Natural Engineering Workbench newly-cut with some object work it says can be used with the existing procedural and the future object versions of the 4GL. A full-function object release of the Workbench with inheritance and polymorphism will appear next March at the same time as Unix and OS/2 implementations of the currently Windows-only mechanism. It'll share tools like a browser, and a repository, with other Natural object products. The German software house, obviously intent on an object prelude to Spring, will also reveal an object-oriented implementation of the its Adabas database at the same time, including a facility for the storing persistent and non-persistent objects generated by Natural and support for a variety of object request brokers.

## AURA TECHNIQUE TO BE USED IN GREENSPACE II TO BRING 100 PEOPLE TOGETHER IN VIRTUAL ENVIRONMENT

By Morgan Holt

In the second stage of their Greenspace collaborative virtual reality project, the University of Washington's Human Interface Technology Laboratories and Fujitsu Ltd are set to increase the number of people that can meet in a virtual environment by limiting their vision of each other. The Greenspace projects are intended to grow local and regional virtual spaces in which people can meet and work in cyberspace. Greenspace II will bring around 100 people together in a shared virtual environment where participants will have their own character, each with an aura - a radius of virtual space outside of which the person cannot be seen. The aura technique, which has also been used in virtual collaborative projects involving the UK universities of Nottingham and Lancaster, detects when a person's virtual character is near before showing them to whoever else they are close. The developers of the Greenspace project said this was vital as sending an image of every person to every other person would immediately exhaust the bandwidth and immobilise the network.

### System this year

Describing the project to this year's Virtual Reality 95 conference in San Jose, Paul Danset, who heads the technical department of University of Washington's lab, said he hoped to have a system this year capable of running under Unix, Posix, Posix.4 and Windows NT. It will use OpenGL rendering and the new Virtual Reality Modeling Language, VRML, which is a lot more than a three-dimensional graphics language. It should do what HyperText Mark-up Language did to Hypertext, he said. Greenspace runs over the growing Multicast Backbone, (MBone), which duplicates packets to individuals as demanded rather than forcing the sender to issue a separate packet for each recipient. Danset said the current network is very fragile at 300Kbps - a novice turning on an application could easily flood the MBone - but maintained that acceptance of the MBone was happening so fast that in two to three years, hooking up to the Internet will mean hooking up to the MBone. Greenspace I, held in November last year, was largely a public relations exercise to create awareness of the project and invite funding. Danset said it had been successful but the sponsors of the second stage of the project have not yet been disclosed. More people will be added to Greenspace II: only six were present in the original, and audio and video quality will be improved. The latter was so poor in the demonstration it had to be switched off.

### Aura technique

The universities of Nottingham and Lancaster demonstrated the aura technique last year by playing the popular drinking game, Bunnies, between 10 people at five sites in Germany, Sweden and the UK. People were represented by virtual cubes with an ear on each side and a face on the front. When one person was pointed at, he had to raise both ears, the person on each side having to raise the ear closer to the person chosen. Nottingham University said it was an excellent way to test the network's ability to respond to immediate instructions, not to mention the researchers.

## DEC TURNS TO SYBASE TO CREATE FULL INTERACTIVE TELEVISION SYSTEM

Digital Equipment Corp may have disposed of its own database products to Oracle Corp, but it doesn't mean that Oracle has won itself a privileged position in database with DEC, and the Maynard has turned to Emeryville, California-based Sybase Inc for multimedia database software. The two are to integrate the Sybase Intermedia and Digital Mediaplex product lines to create a complete system architecture for authoring, delivering, and managing interactive television services. The non-exclusive agreement calls for the two to dedicate the necessary engineering and management resources to deliver the combination early next year. The two say they that will also collaborate on a new generation of free-standing low-cost multimedia production systems for interactive television development environments.

## PRISM SPEEDS WAREHOUSING WITH ORACLE

As well as joining Oracle Corp's Warehouse Technology Initiative (UX No 544), Prism Solutions Inc, Sunnyvale, California, has added new Changed Data Capture and Warehouse Update modules to its software line-up. The Changed Data system captures only the changed data in Oracle tables used as source files for a warehouse, which Prism says means users don't have to pass their entire legacy files through Prism Warehouse Manager's generated Cobol programs. The time-stamped meta data can be exported to Prism's Directory Manager for integration into the information directory. Prism says the module can also be use to create what it's calling operational stores of data that's 30 to 60 days old which can be used alongside the full-blown warehouse containing snapshots of historical data usually spanning several years. Warehouse Update allows users to apply changes in rows in an Oracle data warehouse. The Warehouse Manager generates a Cobol programme with embedded SQL manipulation language to replace or insert rows in an Oracle data warehouse. Meantime, the Prism Directory Manager can now build a directory of meta data incorporating models imported and converted from Oracle CASE and technical meta data from Warehouse Manager. Data Capture and Warehouse Update are \$25,000 options for Warehouse Manager for use with Oracle data warehouse from September. Directory Manager is \$35,000 for the repository engine and \$500 per seta for Oracle servers from August.

## IBM's WORD-PROCESSING PARTNER READIES UNIX STAR WRITER

Until IBM's Lotus Development Corp acquisition goes through to fill the groupware gap in its software, the company will rely on a development and marketing agreement negotiated by its German subsidiary signed back at CeBit in March with the little-known Hamburg-based software house Star Division GmbH to plug the hole in its word processing applications. The company's StarWriter is the top-selling word processor under MS-DOS and OS/2 in Germany, and number two under Windows. IBM is due to market a suite of Star Division applications - the package is currently in beta - as StarOffice on OS/2 from this summer. It consists of IBM StarWriter, a word processing package; IBM StarCalc, a 3-D tables and analysis package and IBM StarDraw, a graphics and presentation package. Although the joint-venture with StarDivision does not conflict with the Lotus takeover, IBM in the US has been very quiet on the subject, offering little about the agreement or its likely impact. StarOffice, which may not have the same name in every country, will be launched in Germany first and later throughout the rest of Europe (in nine languages), the US and Asia. Pricing is promised to be "competitive with Microsoft Office." The interesting part for *Unigram* readers, is that Star Division is readying Unix versions of the package for the fourth quarter to support AIX, Solaris and HP-UX.

## TAPE PRO BRINGS IN HALF-INCH CARTRIDGE DRIVE FOR AS/400, RS/6000

Maidenhead, Berkshire-based Tape Pro Systems Ltd has begun distributing San Diego, California-based Overland Data Inc's L490E half-inch cartridge tape drive, which enables users to write to, and read from IBM mainframe tapes. The drive was launched in the US at the end of last year and since then Tape Pro has sold a number to personal computer users who need information from mainframes. But now that it is confident of the drive's ability, it is launching it into the AS/400 and RS/6000 market. Tape Pro said that while other data interchange drives can read mainframe tapes, Overland Data's drive can read and write, obviating the usual need for two drives. The L490E works with AS/400, RS/6000 and personal computers and 3490E- and 3480-type tapes and is compatible with 18-track and 36-track mainframe tapes. Configured in a stand-alone tower unit, for around £15,000, the drive has a 4Mb cache buffer and SCSI, and data rate of 10Mbps. The company said the accuracy of data recording is supported by extensive use of error detection and correction technology.



## UNEXPECTED CHARGES PUT DAMPER ON OPENING OF THE MONDEX TRIAL

The Mondex electronic purse initiative looks doomed before it starts because of the charges planned for users of the system. ~~Swindon residents taking part in the Mondex Smart Card trials~~ will be charged £1.50 per month for the privilege of using their Mondex Smart Card once the initial six-month free trial is up. Retailers will also pay Mondex anything up to 75 pence per Mondex transaction, a price the company said is competitive with that charged by other UK High Street banks for handling retailers cash but one which could thwart widespread adoption of the system. Mondex International, which is backed by National Westminster Bank Plc, Midland Bank Plc and British Telecommunications Plc launched its first pilot in Swindon, Wiltshire last week. The first participant in the trial was a 72 year-old newspaper vendor who sold *The Swindon Advertiser* for 28p using his Mondex card reader to carry out the transaction. Mondex expects 1,000 retailers and 40,000 consumers to use the system by July 1996; it claims there are already 7,300 applicants eager to get their hands on the Mondex cards and is planning a nationwide roll-out of the system within two years.

### Participants

The Bank of Scotland Plc will join the scheme once it is national in an attempt to increase its customer base over the border without having to install cash dispensers. British Telecom is adapting 150 public telephones and 150 telephones in pubs and shopping areas for users to top up their Mondex cards over British Telecom phone lines - although only 10 telephones have been adapted so far. Users will be charged standard telephone rates; electronic transactions are said to take a maximum of four seconds. British Telecom will also install 2,000 Mondex-compatible screen phones, half of which will be for domestic use, the other half for business use. These will also be part of a free trial lasting a year. Although there is widespread conviction that National Westminster Bank Plc is shooting itself in the foot by imposing charges for the Mondex card when there is no charge for cash, the consortium insists that "consumers are quite willing to pay from £1 to £3 for their Mondex cash card because they get additional benefits over ordinary cash." To arrive at this astounding conclusion Mondex questioned 40 groups of people in America, Europe, Australia and Japan in an 18-month market research campaign; when presented with the supposed benefits of Mondex, such as cash transfers over the telephone, carrying five international currencies on one card and ubiquitous cash withdrawals, respondents said "yes, yes, yes."

## SILICON GRAPHICS LOAN TO OXFORD MOLECULAR-GLAXO

The computer-aided drug design field is seen as such an exciting new market that Silicon Graphics Inc is to lend Oxford Molecular Group Plc, Oxford, UK the workstations it needs for its collaboration with drugs giant Glaxo Wellcome Plc. The joint venture is dedicated to joint development of molecular modelling software that the duo hopes will accelerate Glaxo Wellcome's drug discovery process worldwide. The work will be done at Glaxo Wellcome's Research Triangle Park facility in North Carolina, and on completion, Oxford Molecular will own the intellectual property rights for any resulting products, and will integrate the new software into its commercial product line and support the software for a fee. Glaxo Wellcome will have the right to develop the software further for its own use. The first step will be to develop software for an integrated structure-activity relationship system within 12 months, and follow-on projects may include the integration of advanced visualisation tools and additional structure-activity relationship tools - the same molecule can form itself in different ways - one can be a mirror image of the other, for example - and according to which way they form, they may act differently on the body. The planned software is intended to be suitable for general chemical analysis and reporting, and compound and combinatorial libraries, as well as conventional structure-activity relationship applications, and will run in a client/server environment.

## WILL HISTORY REPEAT ITSELF WITH IBM'S BUYOUT OF LOTUS?

by Stuart Zipper

Long-time IBM watchers are wondering whether it's setting itself up for a repeat performance of its sometimes-disastrous billion-dollar ISV buying binge of the late 1980s, early 1990s. Back in late 1989 IBM had a long-range plan to grow its software and services business to 50% of revenues, from the then-current 30%. Unfortunately, its software business was growing by only 6% a year, analysts figured, less than half what a lot of ISVs were experiencing. So IBM started gobbling up ISVs, big and small. In many cases it made secret minority investments - multi-million dollar outlays that were never publicly reported because they were such a tiny fraction of IBM's revenues and the companies involved were privately held. Sometimes it sweetened the pot with a development contract as well as money. In other more public instances it simply bought the companies outright or took majority control. Some of the investments included a hardware component. At one point it was averaging more than two companies a month. In one 14-month period, from December 1988 to January 1990, IBM ploughed money into 39 ISVs - at least that's how many people could find out about. The tally came from IBM public statements and information gleaned from sources and was put together by an ad hoc team including competitive analysts at DEC, folks at merger specialist Broadview Associates and journalists at *Electronic News*.

### Ferreted

The amount IBM paid could only be ferreted out in 15 of the cases but the total IBM spent on them came to more than \$268 million. Long-time industry watchers who read the list may remember the successes and failures, but the most illustrative was IBM's purchase of Cadam in November 1989. A Lockheed subsidiary, Cadam had been named a prime supplier to General Motor's C4 multi-billion dollar computer automation program, despite the fact that its software ran only on PCs and GM had mandated Unix workstations. Cadam was ported to Sun, HP and Apollo gear. Lockheed soon decided to get out of the business. In a way, it suckered IBM into buying Cadam by insinuating that Fujitsu was bidding. In fact, Fujitsu never made a formal bid. Once IBM took over Cadam it was only a matter of months before IBM's PC, minicomputer and mainframe forces began fretting over the support it was giving to the various Unix workstations. In a matter of months they literally forced Cadam to stop developing its Unix ports.

### Withered

In the end, Cadam withered away to a fraction of its former self and in late 1991 it was turned over to France's Dassault Systemes in exchange for fractional ownership in Dassault, which made the Catia software that IBM sold on its mainframes in direct competition with Cadam. In the Cadam story lies the rub as well as possible parallels with Lotus. Just as forces inside IBM forced Cadam to drop its Sun and HP support, the OS/2 crowd, despite CEO Lou Gerstner's cross-platform promises about Notes, could try their best to turn it into an OS/2-only product or in true IBM tradition the company could simply fritter the whole investment away. Reports suggest that companies evaluating Notes have put it on hold until they feel secure about IBM's actual intents. In the end, the Lotus acquisition could also parallel another famous IBM acquisition of the day, its attempts to get into the PBX business by buying Rolm, a deal it finally wiggled out of by getting Siemens to take over the business. As with Rolm, the question now is whether Lotus will also yield a wrong number.

- IBM Corp did not waste any time completing its acquisition of Lotus Development Corp once Lotus holders almost bit off their hands to grab the \$64 a share on offer, and Lotus is now a subsidiary of IBM. It will remain based in Cambridge, Massachusetts and is expected to start taking in many of IBM's other personal computer software interests.

# uni gram·x

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Seiji Sanda, president of **Apple Japan Inc** has resigned after clashing with parent company officials over management policy: John Floisand, chairman of Apple Japan since 1993, will take control of the unit until a new president is chosen.

**Tandem Computers Inc** has opened its first sales and support office in Russia. Its Austrian subsidiary in Vienna has been actively conducting business in the former Soviet Union since 1993, and Tandem's Moscow office is currently staffed by Russian sales, project management, Alliance Partner, and administrative personnel, augmented by Tandem support representatives from Austria and the UK. Local resellers are to be recruited in the months ahead.

Future versions of **IBM Corp's** RS/6000 43P Series are likely to be differentiated further from their PC Power Series cousins by an upgraded memory controller in the future. Currently both families use the same controllers.

**National Westminster Bank Plc** has gone to **Tandem Computers Inc** for its fault-tolerant Himalaya computers, but not the generation launched this year. Instead the high street banker's technology division has paid £6.5m for the K10000 and K1000 models, and will use them to reduce its three data processing centres from three to two, both outside London. The bank will run SWIFT Society for Worldwide Interbank Financial Telecommunications, point of sale credit and debit transactions, and automated teller transactions that are run in co-operation with two other UK banks.

While the movie studios and consumer electronic majors flock to back the **Toshiba Corp-Time Warner Inc** digital video disk standard, the threat of hopeless deadlock and two incompatible standards replaying the VHS-Betamax and MiniDisk-Digital Compact Cassette battles to the benefit of nobody and the detriment of the entire industry, begins to look inevitable as manufacturers coming from a computer hardware direction all seem to prefer the **Sony Corp-Philips Electronics NV** standard. Latest to stick its head above that parapet is **NEC Corp** - NEC Home Electronics will develop and introduce the Sony-Philips format digital videodisks next summer as the next-generation storage devices, NEC Home Electronics announced. Attraction for computer companies is compatibility with existing compact disks and CD-ROMs so users of the new system will be able to continue to use existing titles.

After a sustained period of public campaigning to turn **IBM Corp** AS/400 users on to its HP-UX servers, **Hewlett-Packard Co** reminds us it still has its eye on DEC's VAX/VMS base. Last week it rounded up a bunch of the latest converts and says that all of the top 30 VMS applications are now either up on HP-UX or being ported. It's an indication as much as anything - as HP admits - that DEC is creeping its way back on to customers' preferred suppliers lists. HP claims up to 25% of its new business wins come from replacements. Meantime, HP has curtailed its ambitious aim to become the number one mid-range system supplier by 1997, now saying it's HP-UX systems will outship AS/400 deliveries within two or three years (UX No 532).

**Apple** is definitely not going to put its own Unix-variant on its desktop machines. Readers may remember the kerfuffle over Apple's lack of support for a desktop Unix. The debate was so fierce at the 1994 Worldwide developers conference Apple promised to have another look at supporting the operating system on the, then future, PCI-based desktop machines. Well the machines are there, but there is still no Unix for them. Now the company says that it DEFINITELY has no plans to put Unix on them.

**Ing C Olivetti & Co SpA's** 9,000-strong, OliService arm will offer support for SCO system software on any platform.

**IBM Corp** says customers who already have or who plan to purchase 601-based SMP RS/6000s will get free 604 upgrades, at least until its purpose-built 604 SMP systems ship.

**Data General Corp** is making its GuardWare and Application Transparent Failover software available for Solaris and AIX users configured with its Clariion disk arrays.

The worldwide systems management software market will grow from \$10,300m in 1994 to \$18,700m in 1999 with a CAGR of 13%, industry watcher **Input** says in its Client/Server Systems Management Software report. It sees the US market growing from \$5,600m now to \$8,100m over the same period with a CAGR of 8%. Input believes the growth is due largely to a move from mainframes to networks; large software companies are rushing from system management tools to intelligent client-server managers which span enterprise applications.

Version 2.0.3 of Natick, Massachusetts-based **Atria Software Inc's** ClearCase configuration management software is up on UnixWare 2.0, HP-UX 10.0 and AIX 4.1.1 and 4.1.2.

**Network Imaging Corporation** Herndon, Virginia, has ported its IView:Object Manager client/server object management services to DG-UX. IView:Object Manager includes scanning, template creation, OCR, bar-code recognition, volume management, and security. It works with a variety of databases and front-end developer tools.

**Delta Air Lines** is going to migrate its databases and applications out of the **Sybase Inc** environment and on to rival solutions from either Oracle or Informix, reports *Computerworld*.

**IBM Corp** has adopted user-based pricing for CICS, its OLTP system. The new CICS for AIX 2.1 release starts at \$3,500 for a base licence (UX No 545). User packs go from \$335 for one user for \$14,250 for a ten-pack. Base upgrades are from \$1,750 - licences start at \$170 for one user and \$7,125 for ten. CICS system management is \$3,000 for a base licence, plus \$2,850 for one server pack, rising to \$123,000 for a 50-server pack.

A renewed partnership between **Digital Equipment Corp** and Germany's **Software AG (SAG)** will see SAG's key software, 4GL Natural and database management systems Adabas C and Adabas D, up on Digital Unix systems.

**Red Hat Software Inc**, Westport, Connecticut, is offering a support programme for Linux software developers who need to remain current but don't have the time to trawl the net newsgroups and archives. The programme includes monthly CD-ROM updates and access to an on-line discussion group that'll collate all the latest Linux info; it costs \$300.

**Unisys Corp's** USoft application development environment operation has tapped Oracle executives Earl Blair - director of marketing programs for worldwide industries; and Michael Peth - industry director; as its new VP business development and VP professional services respectively.

**Platinum Technology Inc** will put the Final Exam automatic software testing suite it's got from RadView Software Ltd, Tel Aviv, Israel, up on five Unices from August.

**Informix Software Inc** has appointed former **Visioneer Communications Inc** CEO Jeffrey Hudson as VP business development, responsible for corporate strategic relationships, including equity investments, mergers and acquisitions, reporting to CEO Philip White. Creation of the new position at this particular time will undoubtedly fan the flames of the rumour mill which recently churned out 'in play at the right price,' along with a list of possible suitors over recent weeks and months.

In the UK, **Woolworth's** has kicked out its AS/400s in favour of a 10-way **Tandem Himalaya K20010** running NonStop due to handle 200Gb data. Tandem says it beat-out AT&T Teradata, and Sequent rival bids. Tandem claims its sold 48 Himalayas into eight UK sites.

**Maxspeed Corp**, Foster City, California, is offering its MaxTerminal 12-session terminal servers for MCA boxes running AIX 3.2.5.

**Red Brick Systems Inc**, Los Gatos, California will announce an upgrade to its Warehouse VPT client/server database at the end of July. Version 3.5 will have enhanced query facilities, new and improved data types and new ANSI capabilities.

US distributor **Hall-Mark Computer Products**, a division of **Avnet Inc**, will be peddling IBM's RS/6000s to resellers in the US targeting ECAD, MCAD, GIS and competitors like Sun Microsystems and Silicon Graphics.

Bentley Radcliff, who had a lot to do with getting **Unix International** off the ground and who's been shepherding the Macintosh Application Environment around lately, is jumping from Apple to Atlanta-based client/server consultant **Enabling Technologies Group** in pursuit of fame and glory.

**Oracle Corp's** Workgroup 2000, its group of low-end products aimed at the workgroup space is now out on a 90-day evaluation CD for NetWare 3.x and 4.1 and on SCO, Solaris and UnixWare (UX No 518). There are four products in the family, Personal Oracle7, Workgroup Server, Oracle Objects for OLE and Oracle Power Objects. Production versions of Power Objects will be available by the end of month. Oracle Workgroup Server starts at \$300 per user, Personal Oracle7 is \$400 and the Netware Client goes from \$600.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

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1 JUL 1995

The weekly information newsletter for the UNIX™ community worldwide

London, July 17-21 1995

Number 547

## COULD SUPERCONSORTIUM LICK THE CONSORTIA INTO SHAPE?

Now here's a thought. Let's take all those consortia that are costing the industry an arm and a leg - beginning with those three gaping money pits X/Open Co Ltd, the Open Software Foundation and the Object Management Group - and combine them into one enormous SUPERConsortium. The 40-odd consortia that any self-respecting Unix company belongs to today wouldn't necessarily have to disappear; they could become working groups within SUPERConsortium. Something useful might actually get done - provided the thing was actually informed by some real technological underpinnings - and it might provide a defensible position against the constant impredations of you-know-who up in Redmond or, if not that, then at least a cease fire zone for our own constantly scrapping Unix houses. Such a proposal has been committed to five thin pieces of paper and sent around in the last couple of weeks to folks like Sun Microsystems' Scott McNealy, IBM's Bill Filip, DEC's Glenn Johnson, AT&T GIS' Dennis Roberson and doubtless countless others. Reportedly it has X/Open chief Geoff Morris and OSF chief David Tory concerned lest they lose their sinecures. The idea is apparently in the what-do-you-think stage and no business plan has been drawn up yet. There are notions about salvaging whatever's good and decent in the existing structures such as X/Open's testing and branding procedures, OSF's sample technology and research arm and OMG's specification process and transporting them over to the new edifice. Insiders say the notion of SUPERConsortium has been floating around for sometime but has only recently made it on to paper. They claim it's the industry facing up to the realisation that it needs consortia - but that it also needs to control them. Whilst the visible lump-sum cost of consortia is at start-up, a bigger waste is estimated to be the expense of maintaining a presence on multiple committee circuits, costs in all likelihood less-visible to company chief executives. A SUPERConsortium may be better able to assess value for money, and its infrastructure allow engineers to get groups going then return to their jobs.

## TANDEM SETS BIG BUS PACE WITH SERVERNET...

The commoditisation of hardware and operating system components will require high-end commercial system vendors to differentiate their next-generation products by other means. All indicators point to high-bandwidth, low-latency, highly-scalable system and device interconnects - or the "Big bus" - will be that key differentiator. Fault-tolerant builder Tandem Computers Inc - now looking for 50% of its business to come from commercial decision support within two years - last week put its head out in front of the pack, unveiling an ambitious hardware/software 'big bus' interconnect called ServerNet. Tandem, a champion of the MPP model which throws CPUs at problems now says that "it is simply not cost effective to keep adding expensive processors" and touts ServerNet as a system area network, or SAN, that allows any server component - CPU, storage or communications device - to directly interconnect without processor intervention. Instead of a processor on every data path, six-port, packet-switching routers implemented in an ASIC provide intelligent switching and wormhole routing with 300Mbps bandwidth per router (slated to double over time) and three microsecond message latency. Tandem says it means many of the large blocks of data required by text, image and video applications of the future will be retrieved through routers that'll cost "a few hundred bucks" without having to pass through costly CPUs. ServerNet is an additional layer which logically and physically isolates processor buses from I/O buses (dispensing with memory-mapped I/O), providing processor and bus interfaces for VME, PCI and other device interconnects. It's the productisation of a three-year TNet - trusted network - development effort and will, the company claims, enable the creation of very large configurations of hybrid SMP, clustered and parallel systems. Examples include a data mining system configured with thousands of processors providing hundreds of Gbps throughput; a telco switching server festooned with communications devices and relatively few processors and disks or a video server with a large database, many communications devices but relatively few processors. ServerNet links connect processing nodes within a cabinet over the backplane or to other cabinets up to 30 meters away over copper cable. Future implementations using serial fibre connections may extend connect distances. Fault tolerance is achieved through duplicated connections in conjunction with Tandem's N+ 1 hardware topology.

## ...FOR RECONCILED SMP UNIX, NT AND NONSTOP LINES

Tandem will use ServerNet to bring its still fundamentally different Unix/Integrity and NonStop/Himalaya architectures together into hybrid SMP, clustered and MPP arrangements, which for the first time will utilise common storage and communications devices. ServerNet is to debut by the end of this year on the first home-grown, fault-tolerant SMP Unix servers in Tandem's currently uniprocessor-only Integrity FT line. The one-to-four ways will use Mips R4400 RISCs with a new SMP Unix implementation and are likely to top-out at eight CPUs. Its deal with Silicon Graphics Inc - Tandem rebadges SMP Challenge boxes as Integrity NR servers - is likely to bite the dust thereafter. ServerNet's second incarnation will feature in Windows NT servers due in 1996 designed from the ground-up to use the next-generation Mips R10000 part, also Tandem's first R10000 implementation. Unix R10000 systems will follow. An issue still being worked through is how R10000's integrated SMP will dovetail with ServerNet. Both new SMP lines will utilise a coherency bus in ServerNet to provide cache coherency between memory modules. The interconnect won't find its way into to Tandem's core NonStop business until late next year when it'll feature in new high-end R4400 parallel nodes that may or may not appear under the Himalaya name. *Details page 3*

## HP, IBM LICENCE ONC+

At the end of last month, Distributed Computing Environment acolytes Hewlett-Packard Co and IBM Corp, plus Sequent Computer Systems Inc, quietly licenced SunSoft Inc's ONC+ networking environment. DEC is said to be close to signing. Readers will recall that Open Network Computing contains Sun's so-called transport independent remote procedure call (TI-RPC) which has been slugging it out with the DCE RPC in the market ever since the Open Software Foundation went off and chose HP's Apollo-derived Network Computing System RPC for DCE. ONC+ compatibility was one of the conditions laid down in the COSE agreement and wounds appear to have healed enough that once arch ONC+ opponents HP and IBM (and maybe DEC too) have come to their senses and will now offer ONC networking support alongside their DCE implementations. It'll provide interoperability with Sun's large installed base, although it's never been clear just how many sites actually use the TI-RPC mechanism within ONC+. Version 2.0 of the suite includes the 3.0 cut of Sun's eponymous Network File System transfer protocol now in use at 5m nodes and up depending whose figures you believe, NIS+ naming, TI-RPC, auto-mounting and network files, network caching and a network debugging tool. Sequent says it's taking ONC+ for NFS 3.0, apparently no longer unbundled; IBM has specific plans to offer ONC+ alongside DCE under OS/400 and AIX. The firms are trying to agree on common positioning. SunSoft hopes to go public by the end of the month.

## ODI SEEKS NEW VISIONARY

After it didn't get bought by Oracle - or any of the other three suitors that bid for it, including Novell - Object Design Inc, the object database company everyone thought would make it, especially when IBM bought a large piece of stock, has relieved president and CEO Ken Marshall, from day-to-day control, making him company chairman. Insiders say it's in no little way connected to ODI's reported \$11m loss last year, its flat sales and gathering expenses. Rumoured layoffs have not yet occurred. ODI, which has by all accounts been shopped hard recently, apparently couldn't find anyone to pick up the tab - the asking was eight times revenue - with its numbers. It's installed Phyllis Swverski as acting president and CEO while it conducts a search but hasn't ruled out the possibility she may stay on in that role. The former Cullinet executive, reportedly an acquisition specialist of some regard, was brought into ODI by Marshall to oversee financial operations. Publicly ODI says it's back on an IPO heading, looking at the second half of next year, by which time it hopes its volume distribution agreements and income from telco markets should have swelled its revenue stream for few quarters carrying it to between \$30m and \$40m. Marshall drove ODI's original sales and consulting model, the firm says a new CEO will have to develop a vision with broader markets.

## EVOLUTIONARY TECHNOLOGIES ADDS GRAPHICAL INTERFACE, OBJECT SUPPORT TO EXTRACT

Austin, Texas-based Evolutionary Technologies Inc, having wooed database vendors Oracle Corp and Sybase Inc with its Extract data conversion program, has revamped the product with a graphical user interface and object orientation, and plans to launch version 3.0 in September. The move to object technology makes the product more flexible, said the company. The product automates the retrieval, transfer and transformation of data from any database or file format to any other, regardless of hardware or software. Version 3.0 comes hot on the heels of release 2.4.1, which was launched only in March of this year, and is designed to fuel what the company describes as a phase of "aggressive expansion". It has recently opened offices in Bracknell, Berkshire and Paris, and is planning further European offices. There are 72 customers in the US and five in the UK for Extract, and a typical sale is around \$250,000. The company, which was formed five years ago as a spin-off from the Microelectronics & Computer Technology Corp pre-competitive research co-operative, the first US industry-backed not-for-profit computer research effort, has been funded through individual investors and venture capitalists to the tune of \$8m.

### Product

Established by Dr Katherine Hammer, now president and chief executive, who worked at the consortium on Extract, and Robin Curle, a vice-president, the company is profitable and, so far, the only spin-off from the consortium to turn research into a product. It has spent \$3m on Extract. The worldwide deals with Oracle and Sybase give the database companies the right to use Extract when installing their products and applications. Sybase will use it specifically for data warehousing. Extract is intended for companies that have vast quantities of information on mainframes that they want to move to client-server environments: the program automates this. It automatically generates conversion programs in any language and produces scripts to move the data and execute the conversion programs. In this way, the product functions as a bi-directional data bridge between the legacy system and server side. The company said this type of capability gets rid of the need for programmers to write individual applications to shift data off mainframes and has estimated that it saves up to 95% of the time and cost that is incurred in manual conversions. Extract can also hold meta data within in its own database, which comes from Object Design Inc. The product consists of the Master Set, Data Conversion and Executive tools, as well as Data System Libraries specific to different environments, all of which reside on a Unix box. The Master Set defines both the source and the target for the data that's being converted; it is basically a series of editors that create programming fragments.

### Applying logic

The programmer, who is ultimately responsible for the format and content of the converted data, adds functions for a particular conversion, such as sorting and merging, which are all re-usable, and once this is done, the data is ready for conversion using the Data Conversion tool. This maps the data onto the new host by applying the logic that the Master Set has provided. The Data Conversion tool generates code suitable for the new hardware and software and automatically populates the new database. This is a point and click exercise, said the company, but it emphasised that the actual conversion goes point to point - mainframe to AS/400, for example. The Executive module automates the process of populating the new database: it basically calls to the new network environment, and distributes the new code. The Data System Libraries have pre-defined functions for a selection of languages and environments that make the use of the Master Set a little easier; there are versions for Cobol, DB2, IMS, C-file systems, AS/400 and Oracle, Informix, Sybase and Ingres databases. A library for SAP AG's R/2 and R/3 systems went into beta testing this month, and the company is working with Sybase to improve the library for that database. At the moment the product is available under HP-UX, Solaris and AIX, and there are plans for a stripped-down Windows NT version that will make it easier for non-technical people to use, said the company.

## NETSCAPE PLANS RADICAL CHANGES FOR BROWSER

Netscape Communications Corp's plans for version 2 of its Navigator Web browser mark the most radical departure from standard hypertext markup language seen so far, according to US sources who have seen the proposed specifications. The company apparently intends to implement a new API set that will let software developers build modules that will slot into Netscape. The concept is similar to today's 'helper applications', such as MPEG movie players, except that the movies appear to be embedded within the the document body, rather than in a separate window, as with today's helpers. In addition to the API, Netscape reportedly plans to introduce a coordinate-based grid system, which will let authors open independent windows of particular size at particular locations within the Navigator. "Its like today's HTML tables on speed" said one source, "put it with the API and it becomes more like an operating system than a Web browser". Each window will be able to display graphics or text and may be made scrollable. Other new features that will make it into the browser include fully integrated e-mail and Internet relay chat. The sources say that the new API is the basis for Netscape's work on integrating Macromedia Director's player and Adobe Acrobat reader into the browser. Macromedia says its software will let Quicktime movies, for example, run within Netscape documents as soon as they load, rather than needing a separate click to load them. Netscape Navigator version two is expected to go into early test within the next couple of months. However Netscape's promised implementation of Sun's Java language will have to wait for later. Though the company is working to have it ready by the end of the year, some industry watchers are sceptical that they will be able to implement the language interpreter by then across all its platforms. The impending addition of Java compatibility does mean it is likely that the burgeoning complexity of Netscape Navigator will reach its peak with the version 2 release, since Java will tend to make support for additional data types within the browser itself redundant. Instead of having to explicitly hard-code new features into the client, the emphasis will move towards content providers placing Java applets within their documents. Netscape Communications was unavailable for comment.

## ORACLE, nCUBE, APPLE PACKAGE BRITISH TELECOM INTERACTIVE TELEVISION TRIAL KIT FOR OTHERS TO USE

Oracle Corp, nCube Corp, Apple Computer Inc and Alcatel Alsthom SA are offering the equipment used in the British Telecommunications Plc interactive television trials at Colchester as a complete kit under their DADS programme. The plan, which sounds remarkably similar to Online Media's service nursery is to get companies involved in developing content for on-demand services without having to re-learn the same lessons already learned in the trial. "Businesses must start taking steps to co-operate with each other on the development of content, otherwise there will be no driving force for the technology," said Paul Burrin, manager of strategic marketing at Oracle. The aim is to get firms to develop both business-to-business applications and consumer applications, depending on where their key interests lie. "The trials are dependent on them having enough content to keep people interested," said Paul Godfrey, general manager of nCube. "Movies-on-demand is a fraction of what consumers spend their income on," and "30% of the content of the trial is material to support home shopping, banking and local life applications." There is scope for development of different types of services - those with a short shelf life such as news and weather, and those such as music with a longer shelf life. Companies involved will be able to swap ideas and problems through private World Wide Web pages. Godfrey added that it is in everyone's interest to work together to develop the content in the initial stages because it will enable the market to build a skills base faster for when the full scale on-demand services take off. The standard kit is a micro version of what is being used at the British Telecom trials and will include a small nCube server running the Oracle Media Server and MediaNet software, eight Apple set-top boxes and the Oracle Media Objects interface, plus an Alcatel network interface box to simulate the Colchester network. The system will be able to deliver 40 video streams. The package will also include support from Oracle Consulting and involve an investment of around £400,000. nCube said that it expects the first services to emerge from the scheme next month.

### TANDEM INTERCONNECT REQUIRES ALL-NEW KIT...

Although existing NonStop applications will be object code-compatible with its new systems, ServerNet - which replaces Tandem's expensive TorusNet interconnect - cannot be retrofitted to any current products. As well as applications now being tailored for use over ServerNet, Tandem is also working with ISVs to implement under-the-hood techniques such as spotlighting, where existing database code is optimised for a select set of processors and devices. To do this without changing the original application its got to figure what type of code changes can be made without having to present a separate API. It's also going to have a bundled, integrated version of the Illustra Technologies object/relational working in the guts of ServerNet that'll lick relational and procedural data into objects that can be directed around the system over ServerNet (*see below*).

### ...HEDGES CPU BET WITH OEM STRATEGY

Meantime, Tandem is also hedging its future CPU bet by positioning ServerNet as a RISC-independent interconnect, going so far as to say it's all signed-up for R10000 but has a clean sheet of paper in front of it thereafter. Moreover, having spent probably more than it should have done to develop ServerNet the \$2,000m-odd company is looking to recoup some of its investment by offering ServerNet OEM. L M Ericsson Telefon AB has already agreed to take Tandem's next-generation Integrity FTs and there's claimed to be one Japanese and one US OEM in hand. The danger of OEMing is that someone might be tempted to create a better implementation than Tandem's, although there's little prospect of anyone overhauling the company's fault-tolerant expertise. Analysts say candidates could include Hewlett-Packard Co, which has already consigned its OEMed Convex Exemplar systems to the technical world and whose T500s, are in their belief, looking a little long in the tooth. Other companies working towards 'big bus' interconnects include Sequent, AT&T GIS, Cray, SGI, Pyramid, Data General, IBM and Bull. Tandem will especially target ServerNet at IBM customers using SP2's 40Mbps Vulcan switch.

### TANDEM TO USE ILLUSTRATE FOR UNDER-THE-HOOD DATA 'SPOTLIGHTING' OVER SERVERNET

Tandem and Illustra Information Technologies Inc are joining forces to bring the Illustra object/relational database to Tandem machines, first as a third-party offering, but ultimately as an under-the-hood device. Tandem is licensing the Illustra server for its current Integrity Unix systems, but will eventually bundle the software with its Unix and NT ServerNet-based systems (see front page). Tandem marketing director Dave Wilson said future versions of Illustra Server, regardless of platform, will take advantage of NetServer and that a fault-tolerant Illustra product could be ready by year-end. Meantime, the two will integrate Illustra for use with the Tandem NonStop SQL database.

#### Two years

Illustra's object/relational technology will optimise or 'spotlight' code to run on a select number of CPUs and devices invisibly to applications. The combination could bring transactional applications and decision support applications into one database architecture, the two say. Wilson said the firms wouldn't "promise you a product within a year:" they still don't know for sure if the project is technically feasible. Illustra CEO Dick Williams said the work will take one to two years, but will be first priority and won't get pushed behind the other Illustra projects. Tandem will use Illustra's DataBlade modules to harness specific types of data such as text or video for use across the system or on connected environments. Illustra also has an agreement with text search tool company Personal Library Software (PLS) that will give Illustra's server the ability to search and manage documents and complex alphanumeric data in a DataBlade.

### EXCITEMENT OVER INTEL P55C

Excitement is building over the P55c variant of the Pentium, the first pure CMOS version of the part with some signal processor acceleration techniques for improved multimedia working. *Reuter* hears that the P55c Native Signal Processing support is optimised for enhanced video and audio under Windows95. The 0.35 micron part is also expected to be fitted with a bigger cache, and to be clocked at 150MHz.

### SNI RM SERVER TO MEET PYRAMID NILE IN NEW SCI SYSTEMS DUE Q2 1996

Siemens-Nixdorf Informationsysteme AG (SNI) is another commercial Unix system vendor which has turned to Scalable Coherent Interface-based interconnect technology to extend the reach of its shared memory architecture. And, like Data General Corp, SNI has taken itself off to Dolphin Interconnect Solutions A/S, planning to use a PCI/SCI chip the Norwegian company is building in new additions of its high-end Mips Technologies Inc R4400-based RM servers line due in the second quarter of next year. A top-of-the-line RM600 currently accommodates up to 24 CPUs over SNI's SPBus running its Pyramid Technology Corp unit's DC/OSX Unix. Whether the new SCI boxes will debut as RM servers isn't clear because they'll also represent the marriage of the RM line with Pyramid's own SMP Nile servers and a new naming convention may kick-in. The first joint SNI/Pyramid is of course the Reliant RM1000 MPP box using Pyramid's Meshine interconnect to which the new SMP units will be attached via a new system bus, the company says. SNI is using the PCI/SCI bridge chip and SCI protocol engine in two interconnect cards and Dolphin's SCI link interface chip for remote interconnect and cache coherency. Jurgen Kock, SNI manager of central components says the company is currently evaluating RM600 clustering using ATM.

### AXIL READIES NEW SPARC SERVERS, AWAITS SOLARIS 2.5

Sparc-compatible builder Axil Workstations Inc has some new servers up its sleeve, but couldn't quite bring itself to unveil the things in Europe a couple of weeks ago as it had originally planned. Instead it's pushed them out to a US launch next month. The Hyundai Electronic America Inc unit, which has its own ASIC collection, is expected to exploit what it perceives to be a performance and configuration weakness in Sun Microsystems Inc's SparcServer 1000 line to drive the new servers to market. It's currently waiting for SunSoft Inc to get its Solaris 2.5 implementation together so it can harden its UltraSparc prototypes into product form. Indeed, its apparently the Solaris 2.5 issues such as support for 64-bit that's holding back the whole UltraSparc programme.

### FIBRE CHANNEL, ATM, SCI DIDN'T CUT IT FOR TANDEM

Tandem Computers Inc says it had to start from scratch when creating its TNet/ServerNet interconnect after looking for an existing bus or network to fit its architectural requirement but finding nothing that would fit (see front page). Fibre Channel didn't meet its requirement for short packet-switched transfers, although it performs well on long sequential transfers. ATM was deemed too costly given the large number of network attachments required in a system area network. Scalable Coherent Interface has a design centre for handling cache coherency, but costs and complexity exceeded Tandem's limit. P1394 serial links wouldn't meet its high-end requirement. The system area network it came up with has a 64 byte packet size, no memory-mapped I/O and is claimed to allow the on-line servicing of peripherals; isolation and containment of faults; a common I/O programming model; and common I/O configuration and error management. TNet nodes can read and write portions of each other's memories without requiring software execution at the remote node. Tandem says TNet can be used in various topologies - hypercubes, meshes and trees. It expects the 300Mbps ServerNet implementation to reach 600Mbps within a couple of years.

### IBM LICENSES MACH 3 TO TAIWAN

IBM Corp has won another adherent for its Mach 3 microkernel, licensed to Digital Equipment Corp last year, in the shape of the Institute for Information Industry of Taiwan, which wants to see it used in Personal Digital Assistants and television set-top boxes in the Chinese market. Although IBM prefers to see what it is now calling the IBM Microkernel running on PowerPC, it also runs on iAPX-86 and the MIPS R-Series. The Taiwan New Personal Computer Consortium has a soft spot for the PowerPC processor.

## COMPUTING WITH A HUMAN FACE

By Chris Rose

Just when you thought they were dead, the Human Centric people at IBM's Power Personal Systems Division popped up at PC Expo a few weeks back showing their technology. For those who have missed it, Human Centric technologies are meant to make interacting with your computer a cuddlier, more caring experience. Computers are not things to be typed on, they are things to be chatted to. They are also ~~things that need a frightening amount of Computing power and RAM if they are to answer back. The PowerPC triumvirate IBM, Apple and Motorola have always made much of the chip's floating point performance, and its consequent suitability for multimedia applications, but a dearth of software has made it difficult to prove.~~ This changed somewhat at the Expo when IBM demonstrated its "sensory suite" software for Windows NT which includes software-based MPEG decompression, speech-to-text and speech controlled 'agents'. The Sensory Suite, like too many of IBM's PowerPC-related software projects, is running late. Soft-MPEG and MIDI software is shipping bundled with NT boxes, but customers will have to wait until around October for the human-centred components to be sent to them. The finished version of OS/2 for the PowerPC is now delayed until the fourth quarter this year, but the Power Personal Systems division is committed to ship Sensory Suite for that operating system 90 days after it arrives.

### Accuracy

The human centred and allied multimedia technologies are vital to the success of IBM's machines; it needs them to show that sheer processor performance can be converted into a tangible selling point. Software-based MPEG is an obvious example; by cutting out the necessity for an add-on board the company hopes to show that the total price of building a multimedia system is lower with PowerPC. The company has pulled the same trick with its voice dictation software. IBM's Voice Type dictation software has been around for some time on Intel-based boxes, and has generally won plaudits for its accuracy. However, until now the software has always required a separate, \$500 add-in board to cope with the digital signal processing required. Now this has been moved onto the main CPU. The downside of the approach is that trying to run too many of these applications simultaneously will push the processor too far. Toby Maners, programme director for human centred computing at IBM admits that trying to play an MPEG movie in one Window, while carrying out dictation in another is going to degrade the performance of one of them. Still, no doubt IBM will continue to crank-up the clock speed on the processor.

### Learn mode

But more than any cost-saving, the company is hoping to use its human centred technology to change the way that people interact with their computers. At the simplest level this is straight-forward voice control of existing applications; one of the components to be bundled with the 'Human Centre' is Navigator. Put Navigator into learn mode and it will snoop the pull-down menus on the running application. Thereafter, telling your machine to "File Open" etc, will have the required effect. So far, so dull - there's not much of a productivity gain there, unless you are physically disabled, or want to open files while standing at the coffee machine. More interesting are the specific voice-enabled applets, or 'conversational agents' that the company is providing. One example is the e-mail agent, which is implemented in such a way that it can be used while sitting in the background. This means that the stressed executive, can shout "Do I have any new e-mail?" at the machine without pausing from bashing out the latest, most important memo on the word processor. If the disembodied voice answers "yes" then he or she can further command "read it to me". It's using voice as a separate, concurrent input mechanism to widen the applicability of multi-tasking.

### No gimmick

The other sample application which IBM includes is a telephone-book package that accepts voice input to make phone calls to the nearest and dearest. The package can be configured to take family relationships alongside regular names and addresses, making voice commands such as "phone my husband" a reality. Maners says that unlike the simple navigator, the voice-activated apps can make use of a sophisticated language parser built into the system software. So whether you ask "have I got any new mail?", or "is there any new mail for me?" the answer should always be the same. Each speech-enabled application will come with its own particular grammar built in. The downside is that, as with the full dictation package, the system has to be taught to react to a particular voice. This means that our aforementioned harassed executive is going to have to take a couple of hours out to talk to the box and put it through a training programme. Once that is done, IBM claims about a 97% correct recognition rate.

Maners admits that some of this stuff requires "a different mind-set" from users, but she is convinced that the technology is more than a gimmick. Certainly, 'Charlie' the speaking head which can be used to front voice-controlled operations looks like it might be a gimmick; the thing, implemented using IBM's Open/GL 3D image-construction toolkit responds to the user's requests; its lips move, its eyes blink etc. But Maners says that while advanced, techno-centric users, software developers and the like, do away with Charlie, some business users reported that it "felt strange talking to a computer", and that a bit of anthropomorphism cleared up the problem. Moreover these users can use Charlie's lips to gain visual cues as to what the speech synthesiser is actually saying.

### Smile

But hang on - wouldn't be simpler to just print the text on the screen so that the user could read it, rather than mucking about with lip-reading? "Well yes, we do that too" says Maners, "the idea is to give the user a choice". These applets are mainly there to whet the appetite of both users and application developers, so when should we expect to see third-party developers take advantage of these capabilities? "The biggest hurdle to is that we haven't put out a toolkit yet" Maners admits - and one isn't being promised until sometime next year. IBM intends to hide the complexity of the speech recognition and parsing from developers who instead will be presented a high-level interface that will let let them, for example "put a smile on the face, and say the following words..." says Maners.

### Memory

Whether users will have a smile on their face once they see the mammoth memory requirements for the system, remains to be seen. The Power Series boxes come with 16Mb RAM as standard, but the full human centred suite will require another 16Mb to run. That's not outrageous, Maners claims, considering that the dictation vocabulary takes 8Mb. Still, the price of RAM chips remains high, and it seems that very soon, the uptake of advanced multimedia applications will be limited more by the cost of RAM than the availability of cheap MIPage on the desktop.

### Surprise

Another question; and one that seems to take Maners by surprise, is whether she will make these tools available for Windows NT running on other platforms. If the human centred technology proves as popular as she hopes on IBM's PowerPC machines, then third party developers won't want to limit their software development investment to just one processor architecture. In particular, they will want to get their apps running on Intel-compatible machines, which still account for over 90% of all Windows NT shipments. Intel is also likely to be the biggest platform for OS/2 for sometime too. Maners' initial response is to worry about whether the alternative platforms will have enough power. the claim, coming from the Power Personal Systems Division is that at the same clock-speed, a PowerPC-based machine will generate double the real-world processing power of a Pentium, or, put another way, that a Power Series machine of processing power X will cost half as much as a Pentium machine giving the same performance. Maners says she hasn't given the matter much thought, but after a little reflection decides that there is no reason in principle why she wouldn't be willing to have her human centred work ported to NT on other processors, "but we would always do the new stuff first" on PowerPC, she added.

### SCO SALES AND PROFIT WARNING...

Santa Cruz Operation Inc warns that it expects to report third quarter sales and profits below analysts' expectations, and is cutting expenses by restructuring some businesses - thereby incurring a related fourth quarter charge. It expects net profit to fall to between \$0.04 and \$0.06 per share in the third quarter to June 30, against the \$0.14 per share it ~~earned a year earlier, and sales will be \$50m to \$51m, compared with~~ last year's \$48.1m. The company blamed the results primarily on a slowdown in the buying cycle as a result of the May launch of version five of its OpenServer product, but also on slowdown in the US government buying cycle and the state of the South American economy. The company acknowledged that the shake-up would involve lay-offs but did not say how many jobs would go.

### ...PROVOKES MARKETING RE-ORG

Following the news, SCO reorganised some of its marketing positions, installing David McCrabb as head of a restructured marketing operation reporting to Ed Adams, senior vice president and general manager of SCO Americas. Grover Righter becomes VP strategic marketing, Mike Tilson gets the CIO job and Helene Mann-Bouchard is VP worldwide customer delivery systems. Righter and Mann-Bouchard become members of SCO's senior executive staff; McCrabb and Tilson were already members. McCrabb will be responsible for consolidating all US-based marketing functions. Righter reports to SCO chief executive Alok Mohan, and will act as chief company spokesperson, responsible for increasing SCO's visibility in the market by explaining the company's strategic direction. Tilson also reports to Mohan and will be responsible for increasing the visibility and accessibility of information within the company, SCO says. Mann-Bouchard has responsibility for order management and worldwide manufacturing.

### RAMBUS FAST MEMORY STAR OF SILICON GRAPHICS IMPACT

Silicon Graphics Inc duly unveiled its Indigo2 Impact line of three-dimensional graphics and imaging workstations last week with a choice of 250MHz or 200MHz MIPS R4400 processors. The Impact is described as the result of a new strategy for accelerated collaboration between SGI engineers and the company's leading-edge customers and software developers, and supports a string of new custom third-party applications for computer-aided design and engineering, geographic information systems, film and video production, chemistry, games development and visual simulation. Claimed to offer the world's fastest three-dimensional graphics and imaging performance on the desktop - three times the 3D performance and as much as 100 times the complex visualisation power of the company's Indigo2 Extreme which it replaces. It includes texture mapping, volume rendering, high definition television resolution and professional digital media features. The graphics subsystem is driven by eight new custom-designed ASICs, with 18m transistors (SGI claims the Pentium has 3.5m transistors), designed by SGI and manufactured by Toshiba Corp to process three-dimensional graphics, imaging and photorealistic textures to generate "a record" 100m trilinear interpolations per second for advanced visualisation. It is also one of the first machines to use the new Rambus Inc 500MHz memory subsystem, of which Toshiba is a licensee, for "unprecedented" fill rates. The Rambus, which derives from work done at SGI's Mips Technologies Inc unit, replaces the conventional control signals and multiplexed address of the conventional dynamic memory with a packet-oriented bus clocked at 250MHz, which delivers a 9-bit byte at each extremity of the cycle, one every 2nS. Applications for the Impact are on offer from Alias/Wavefront Inc, Biosym Inc, CADCentre Ltd, Deneb Robotics Inc, Discreet Logic Inc, Landmark Graphics Corp, Paradigm Simulation Inc, Structural Dynamics Research Corp and Vision International Inc. The two models are the High Impact and Maximum Impact with double the three-dimensional and imaging capabilities. The Indigo2 High Impact is available this quarter with 250MHz and 200MHz CPU at \$40,000 and \$35,000 respectively. The 200MHz performs at 140 SPECint92 and 131 SPECfp92. The Maximum Impact and Power Indigo2 Maximum Impact are available with the 250MHz MIPS R4400 and the 75MHz R8000 respectively. The R8000 75Mhz performs 113 SPECint92 and 269 SPECfp92. The Maximum Impact is \$51,000, next quarter, Power Indigo2 Maximum Impact is \$60,000. All base configurations feature 64Mb CPU, 2Gb system disk, 2Mb cache and 19" 1,280 by 1,024 colour monitor.

### TIVOLI WANTS DATABASE VENDORS TO ADDRESS USER CONCERN OVER INCOMPATIBLE SYSTEMS MANAGEMENT

Austin, Texas-based Tivoli Systems Inc is planning to bring together the big three database vendors - Oracle, Sybase and Informix - to discuss how to make their enterprise server management products, which are each based on Tivoli Management Environment technology, interoperable. Informix and Sybase use TME as the basis of their distributed database management systems; Oracle gets the framework through its relationship with DBMX Ltd. Others planning to use the environment will also be invited to join. The aim is to make the management of distributed databases easier for users that have more than one company's product. Tivoli said customers have complained that it is becoming a serious problem and described the get-together as a series of informal "technical dialogue" meetings scheduled to take place over the remainder of the year. Tivoli says it is willing to look at ways of linking the companies', respective management environments if that is what it takes to get the job done. Tivoli business development manager Michael D'Ath said, "all of the [database vendors] have mutual customers, yet there's no formal business relationship between them. We're the point of integration."

### PEER LOGIC AIMS FOR PARTITIONING, ORB WORLDS WITH NEW RELATIONSHIPS

Peer Logic Inc is working-up a bunch of relationships and new technologies which will see its PIPES messaging system pitched more squarely into the distributed application partitioning and object technology spaces. Both markets, it agrees, are characterised by rampant partnering at the moment; indeed it's been on tour talking to "practically everyone" in these areas. As a consequence it expects to begin offering additional tool connections for application builders and messaging services for object request brokers. After assessing what's on offer, it reckons none of the application partitioning folks really do the distributed story properly, and that the ORB community is in general very weak when it comes to underlying naming and communications services. It really likes the type of distributed message-passing techniques ICL Plc is applying to its DAIS Corba ORB environment, but says it could ultimately end up competing with Fujitsu Ltd's UK company depending on how the two develop and package their respective offerings. Peer Logic is readying a graphical tool for release this year which will hook PIPES into SNMP management environments and has other IBM Corp-related work coming down the tube. Its IBM System Object Model-enabled version of the PIPES messaging system is on track for delivery next quarter.

### THOMSON SETS FIRST IN ST20 EMBEDDED LINE

SGS-Thomson Microelectronics BV has announced the first product in its ST20 microprocessor family, the ST20C4, based on its 32-bit micro core technology done in 0.5 micron CMOS. It's targeted at embedded applications - peripherals to high volume computer appliances. The ST20 technology is part of Thomson's collections of VHDL (Very High Description Language) macrocells and support software tools, debug tools and models including CISC, RISC and DSP processor cores combined with memory blocks, peripherals and glue logic in a single chip. The micro core is designed to offer standard products with specific options for targeted applications. The ST20 offers a real-time kernel and the macrocell library, plus connections to standard peripherals, I/O, embedded memory and dedicated ASICs. The ST20 bus has a 2 machine cycle latency, and 200Mbps bandwidth access to on-chip and off-chip memory. Thomson says the ST20 core has already been used in designs for ATM, Global Positioning Systems (GPS) and set top box applications. Thomson will shrink the ST20 to an 0.35 micron design in future. The first deliverable, the ST20450 delivers 40 MIPS at 50Mhz, with 16Kb of SRAM, and up to 16 vectored interrupts (enabling the processor to interrogate the device it needs to service), task switching of 500ns (the scheduling of processor tasks) and a Programmable Memory Interface handling up to four mixed memory banks. The ST20450 has a processor core and Transputer-like elements that'll offer an upgrade path for the company's Inmos T425 and T805 parts. It includes a C4 core for software compatibility. The ST20450 samples in September, with volume production set for the fourth quarter. Prices go from \$35. Further ST20 products designed specifically for the set top box applications and Global Positioning Systems are planned for the fourth quarter.

### **IBM CONFIRMS PLANS FOR A NEW CONSUMER DIVISION, SEEKS HEAD**

The consumer sector has become such an important part of the whole computer market that IBM Corp is determined to get its approach to it right this time. It plans to create a consumer products division to consolidate all its products for the sector in one area, with launch planned for sometime in the autumn. The company says it is too early to say exactly what will be included but the Aptiva home computer line is expected to be a cornerstone. IBM says it wants an executive with a strong consumer background to head the new division - and John Sculley is not doing much at the moment. So what should the consumer emporium be called? The company is likely to be saddled with the usual po-faced soubriquet the IBM Consumer Co, but it is going to need a snazzy brand to capture the consumer's attention and Aptiva, the current name of the home computers, doesn't really cut it. IBM is going to have to do better than PCjr, which was a demeaning name for a product that treated the customer with ill-concealed contempt - these days, home computers are typically even more powerful than office ones, and the way things are going, there will be 500,000 P6 machines in homes before 1,000 P6 servers have been installed with companies. Lotus is a good brand name now owned by IBM, but that might be a bit too obvious for anyone to think of it.

### **IBM ADOPTS AIMTECH'S ICONAUTHOR, WILL WIDEN APPLICATION AREAS**

The IconAuthor cross-system multimedia authoring tool that made the name of AimTech Corp, San Francisco and Nashua, New Hampshire has caught the eye of IBM Corp. IBM has signed a joint development and marketing agreement to enhance IconAuthor to include Internet, interactive television, and expanded OS/2 support, and IBM will also market IconAuthor to customers worldwide. IconAuthor supports multimedia development and deployment under OS/2, Windows, Windows/NT, and Unix systems, and supports a run-time player for the Mac. IBM reckons IconAuthor is ideally suited to development of computer-based training, performance support systems and self-service kiosks, and it will be enhanced to provide a native 32-bit player for OS/2 Warp, a player for Microware Systems Corp's OS-9 - David - interactive television system, and Internet application deployment. IBM reckons that with VisualAge and ScriptX-based development tools, IconAuthor enables it to offer a full line of multimedia authoring tools.

### **US FINDS NEW JAPAN SOFTWARE "RESTRICTIVE PRACTICE"**

The US Trade Representative Mickey Kantor was last week bombarded with complaints from the US computer and telecommunications sector about alleged restrictive practices and non-compliance with purchasing agreements on the part of Japan, but the most serious complaint comes from the American Electronics Association, which has asked Kantor to join it in protesting a planned Japanese software registration process that it says could raise software development costs by 20%. In what looks very like a means to protect the Japanese embedded software industry, Japan intends to require that all companies wanting to sell products that include embedded software - from games machines to aircraft - to get their quality systems registered by the Japan Accreditation Board, possibly starting in October. According to the Association, only Japanese firms are currently accredited by the Accreditation Board, and this, in effect, constitutes a non-tariff trade barrier. It also believes there is significant risk that auditors could obtain proprietary information during the auditing process, and that some 30% of US exports to Japan could be affected by the ruling.

### **DOCUMENT MANAGER NOVASOFT BUYS ASSETS OF OBJECTIVE SOLUTIONS**

Burlington, Massachusetts could be thought of as a hotbed of object technology, but Novasoft Systems Inc, which likes to think of itself as a leader in document and workflow management software, has had to go to Melbourne, Florida and nearby Cambridge to acquire the software and intellectual assets of Objective Solutions, Inc, which developed the Orin object-oriented, multi-system proprietary language. Its NovaManage product line was created using Orin, which enables it to provide interactive graphical screen, data and workflow definition tools. The technology will be further developed and optimised to handle the specialised requirements of document and workflow management, directly incorporating Document Management Alliance, Workflow Management Coalition and Open Applications Group standards. Key technical and management personnel will join Novasoft, with the offices in Melbourne and Cambridge becoming Novasoft development locations; no terms were given.

### **SEQUENT, COMPAQ SET TRUCE IN UNIX-NT WAR: USE BOTH**

In a remarkable alliance to create what sounds more like an ugly kluge than an elegant solution to an intractable problem, Compaq Computer Corp and Sequent Computer Systems Inc have joined forces to create a "highly-scalable" Windows NT plus Unix hardware-software implementation of SAP AG's R/3 version 3 business management, accounting and administration suite - not for a specific customer, but for the market in general. Integration is being done by Sequent, Beaverton, Oregon and the idea is that you run the database - Oracle7 - on the symmetric multiprocessing Unix machine from Sequent, and the applications under NT Server on a Compaq Proliant server, which also runs either Oracle7 or SQL Server 6, with Sequent providing technical and support services. Benefits are claimed to include increased productivity through enhanced Microsoft desktop integration, lower cost of ownership by using Compaq application servers, and the robustness of the Sequent Symmetrys. Users can also run NT Server rather than Unix on their Sequent servers, so that all three layers of the German company's R/3 run under the same operating system. With NT you can have up to 28 Pentiums, with Unix, 30, and the Proliant comes with up to four; a clustered Symmetry with up to 120 CPUs can also be used.

### **NETSCAPE GETS ITS WEB PAGE TO PAY FOR ITSELF; OFFERS AD SPACE**

In an effort to start cashing in on the thousands of World Wide Web surfers on the Internet, Netscape Communications Corp will launch a multi-tiered advertising programme on its most heavily trafficked Web site pages. Three levels of pricing and defined exposure will be offered to the more than 25 companies that currently advertise with the company. Up to now, it offered a fixed advertising rate for banner ads, but that pricing was based on audience expectations derived from a one-week statistical survey conducted in May. It learned that its Internet search page is accessed more than 308,000 times a day while its Internet directory is visited more than 125,000 times daily. Three tiers of pricing, labelled the silver, gold and platinum, cost \$15,000, \$20,000 and \$30,000 on a monthly basis. The adverts will rotate through predetermined locations on the company's Web site. Advertising is a relatively new source of income for Netscape, whose main business is selling Web browser and server software. However, the company's information-rich Web site has emerged as one of the most frequently-accessed areas on the Web, turning the firm into a potential goldmine for World Wide Web advertisers.

### **NETWORK COMPUTING DEVICES ENDORSES NT ON POWERPC WITH PC-XWARE FOR NT**

Before the customers start flocking or otherwise, the first test of whether you have a winning product or not is the degree of support you get from your peers, and on that count, Windows NT on the PowerPC is doing rather well, because Mountain View, California-based Network Computing Devices Inc is sufficiently hopeful for its prospects that it last week rushed out PC-Xware for NT on PowerPC. Moreover it is the company's first move beyond the iAPX-86 family with its personal computer X Window server software (remember in the quirky Alice in Wonderland world of the X Window System the server software is at the terminal end of the link).

#### **32-bit application**

PC-Xware for Windows NT supports Microsoft Corp's Windows Folder Tabs user interface to improve productivity with on-screen choices that "eliminate the need to navigate through a maze of pull-down menus and dialogue boxes in order to find important data, configure interfaces, create icons and launch applications. PC-Xware for Windows NT is written as a native 32-bit Windows NT application and is compatible with Microsoft's TCP/IP stack, which is included with Windows NT. The NT version also includes CD-quality sound and support for the X Image Extension. The company has also upgraded the iAPX-86 version of PC-Xware product to be X11 6-compatible, with virtual screen support for high-resolution workstation applications on a lower-resolution personal computer screen, single Windows mode for improved X Window grouping, and a Windows File Transfer Protocol utility. PC-Xware for the PowerPC ships next month for \$545, single-quantity price.



## FORTE TOUTS TWO-WAY DCE AND CORBA INTEGRATION IN 2.0

Eponymous object-oriented software development house Forte Software Inc, the Oakland, California company that's won the ~~mindshare in the application partitioning world without spending a buck on media advertising or putting its foot inside a trade show hall~~, has debuted version 2.0 of its second-generation environment. The core framework architecture has been extended so that Forte applications can now be accessed from external tools and services without the need for custom programming, the company says. Forte Middleware Independent Servers can be accessed from Distributed Computing Environment and Corba. Support for IBM Corp System Object Model and SunSoft Inc object environments is planned. Forte services can be managed by the Transarc Corp Encina TP monitor (Forte automatically publishes the Forte service as an Encina service managed by the Encina environment). New global name services allow shared services to be referenced across environments. 2.0 also includes support for OLE 2 so that OLE applications can work within a Forte window and cross-platform window inheritance. There are local language versions based upon X/Open NLS standards (the Kanji implementation is Forte 1.0) and 2.0 includes the ability to work concurrently in the environment from English, French, German or Kanji front-ends (though Forte's not gone the Unicode route). Additionally, code is now generated, sent for compilation and partitioned from a graphical menu rather than manually. There are new security and performance enhancements for the repository and application libraries that allow developers to modify sections of code without having to recompile the whole applications. Forte is putting 2.0 up on Intel and Alpha systems running Windows NT for the first time, which it expects to provide a significant share of business over time. It now supports Power Mac clients, and adds direct database access to DB2/6000, Microsoft SQL Server and Informix, as well as support for ODBC for multiple, but non-direct database connections. OS/2 and Ingres implementations beckon. Version 2.0 ships in the fourth quarter from \$4,000 to \$6,000 per developer and \$225 per user. There are no upgrade charges. An entry configuration would probably start at \$75,000, though realistically Forte says anyone expecting to spend less than \$150,000 - its estimate of the fully-loaded cost of maintaining a C++ program for a year - should be heading for other suppliers.

### ORB search

Forte says it'll support OpenDoc when that stabilises, anticipating easier and more portable environments using it. Although the framework comes with Forte's own non-Corba Object request broker message plumbing it also allows other Corba ORBs to plug-in and, as soon as it finds a suitable technology, the company says it'll strip its own ORB, a temporary solution, out of the framework. Like PCs that are pre-loaded with give-away applications which don't get used, Forte says its quite happy for its own modules, such as TP or system management services, to be replaced with whatever a customer may have already implemented, such as Encina, or Tivoli Systems Inc technologies. (It's seen no demand yet for Tuxedo or Top End integration).

### IPO route

Forte is capitalised at \$36m, of which \$28m is VC money with \$8m from hardware partners, DEC, Data General, IBM, Sequent and Apple. It's up to 150 employees. In its first four quarters of shipping revenue product to the end of June it claims to have done \$15m (its fiscal year runs March to March), 80% of it in licence sales, and 10% each in consulting and maintenance. It aims to be in the black by March 1996 and reckons two profitable quarters thereafter should be enough to see it to an IPO barring unforeseen circumstances. Less than \$1m of the \$15m came from its key OEM, DEC, though it expects that figure to rise as projects now in the works kick-in. Forte claims 100 customers - six in the UK - and 2 sites now with more than 50 concurrent users though it says there are four of 1,000-plus user projects underway. It has local operations in the UK and France and eight distributors worldwide (though zero in the UK). It counts EDS and Andersen as integration partners, though they're not peddling Forte on any kind of exclusive basis.

### Competition, acquisition

As far as the competition is concerned, the list of ISVs now claiming to be object-based application partitioning houses includes Dynasty, Neuron Data, XVT, Uniface, Ipsys, Progress, Texas Instruments, Unify, Open Environment, Seer and the Passport folk ~~to name but a handful~~. Forte says it's met Seer - probably its closest rival with a similar \$75,000 entry-point - a couple of times and Dynasty on eight or nine occasions, all of which it claims to have won. It knows there's a marketing issue it needs to address if it is to distinguish itself from the wannabee's, but says till now it's been more concerned with building a business than evangelising its technology. It doesn't want to play the checkbox game that partitioning folk are currently employing against each other, and says its C++ code generation/compilation can't be touched. With the likes of Taligent and SunSoft C++ development environments bearing down on it, Forte says it'll continue to play the middle conceptual ground, sitting between approaches like Taligent, which start with plumbing and move up, and the CASE operations that start with methodology and work down. Meantime, the company's got a bunch of new products coming down the pipe that are different to what it has now, and says they will hang off the framework environment. Its also on the acquisition trail.

## HITACHI CREATES HG72C CORE FROM ITS SH SERIES RISC...

Hitachi Ltd is now offering its proprietary 32-bit SH - Super Hitachi series embedded RISC launched in 1993 as a core that it will customise for third parties' microcontroller requirements. The 0.5 micron HG72C core is from the SH1 branch of the RISC family, which currently has three branches. Any of the peripherals for the SH family can be integrated with the core, and it supports 5V and 3V working for peripheral controllers, cellular phones and handheld computers. Design can start now, parts in October.

## ...AS CABOT IMPLEMENTS P-CODE DEVELOPMENT ENVIRONMENT

Bristol, Avon-based Cabot Software Ltd has implemented its Power System development environment on Hitachi Ltd's SH Super Hitachi 32-bit family of RISC microprocessors, enabling applications developed for other systems to be transferred to the chip set, without the need for recompiling, as long as the application compiles down to p-code. The environment, which enables the developer to write in pseudo machine code, can already be used on the RS/6000 and Motorola Inc 68000 microprocessors under a variety of Unices, and under Macintosh System, OS/2, MS-DOS, CP/M, VAX/VMS and Windows. The company reckons the ability to write in pseudo machine code to create portable programs is a unique offering. The Power System is hosted under MS-DOS, OS/2 and Unix, running underneath it are a variety of compilers and C, Modula-2 or UCSD Pascal, for which the company is the exclusive worldwide licensee. Developers can choose any one of the compilers, or write in a mixture of the languages. They can also use native code generators, but the environment is primarily designed to generate pseudo machine code which produces applications that require about half the memory taken up by programs written in native code.

### Embedded applications and PDAs

With this ability to produce concise code, Cabot, a five year-old, 10-man company, has targeted embedded applications and Personal Digital Assistants - anywhere where memory is at a premium - as its main market. Hitachi's chips, which are all designed for embedded applications either as controllers or processors, are aimed at the same market. The company said the system is ideal for general applications such as interactive television that has to work on different set-top boxes. It sells the development environment mainly in North America and Europe but wants to become better known in the UK; it is considering floating within "the next few years." The development environment, its breadwinner, costs about £350 for a Windows version and more than £2,000 for a Unix one. The company also says it is currently working with a number of universities on what it describes as futuristic applications for set-top boxes.

# unigram·X

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George Soros has donated \$50m of **Legent Corp** shares to the New York-based **Open Society Institute**, which promotes development of open societies around the world: the Institute, which Hungarian Soros founded in 1993, has acquired a 50-year lease to an archive described as the most extensive source of information on the former Soviet Union and its East Bloc partners, and plans to make the materials available to on-line computer users.

**BlueLine Software Inc** is using Oracle Corp's database to do a version of **Vital Signs' Vision-Net**, its network performance management system for Unix. VisionNet collects performance metrics. Prices will range from \$30,000 to \$115,000, depending on hardware and options selected. BlueLine will resell Oracle as part of the deal.

Uniforum, the annual Unix fest, has found a way to cozy up to NT without appearing to, how shall we say, pander perhaps? The **Softbank Comdex** people who are managing the thing now, are going to be putting it together with a show they call Enterprise Computing Solutions hoping to draw a stronger user base come February 12-16 in San Francisco. They'll also put it together with Enterprise Computing Solutions/Windows World April 10-12 in Atlanta when Comdex Spring is off in Chicago and move a Uniforum showcase into Comdex/Canada in Toronto July 10-12 1996.

Director of enterprise networking Larry Weber has taken over **SunSoft Inc** boss John Kannegaard's former role as VP and general manager of the developer products group. Meanwhile SunSoft networking Jim Billmaier, one of the three **DECies** that instigated or at least fanned the flames of **OSF, X Consortium** and DEC's Mips deal has upped and offered to become president and CEO of Paul Allen's **Asymetrix** up in Washington.

**Hewlett-Packard Co** has lost senior workstation systems division marketing executive Karl Freund to **Cray Research Inc** where he takes up a newly-created VP marketing position.

**Motorola Inc's** now offering versions of its Ultra and Atlas OEM PCI bus and VME bus boards with 100MHz low-power PowerPC 603es.

**Versant Object Technology Corp** VP of marketing Dave Kellogg has skipped to **Business Objects SA** in Paris where he'll be VP worldwide product marketing.

**Amdahl Corp** has tossed its North American, European and Asia Pacific Enterprise Information Solutions' (EIS) business into a global EIS unit. Amdahl EIS will market and distribute applications development tools, including Antares' Huron ObjectStar. Steve Coggins, previous VP and general manager of EIS Europe and Asia/Pacific heads the operation.

**Hewlett-Packard** has put back the port of AdminCenter, its change management and configuration module, to AIX, Solaris and NetWare because of the additional functionality it says AdminCenter will offer with its impending HP-UX 10 shipment (UX No 513). AdminCenter on the other platforms will now be offered in the September/October time frame.

Windows-friendly Seattle-based **PageAhead Software Corp** has upgraded its SimbaEngine Software Development Kit (SDK) to comply with ODBC Version 2 Level 2 API functions. Version 3 includes improved driver writing tools, two new performance functions and new features including sub-queries, in which queries are the predicate of another query and unions, which are made up of two or more query sets. SDK enables Windows-based ODBC drivers to be built for any data source. Its up on Windows 3.x, with NT and Windows 95 due in September.

Writing in the latest issue of *Upside*, chip follower Michael Slater asks himself whether he's willing to write off any of the RISC processors yet. He answers himself saying he "would put Sparc at the top of the list as the most endangered."

**Software AG** is shipping SourcePoint, which it says automates the simultaneous extraction, transport and loading of data warehouses. SourcePoint extracts can be written in the Darmstadt, Germany-based company's own Natural, as well as Cobol and C-programming languages. SourcePoint is up on Unix, MVS, VSE and Windows and goes from \$30,000.

**Oracle Corp** is expected to announce Smart Client, a new graphical front end for its Oracle Financials, Manufacturing and Human Resources (UX No 506) this week.

**Sybase Inc's** System 11, which we anticipated was due some time in the second quarter (UX No 516) looks to be nearing a concrete announcement.

PC-to-Unix connectivity house **Walker Richer Quinn Inc** plans an office in Singapore to serve Southeast Asia

Eltham, London-based **Symicron Ltd** has Unix device drivers for use with Solaris 2.4 for Sparc and AT machines. The Symdriver-UR for AT, and Symdriver-US for Sparc feature line monitor, configuration and management utilities and provide ISDN, X.25, OSI Transport and HDLC support. They are out now for £600.

Distribution systems house **Liocs Corp**, Lombard, Illinois, is offering its Perspective/CS warehouse management software on HP 9000 servers.

**Novell Inc's** WordPerfect 6.0 for Unix is now up on nine platforms, including **Silicon Graphic Inc** and **Siemens Nixdorf** boxes at from \$500. Ray Noorda's **Caldera Inc** will port and sell WordPerfect 6.0 for Linux.

Alameda, California-based **Wind River Systems**, says its embedded operating system, VxWorks is generally available on PA-RISC from the third quarter (UX No 531). Shipping with its own development tools it goes from \$23,500 for 10 users. The company has hired David Larimore from Destiny Technology as its new VP marketing. He takes over from Wind River founder David Wilner who will continue as CTO.

**SysKonnnect Inc**, San Jose, California, is adding AIX and NT drivers to its network adapter cards for **IBM Corp's** recently-launched Power Series super clients; Solaris, OS/2 and NetWare implementations will follow.

**Concurrent Computer Corp** has turned to Dallas, Texas-based **Epoch Communications Corp** - soon to become a subsidiary of interactive systems distributor **Stone Media Corp** - to rig its R4400 Maxion servers with interactive networking, entertainment-on-demand and other multimedia capabilities. Both companies are to market the integrated solutions.

**Auspex Systems Inc** founder Larry Boucher is turning day-to-day management of the company over to new president and COO Bruce Moore formerly president and CEO of **Diasonics Ultrasound Inc**. Boucher remains chairman and CEO of Auspex.

**Computer Systems Advisers Inc**, Woodcliff Lake, New Jersey, is putting its Silverrun business process and data modelling workbench up under Solaris 2.4 with Motif.

**Network Application Technology Inc**, Campbell, California, has added automatic troubleshooting and report-generation tools for version 2.1 of its MeterWare for Unix distributed LAN monitoring software. MeterWare is from \$5,000; EtherMeter, TokenMeter and MasterMeter network hardware probes are priced separately.

Middleware and network specialist, Eden Prairie, Minnesota-based **Apertus Technologies Inc** is opening a new office in Stuttgart, Germany on the back of recent wins with the German Finance Ministry and tie ups with **Siemens Nixdorf Informationssysteme** and **Comparex Networks GmbH** (UX No 525).

**Micro Focus Plc** will offer Transoft's U/SQL ODBC database API to provide Micro Focus Cobol applications with access to ODBC and SQL from the fourth quarter.

**Covia Technologies Inc** will finally ship its Communication Integrator messaging middleware from July 21st on HP-UX, SunOS, Solaris and AT&T Unix. Pricing goes from \$4,000 (UX No 529).

The **Object Management Group** is compiling a directory of business objects and is looking for entries. It needs information on current or future technologies by July 24th.

The customer information houses have swooped on **Sybase Inc**: **Aurum Software Inc's** hired Sybase VP market development Chuck Donchess as its new VP marketing and business development, and **Vantive Corp's** tapped VP western area sales John Jack as its VP worldwide sales.

Following **Sun Microsystems Inc's** admission that it won't after all offer the Common Desktop Environment (CDE) as the default interface with Solaris comes news that **Hewlett-Packard Co** is following suit. It won't now offer CDE as the default interface in the next version of HP-UX 10 as it had planned; Visual User Environment still reigns there, it seems.

**Data General Corp's** offering a new entry-level version of its Clariion RAID system with from 6Gb to 28Gb disk, 8Mb cache, redundant power and cooling and an interface kit for Sun, DEC, IBM and Intel PC servers from \$11,000.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

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The weekly information newsletter for the UNIX™ community worldwide

KBN

31 JUL 1995

London, July 31-4 August 1995

Number 549

## OSF SETS MICROKERNEL, DCE WEB, JAVA DEVELOPMENT VIA NEW ADVANCED TECHNOLOGY PROCESS

As part of a new technology and business model it's drummed-up to sustain itself, Open Software Foundation and some of its sponsors - IBM, Hewlett-Packard, Hitachi and DEC - plan to create a common set of APIs that'll bring their various Mach-based microkernel efforts into synch. OSF envisages ISVs using the APIs to write software for multiple microkernels, and where microkernels are installed in conjunction with Unix, that database vendors and others create API hooks into their applications. The four investors are paying a minimum of \$100,000 each under OSF's new Advanced Technology Offering (ATO) process, designed to nurture research and development technologies to raw, but stable code releases (NCSA Mosaic is the benchmark), available freely for research, evaluation and internal use. It's a kind of pre-Pre-Structured Technology process. ATO code could go forward into a PST, to company-specific products, or to the wall. The microkernel initiative, which has been brewing since at least last October (UX No 511), will deliver a preliminary specification by October, including additional SMP, fault-tolerant and real-time work, with conformance and performance test suites thereafter. They'll be available, along with an unencumbered version of OSF's microkernel source - and all other ATO code - from an Open Software Mall the Foundation's creating on the Internet, *see below*. IBM will develop compliance with the spec in a second rev of its microkernel technology. The ATO is part of a model for next-generation microkernel architecture OSF's looking to foster. It's not clear whether other Mach users, including Next Computer and Convex Computer will make use of the APIs; at press time Next was unfamiliar with the initiative.

### Jumpstart

OSF says ATOs will jumpstart collaboration around technology from industry, academia or its Research Institute, providing a counterpoint to the commercial PSTs. ATOs require a minimum of three investors contributing \$100,000 for up to six engineers, plus a \$50,000 maintenance fee, with three code releases on a quarterly basis. Investors get unrestricted commercial rights, other redistribution rights are estimated at \$25,000 per licensee. Other ATOs underway are DCE Web, and Sun Microsystems Inc's Java. The DCE Web ATO, funded by AT&T, HP and Hitachi, is an application for employing DCE naming, security and access control mechanisms over the web. An interface module will allow browsers to interact with servers via DCE. It will work with off-the-shelf browsers and won't require source code alterations. Although it will work with commercial servers, access to source code and the use of multithreaded web servers will yield better performance, OSF says. Sun, HP, AT&T and Novell are funding an ATO for Sun's Java WWW technology, with ports to HP-UX, UnixWare 2.0 and MP-RAS, plus an evaluation of how Java can be used to create secure Web-based applications.

### Software mall

Additional ATOs already lined up - a dozen will be active by year end - include a contributed widgets library (that could feed into the CDE Next PST, *see page 3*); Corba support in DCE; a data format conversion architecture; plus DCE applications, event services, navigator, NFS, name service interface over XFN, public key extensions and system test suites (UX No 533). Next comes federation of dominant name services, HotJava, iKP secure payment protocol on DCE, Java controls, Motif multimedia widgets, network clipboard, scalable trusted public key certificate repository, ODP training service, Wand Web and DCE server and XFN conference library. OSF's Open Software Mall will include software executables and source; documentation, plans, designs and specs, web links to relevant sites, services, products and consulting. The mall has ATO, PST, Research and other plazas.

## INSIGNIA'S SOFTWINDOWS 2.0 EMERGES AT LAST

Eight months later than originally expected, Insignia Solutions Ltd is now ready to release its 486 emulation product SoftWindows 2.0 on Macintosh PowerPC platforms, and has an announcement scheduled for the opening of MacWorld in Boston next week. Unix versions for HP, DEC, IBM, SGI, Sparc and NeXT workstations will all be out by the end of the fourth quarter - the first time the company has been able to manage a simultaneous multi-vendor release. The reason for that, and for the delay, is the implementation of the company's new Emulation Description Language, a rules based system that allows for easier porting between processor architectures. Insignia, based in High Wycombe, Bucks in the UK and Mountain View, California in the US, also struggled with the extra complexities of enhanced mode Windows, which means that the new version runs only at the same speed as SoftWindows 1.0 would on the same machine. On a Mac it takes up 12Mb, meaning a 16Mb Mac is required to emulate a 4Mb PC. An NT version relies on Microsoft's schedules, but a beta version should be out in November. Windows 95 is still six months down the line, as Insignia is still waiting for Microsoft source code. SoftWindows 2.0 survives the ultimate compatibility test on the Mac - it can run Doom II - although it currently lacks SoundBlaster support. No US prices yet, but in the UK it will cost £329. Apple has a bundling option but has yet to make its intentions clear. Insignia remains tightlipped over its rumoured Phantom and Stringfellow "native" Windows for non-Intel platforms projects, but those efforts are likely to end up as a mixture of emulation and native code.

## TRITEAL FLIES COMMON DESKTOP COLOURS WITH TED 4.0

More than two years on, COSE's promise of a common GUI for Unix looks a little distressed. But who cares any longer that only IBM has a default implementation of CDE for its Unix, that HP and SunSoft have put off plans to offer CDE as their default GUI any time soon - although they offer CDE options - in favour of pre-COSE VUE and Open Look front-ends, and that it's anyone's guess when Novell will get around to offering the thing as standard. COSE latecomer DEC says it'll have a default CDE on Digital Unix release sometime early next year, whilst hanger-on SCO says CDE will be an option. Whilst CDE isn't likely to increase sales of Unix as a desktop system, these companies had intended for CDE to provide some degree of Unixification against NT, plus better application portability and a common look and feel. Even where CDE is being implemented, each vendor has its own particular cut of the tree. Users and ISVs with a bunch of different Unixes to support do care, according to Carlsbad, California-based CDE development house TriTeal Corp. From this month it will begin offering version 4.0 of its CDE, the TriTeal Enterprise Desktop (TED), for AIX 3.2.5 and 4.1.x, HP-UX 9.0x and 10.x, SunOS and Solaris (all in August); Irix, Digital Unix, Sinix, MP-RAS (September); plus HP, Tektronix, NCD and Sun River X terminals (October) and PCs running Hummingbird eXceed or NCD PC-Xware X servers.

### Getting the goods

It's also porting to SCO, and pitches an aggressive OEM story, claiming three or four names on the list are either close to signing or are getting the goods on TED from their analysts. TED 4.0 - golden code is expected this week - is an implementation of CDE 1.0 APIs, plus additional features, some of which are slated for CDE Next, *see page 3*. TriTeal expects to win X/Open CDE 1.0 branding from September on a per-platform basis. 4.0 enhancements include a graphical workspace manager, multi-monitor support and extended key bindings. TED has a Spyglass Web browser with additional graphics streaming and disk caching called TEDvision (users with other browsers can't take advantage of TED's cut-and-paste facilities, though additional WWW support isn't ruled out), Andataco's ExpressFax (TEDfax), support for NCD and Tektronix PC X servers (WinTed), LocalTED X terminal clients and the optional Spyrus Corp-derived NSA Fortezza-based TEDsecure 1.0 for use with 4.0 from October. TED 4.0 is from \$425, TEDsecure is \$200. TriTeal plans to pick up a WinDD or similar technology for accessing Windows applications in a 4.x release. TriTeal, which expects to do \$15m in its year to March 31, is targeting users doing database work from Unix desktops who also require personal productivity tools. It claims over 50,000 seats and says it only needs to win a tiny percent of Unix desktops to get rich.

### NETSCAPE'S INFORMIX ALLIANCE COULD HARM ORACLE'S NET INTENTE

Netscape Communications Corp, Mountain View, the runaway leader in the supply of Internet access software which is shortly to go public on a sky-high valuation of nearly \$500m, has switched database supplier from Oracle Corp to Informix Corp only a few months after it first began shipping products (UX No 548). Our sister publication *Computer Business Review* says that Informix and Netscape were playing down the long-term impact of the switch, it could mean tens of thousands of extra licence sales for Informix and a serious blow to Oracle. Netscape says it will replace Oracle in all its Internet server products, known as the Netscape Internet Applications family. These products, which enable businesses to build up a commercial presence on the Internet's World Wide Web, are expected to be enormously successful, hence Netscape's high rating leading up to its public offering. Netscape made a loss of \$2.7m on sales of \$4.7m for the first quarter but some analysts believe demand for its product could be so great that it will be turning over \$500m within two years. Netscape's business model is based on the free distribution of Internet browsers, with all its revenues coming from the sale of high-value server products and systems integration and services. Netscape will use Informix as a key component in Netscape Community Systems for on-line chat and Netscape Instore for on-line merchandising, bundling the products with Informix and offering them as a turnkey system. At present, about 1,000 users have Netscape server products based on Oracle. Many of these are trial users. Marc Andreeson, Netscape's technical director and co-founder Jim Clarke, said the switch was made because, "it is clear to us that Informix is the technical leader." A key reason is that Informix's main database product, Informix Online Dynamic Server, performs much faster for large scale database searches that are likely to be typical on the Internet. Informix's scalability and implementation on multiprocessor architectures was also cited as important. Jeff Hudson, Informix's vice-president for business development, refused to put a value on the deal, but said that it was more than just an OEM agreement and involved long-term co-operation. This could involve building large-scale transaction databases for access over the Internet and mobile access using software currently under development by Informix. The day before the tie-up, Oracle announced a similar co-operative agreement with Spyglass Inc, another supplier of Internet access software. Hudson said, "I believe everyone can see the announcement for what it is." He said that Oracle had made the agreement to distract attention from the Informix-Netscape deal. "That's not a good reason to partner, in my mind" he said.

### LINUX KERNEL MAKES IT ON TO POWERPC - POWER MAC IMPLEMENTATION STILL THWARTED BY APPLE

The first working Linux kernel for a PowerPC based machine was made available for anonymous FTP from <ftp://liber.stanford.edu/pub/linuxppc> last week. The implementation of Linux 1.2 runs on Motorola Inc's PowerPC VME 1603 machine, but is still in its formative stages, according to Joseph Brothers who is co-ordinating the project. It "boots and runs the rc shell single-user, but little else. It has few utilities and almost no drivers so far. It does not have X," he said. The software can be built by cross-compiling with gcc 2.7.0 and binutils 2.5.2 using ELF binary format. The team is expecting a flood of "why haven't you ported it to the Power Macintosh?" queries. The answer is, as previously, that there is a dearth of very low-level programming information from Apple Computer Inc. "What is needed is full programming specs on the Power Macs' ADB and NuBus, listing addresses of the various devices, bit patterns of the commands and data to be written to and read from those addresses, behaviour of the devices, memory map, and enough info on the interrupt hardware to get by," according to Brothers. He said repeated attempts over the past 15 months have failed to secure the necessary information from Apple, although he hopes that a recent approach may bear fruit. If something doesn't happen soon, however, the project to implement Linux on NuBus Mac will become a moot point - Common Hardware Reference Platform machines will be upon us. The next most likely target machines after the Motorola box are Motorola's Ultra and PowerStack computers and IBM's PowerPC-based RS/6000s. The current implementation is mainly the effort of Gary Thomas of Mercury Computer Systems Inc. Anyone that wants to help with the implementation can follow developments via the [linux-ppc@vger.rutgers.edu](mailto:linux-ppc@vger.rutgers.edu) mailing list or by anonymous ftp to <ftp://liber.stanford.edu/pub/incoming>.

### SAP CONTINUES TO WORK WONDERS IN THE FACE OF AN UNKIND EXCHANGE RATE

A strong Deutschmark wiped off the equivalent of \$8.7m from SAP AG's half yearly net profits, which stood at the equivalent of \$101m, resulting in a fall of 1% in the price of the Walldorfer's preference shares on the IBIS electronic trading system - against a market climbing nearly 0.5%. Although the company's figures were very good - profits up 79.3%, turnover up 67.2%, orders up 97% - traders' reaction was somewhat muted since the market expected nothing less from the company, especially after the first quarter's storming results. And despite exchange rates working against SAP, it still managed to grow its overseas sales in the half year so that they accounted for 67% of total revenues of \$832.3m, compared with a 58% share last year. The company did particularly well in the US, increasing sales by 85% to \$242.3m. But this expansion abroad fuelled growth of the workforce, something the company is concerned about. Last month it said it plans to rein in this growth sharply over the next 12 to 18 months. Nevertheless, it has added 1,178 employees since the end of December to total 6,407 at the end of June. The workforce at foreign subsidiaries rose by 41% to 2,959. As chairman Dieter Hopp told the company's annual meeting last month, business had developed very strongly in the first half: orders rose 97% from year-ago levels to \$537.3m and it won 448 new customers including Royal Dutch Shell NV, Philips Electronics NV and Microsoft Corp as users of its R/3 financial software. The Redmonder will use R/3 on Windows NT servers with the SQL Server 6.0 database; it will replace the company's legacy financial systems worldwide and users around the globe will communicate with a central SQL Server system located in Redmond, Washington. The latest version of R/3, version 3.0, is expected in the fourth quarter and likely will boost sales. But ever cautious with its predictions the company said, "All indications are that the second half of 1995 will be successful, although it seems unlikely that SAP will sustain the breathtaking rate of growth achieved in the first half of the year." SAP AG has reported net profits for the six months to June 30 up 79.3% at \$101m on turnover that rose 67.2% to \$832.3m. No per share figures. Conversion has been done at \$0.72119 to the Deutschmark.

### SYBASE SETS OUT ITS INTERACTIVE TELEVISION STALL

Oracle Corp has made most of the running so far among database vendors in the interactive video-on-demand world, but Sybase Inc does not intend to miss all the fun, and its New Media Division, formed in Mountain View, California has been outlining its plans for providing Internet and interactive television tool and server software. Its interactive server software currently runs on Hewlett-Packard Co and Digital Equipment Corp servers - it has three wins so far, all under HP-UX - but versions for Sun Microsystems Inc and Silicon Graphics Inc are on the way. The company also announced New Media Partners Developers Colleges, to start in September with a series of interactive television developer seminars and workshops jointly sponsored by Hewlett-Packard, PowerTV Inc, Scientific-Atlanta Inc and Sybase, backed by "the first fully integrated end-to-end interactive television developers kit," consisting of the Hewlett MediaStream Server video server, Scientific-Atlanta's Digital Home Communication Terminal, the PowerTV operating system development environment and the Sybase Intermedia software product family, including the new Sybase New Media Studio development environment - Centro Digital Pictures Ltd of Hong Kong is using it to develop its next generation of interactive television applications. The New Media Studio environment is a Windows95, Windows NT, and Unix development system for video and cable networks that can be accessed from both personal computer clients and set-top boxes running the Interplay client software. Interplay supports Windows95, Mac OS, Microware Systems Corp's OS-9 and OS-9000, Power TV, and Windows 3.1. The New Media unit employs 150 people and in September plans to announce an array of tools for managing and analysing on-line transactions, as well as tools for customising and creating Hypertext Mark-up Language interfaces. The three Sybase wins are BellSouth Corp's video-on-demand trial in Chamblee, Georgia, Singapore Telecom Ltd's system, which is planned to cover 3m homes, and the Southern New England Telecommunications Inc trial in Hartford, Connecticut.

### SANTA CRUZ CUTS 100 JOBS IN RESTRUCTURING

Santa Cruz Operation Inc saw third quarter net down 72.6% at \$50.9m on turnover up 5.8% at \$50.9m; nine-month net losses were \$3.5m against a profit last time of \$8.4m on turnover up 14.0% at \$152.2m. The company is cutting its 1,250-strong worldwide workforce by about 8% - 100 people, and will take a fourth quarter restructuring charge to cover the cost. Santa Cruz Operation blamed the need for the restructuring on its business having been hurt by a slow-down in the buying cycle as well as by a weaker South American economy.

### BAAN READIES TRITON FOR VERTICALS

Now armed with Motif and Windows GUI clients for its Triton manufacturing suite, Baan International BV, Ede, Netherlands, is heading out to vertical markets, planning new versions of its software tailored for automotive, electronics, food and beverage and complex, industrial manufacturing markets. It's got a bunch of announcements set for late August. Baan, which claims 1,000 Triton production sites, will use some of the \$120m it raised in its IPO to develop the packages. It's also ramping its US operation, aiming to move from a primarily product-driven outfit to a marketing-driven concern. Baan says Triton attracts users looking for SAP R/3 or Oracle and Avalon alternatives and touts what it claims is a unique ability in the software that allows the user to decide when the actual production system gets put together out of development pieces, or what it dubs the customer order decoupling point. Implementation costs, it claims, are generally less than twice the price of the product set compared to the five times product price a SAP install may cost the user. Triton currently supports Oracle and Informix databases; it has Sybase code internally but no release schedule. It sees no demand for an Ingres implementation. It's 25-strong research and development unit in Ede is currently evaluating strategies for implementing object technologies, though it doesn't think object databases are currently robust or pervasive enough for manufacturing applications such as Triton. Support for object development languages is a more likely route. Of the big six integrators Baan works most closely with Ernst and Young and KPMG, but also with Cap Gemini Sogeti SA (and its Hoskyns Group Plc in the UK) and former Philips NV affiliate Origin in its home country. Baan last week reported second quarter net profits of \$3.3m up from a \$2.6m loss last time around. Revenue was up 122% at \$47.3m over \$21.3m in the same period last year. Net revenue for the six months to June 30 was up 123% at \$86.2m over \$38.7m for the first six months of 1994. Net income for the six months was \$5.4m compared to a loss of \$5.6m in the same period last year. Licence revenues were up 182% to \$23.4m in the quarter, up from \$8.3m last time. The company expects its revenue mix to shift from 40% licence fees, 40% consulting and 20% hardware now, to 50% from licences, 40% services and 10% hardware over the coming year. It claims it'll do 40% of its business in the US this year - 80% of revenue came from Europe last year. The 225-strong north American operation accounted for around 25% of its second quarter revenues.

### CDE NEXT AWAITS INK

A development agreement for the long-gestating CDE Next Pre-Structured Technology effort is finally out for signing (UX No 530); it's expected back by the end of next week. At least DEC, Fujitsu and Hitachi are expected on-board in addition to the original COSE developers. The plans call for the creation of the next cut of Common Desktop Environment and parallel development of Open Software Foundation Motif 2.0. As prime development contractor, X Consortium also has a key decision making role, and has quietly tripled its headcount to more than 30 engineers in readiness. Some original CDE Next wish-list items, including systems administration and a web browser have been dropped, but a multithreaded version of SunSoft ToolTalk and an on-line information access tool are planned. Several million development dollars have already been committed but the project isn't expected to run to the two-years and tens of millions of dollars of the CDE 1.0 fiasco. As well as CDE Next and DCE 1.2, OSF claims four other PSTs will roll-out before year-end.

### TADPOLE LAUNCHES ITS P1300, NEW SPARCBOOK, DOCKING STATIONS

Tadpole Technology Plc duly announced its Tadpole P1300 133MHz Pentium-based notebook computer, with high-resolution 800 by 600 10.4" active matrix thin-film transistor display and 1.2Gb internal disk option. It is aimed at 3D modelling, real-time data analysis, large database management and complex multimedia applications in the field. It supports Windows95, NT, OS/2, NextStep or Solaris, and comes with 8Mb to 128Mb memory, from \$7,000 (£4,800) with 340Mb disk. Tadpole also added the Sparcbook 3GX with 110MHz microSparc II, the same screen as the 1300 and 340Mb to 1.2Gb disk with 16Mb to 128Mb memory. It is \$13,450 (£9,200) with 16Mb and a 520Mb disk. Upgrades from the 85MHz CPU are £980. Tadpole also added P1000 Series Docking Stations: the \$3,000 Model 100 has 5.25" quad speed CD-ROM drive, 2Gb SCSI disk, removable drive bay, two full-length free AT slots, AT Ethernet controller and 1.44Mb floppy drive. The Model 50 costs \$1,700, with floppy drive and an Ethernet controller.

### ICL TO PUMP A FURTHER £30m INTO OBJECT DEVELOPMENT, NEW LAB

Believing it's got a technology winner on its hands, ICL Plc is going to pump a further £30m into developing its DAIS object request broker, application development system and other object initiatives. With project pieces currently scattered all around its organisation, Fujitsu Ltd's UK unit says it's not clear how much it's spent in total on object technology development so far. However it will now consolidate all of these activities in an Object Software Laboratory run by Ian Corden, formerly business manager of ICL's healthcare operation, who reports to David Teague, managing director of the company's high performance systems group. The DAIS team will expand to 60 staff - it's at 40 now. Although the Object Lab kicks off with a strategy ICL expects to serve its purposes up to the turn of the century, the company doesn't think an object market as such will really get going until around 1997. It'll concentrate on developing gateways for existing applications, more flexible runtime environments, additional security, encryption and transaction services in the meantime. As well new technologies ICL says it'll book other OEM business and joint ventures during 1996. ICL has already promised a Corba 2.0-compliant version of DAIS, now at release 2.1, by the end of this year (UX No 515) and says it's already demonstrated Corba 2.0 ORB-to-ORB interoperability with SunSoft and Postmodern Computing Technologies environments at a pre-Object World try-out at Hewlett-Packard's Burlington, Massachusetts labs. It's got other plans to provide compatibility with IBM, DEC and other object environments and says it'll also run DAIS over IPX/SPX networks. ICL, an Object Management Group board member and chair of three OMG working groups - security, object modeling and analysis - also sits on object request broker, object services and common facilities task forces.

### ...CREATES DISTRIBUTED VERSION OF VISE SIMULATOR USING CORBA, GALAXY

Meantime, ICL's Design Automation Laboratory is set to develop new Corba versions of its Vise and SuperVise Motif-based chip logic simulation applications. Vise's display component is written with Visix Software Inc's Galaxy development environment; SuperVise provides extended display capabilities. ICL says Corba will be used to define the split between the major application components so that the different parts of SuperVise could live on separate systems. Communications are handled by Dais. ICL says it'll ship SuperVise early next year. Fujitsu is already using Vise and will move over to SuperVise.

### ORACLE RELEASES POWER OBJECTS WITH BACKING FROM IBM, APPLE

Oracle Corp has won the backing of IBM Corp and Apple Computer Inc for Power Objects, its cross-system answer to Microsoft Corp's Visual Basic - although the Apple deal was last week described as "an intent" rather than a done deal, despite press releases and press reports to the contrary. The IBM deal is a three year marketing agreement for OS/2 Warp versions and includes the Workgroup/2000 development toolset and Oracle 7 database. The visual Power Objects programming tool supports cross-system development under Windows and Mac OS with OS/2 to be supported next year, and includes its own local, low footprint (300K) database, named Blaze. Applications written using Power Objects can be moved from one system to another without recoding. The Client/Server edition comes bundled with native data access drivers for Oracle7, Sybase SQL Server and Microsoft SQL Server. Power Objects Client/Server Edition is \$2,000, Oracle Power Objects Standalone Edition costs \$400, for Windows or Mac OS. Oracle also launched its Object Marketplace software development and distribution strategy that takes the first step to putting into practice what object technology was always intended to be all about - enabling users to mix and match component objects to put together the applications of their dreams. The Object Marketplace is part of the Oracle Store on the World Wide Web, and through it, Oracle will resell third-party Oracle Power Objects components and OCX controls, so that developers can go to there to buy the pre-built components they need to assemble their application, and via Power Objects' visual object model, customise objects further to meet their individual application requirements. Objects in the Object Marketplace will be organised by function, application and industry. But Oracle's decision to take a huge 50% cut of any sales made may discourage third parties from participating. Only a very few appear to have signed up so far, and a similar effort by the Object Management Group foundered due to lack of commercial demand.

### INTERNET PUBLISHING MAKES ON-LINE CREDIT CARD CHECKING A REALITY, PUTS GRAMS ON THE WEB

On-line credit card checking is a step closer to reality with a system worked out between Internet Publishing Ltd and an arm of one of ~~the UK clearing banks. London-based Internet Publishing Ltd has~~ used a piece of software from the merchant services arm of its banking partner - which Internet Publishing has chosen not to name - to crack on-line credit-card verification on the World Wide Web. Checking credit cards in real time has proved a thorny problem for Internet commerce, with banks understandably nervous about letting their credit card systems get anywhere near the Internet. The company has allayed its partner's fears, for now at least, by isolating the credit card checking code on a separate machine. The Web front-end is built on Netscape Communication Corp's Netsite Commerce Server running on a Sun Microsystems Inc Sparcstation. Pages that require credit card numbers are protected by Netscape's proprietary RSA-based encryption technology. Alongside that sits a personal computer, running Windows and a software package that dials the bank over a modem link, submits the credit card and transaction, receiving either a pass or fail message. The company's main contribution has been to build an extra interface that enables the Web server and credit-checking machine, to pass credit transaction details and replies directly via their serial ports. The company is at pains to point out that the machine is not attached to any network and credit card numbers are not stored anywhere on the Unix box. The bank is being reticent about the system: its technical department acknowledged that this is the first of its kind for a UK bank, and any similar systems will be evaluated on a case-by-case basis.

#### Novel

The bank "is still in quite a conservative mode when it comes to trading over the Internet," says Internet Publishing's managing director, Eamonn Wilmott, "they are looking at us closely," he added. The bank's press office was unaware that the bank was cooperating with Internet Publishing on credit-card-over-the-Web projects at all. The system was initially designed to support the company's World Software Library, which is due to go live later this month. This will enable users to try, buy and then download software over the Web. A more novel project will put *Unigram* and initially its sister publication *Computergram* on the Web site. Users will be able to search the database for news stories by keyword and be returned a list of headlines along with story lengths. Individual stories then cost 50 cents a piece with a minimum charge of \$10 for 20 stories, but there's no time limit on usage. Billing will be in dollars and converted to local currency by the credit card company. As such, the system will bring pay-per-view text publishing to the World Wide Web for the first time. One problem is how to deal with differing international and inter-State sales tax legislation. "We are clearly responsible for taxes," says Wilmott, who explains that it will be up to the customer to add the appropriate local levies to their bill. "We are still working out the fine print," he added. Internet Publishing Ltd is an associate company of APT Data Group Plc.

### IBM HAS NEW SERIAL STORAGE SUBSYSTEM FOR RS/6000

IBM Corp has announced a 7133 Serial Storage Architecture Disk Subsystem for the RS/6000 line, which it touts as a low-cost way to avoid the storage bottlenecks of SCSI connections. IBM compares SSA's advantages over SCSI's parallel interface to adding more lanes to a freeway. SSA reduces congestion among data packets by adding more paths for the data to travel on. IBM claims that the 7133 Subsystem can achieve 3,000 I/O operations per second, more than any single processor in the industry, meaning data transfer can match processor performance. The subsystem will run on AIX 3.2.5 by August 11, with support for AIX 4.1 by year-end. The subsystem can come with up to 16 hard drives. The rack-mount Model 010 with a standard configuration of four 2.2 Gb drives is \$17,500, and the maximum configuration of sixteen 4.5 Gb drives is \$72,300. The desk-mount Model 500 runs \$500 more for each configuration. More storage can be added by plugging additional drives into slots in the 7133; each SSA adapter card can handle up to 96 drives for 432Gb of memory.

### TAIWAN "TO DEVELOP P6, P7 CHIPS"

*Electronic Engineering Times* broke a story recently saying that the Taiwanese government is going to try to defend its industry against Intel and develop its own P6 and P7 chips by 1997. The locals, under pressure from Intel's deepening incursions into motherboards and chipsets, ~~Taiwan's bread and butter, are planning simultaneous P6 and P7 development, hoping for first silicon by mid '97, a tight two years off.~~ Taiwanese refer to the Intel scheme they're going up against as Intel's 3-2-1 strategy - its plan to sell 30 million CPUs, 20 million Triton chipsets and 10 million motherboards - the latter the entire number of motherboards Taiwan plants produce. A sketchy plan has apparently been approved calling for outlays of at least \$16 million a year for several years, peanuts by Intel standards. They are now reportedly working on how to implement the thing. It could eventually involve chip houses outside Taiwan. The paper says they've got 20 professors working on research into such areas as Very Long Instruction Word (VLIW) that the Intel-HP combo is believed to be using ostensibly for the P7, and the Taiwan government-backed Computer and Communications Research Laboratories, which previously failed to commercialise a Sparc chip it was working on, reportedly has a small team doing a P6 design. The work could be spun out to a commercial concern. Taiwanese motherboards, half of which ship without processors, could be the clones' first market, potentially about 5 million chips. Meanwhile, Intel is suing United Microelectronics Corporation (UMC), potentially one of the players, in Singapore, Hong Kong, Germany and the UK for patent infringement because of UMC's 486SX clone. The Microprocessor Report says Intel is really more worried about UMC's promised Pentium follow-on than it is about the 486 chip. It notes that if the case goes to trial it'll be the first test of the validity of Intel's patents as well as the possibility of creating a compatible design that doesn't infringe them.

### DEC PUTS 250MHz ALPHA 21164 IN 2000 SERVER SERIES

DEC's Alpha 21164 microprocessor has found a new home in the AlphaServer 2000 line, making its first appearance there as a 250 MHz CPU in the model 5/250. DEC also announced new Internet-ready AlphaServers and cut tags on CPU upgrades. DEC has already released a 21164-based 2100 series server, but this is its first 21164 machine in the 2000 line. The 2000 5/250 SMP system, with a 4Mb third-level, off-chip cache, can support up to two processors and uses the same PCI and EISA I/O as the rest of the AlphaServer family. The NT version will sell for \$34,000; and the Digital Unix and OpenVMS systems sell for \$43,030. The AlphaServer 2000 4/200, 4/233 and 4/275 models, which run a 21064 chip, can be upgraded at a cost of \$16,600 for the NT board. The board for Digital Unix and OpenVMS has been reduced from \$23,000 to \$17,700. DEC is offering Internet AlphaServers - the 1000 4/233 and 400 4/166 - and the Internet AlphaStation 200 4/100 with Netscape Communications Server, DEC Electronic Locker graphical administration, Telnet and NCSA Web Server. The Internet machines, available with Unix only, list at \$7,500 for the 200 4/100, \$12,000 for the 400 4/166, and \$20,000 for the 1000 4/233.

### ORACLE LEADS MULTIMEDIA OBJECT ALLIANCE

Oracle Corp has formed the Object Definition Alliance to create a common standard for software used to run multimedia programming on a variety of communications networks. Multimedia developers now have to create multiple versions of their software to satisfy the numerous networks, hardware and operating systems that are emerging in various industries, but the proposed common standard would enable interactive software developers to create programming that could be used on multiple networks including the World Wide Web, on-line networks, Integrated Services Digital Network and broadband cable networks. The alliance plans to use building blocks of programming code to manage services such as billing, credit, security, user ID, parental control and other such services. Members of the group include Apple Computer Inc, Compaq Computer Corp, Time Warner Inc's Home Box Office, Kaleida Labs Inc, Taligent Inc, MasterCard International, MCI Communications Corp, NeXT Computer Inc, the Object Management Group, PriceCostco Inc, Sun Microsystems Inc, VeriFone Inc, Visa Interactive, Wells Fargo & Co and Xerox Corp.

## IBM REVS SYSTEMS AND NETWORK MANAGEMENT ENVIRONMENTS

IBM Corp has spruced up its core NetView for AIX network management environment with release 4.0, at the same time introducing some of the promised enhancements to SystemView for AIX, its GUI-based systems and network management combine of which NetView is part (UX No 537). NetView 4.0 gets a new event correlation mechanism and an object collection facility which allows users to group different kinds of nodes together under graphical submaps. A new agent policy manager provides centralised configuration of SystemView's systems monitor; together they support ~~the mid-level manager, a new systems-level manager (see below) and system information agents. They also monitor mid-level manager domains via~~ a graphical display and dynamic event window. A new WinSNMP 1.1 API allows developers to write applications that can communicate with SNMP 1 and 2 agent devices. GUI processing has been moved out to clients to free-up server cycles for additional polling and 4.0 can now support up to 30 operator consoles. There's a new set of security services including user and message authentication, sequential group login, access control and administration and audit services for SystemView for AIX users and operators. NetView for AIX 4.1 server costs \$15,000, clients are from \$500 and upgrades go for \$1,000. New SystemView for AIX features include a system-level manager, which provides local systems management and works in conjunction with the systems monitor. It can be installed remotely to periodically collect data for NetView. IBM describes the mechanism as an intermediate SNMP manager which filters and off-loads network and systems information, sending only critical situations to top-level management. It runs on AIX 4.1 and 3.2.5. There's also a new version 2.2 of the SystemView for AIX remote distributed configuration management frame-

### WITH ITS TRIAL UP AND RUNNING, MONDEX UNVEILS LATEST SPECIFICATIONS FOR ELECTRONIC PURSE SYSTEM

Mondex International, the division of National Westminster Bank Plc that is pioneering the Mondex electronic purse, has released updated specifications for manufacturers developing Smart Cards, readers and terminals for the cashless system. The updated set of specifications should iron out initial bugs and misunderstandings arising from the original details issued in April 1994. The system went live at the beginning of the month: Swindon in Wiltshire is the scene of an extensive trial into the technology (UX No 546). The specifications, which come too late for the start of the Swindon trial, include corrections to parts that manufacturers found unworkable or in need of updating. For example the document referred to using 1" screens for devices such as electronic wallets, but manufacturers wanted help in incorporating 5" screens that are now available. It also includes guidelines for the physical, electrical and interface characteristics of all Mondex cards, and particularly focuses on the messages consumers will see when they carry out transactions using the cards. The messages will use symbols instead of the written word to eliminate language problems, although Mondex has yet to win major European support and is developing a set of internationally recognisable symbols, such as a keyhole to symbolise the card's locking device. Other areas now covered include the interface between the Mondex 'purse' and a Mondex device, that is anything that takes payment from a Mondex Smart Card, and an outline of the standards required for using the Mondex branding on their products.

#### Electronic wallet

Those taking part in the Swindon trial will need their Smart Card, an electronic wallet that enables cash to be transferred from one Mondex card to another, and a balance reader to tell you how much is left on the card. Retailers will have either a stand-alone reader unit or a reader incorporated into electronic tills. You will 'charge' your Smart Card either from a bank teller machine of National Westminster or Midland Bank Plc, a partner in the trial, or from a specially adapted British Telecommunications Plc pay phone. Then simply go shopping, and use your card as cash. The card sends cash 'chip to chip' without going through a central clearing facility, and is, therefore, seen as a cheaper and quicker alternative to credit cards, especially for buying services on the Internet (CI No 2,606).

#### Developers

For the trial, developers include AT&T Global Information Solutions, which has developed cash machines, British Telecom with residential and pay phones, De La Rue Fortronic Ltd retailer terminals, General Information Systems Ltd electronic wallets, Hitachi Ltd integrated circuits, and the Panasonic Personal Computer Co unit of Matsushita Electric Industrial Co Ltd with electronic wallets and personal balance readers. Several mobile telephone manufacturers are also working on incorporating Mondex in their telephones, using their existing product to become an electronic wallet. David Morton, Mondex International's public relations manager, believes that in the future, taxi drivers and window cleaners will carry Mondex electronic wallets, you will be able to exchange sterling for foreign currency on your card, and that you will shop "wherever you see the Mondex symbol." He even thinks you will give your child pocket money by transferring cash from your card to theirs.

work which IBM calls the distributed management interface tool (DSMIT); it has additional security features and now supports AIX 4.1 and Solaris clients. Systems Monitor for AIX version 2.2 Mid-Level Manager is from \$1,500, the systems information agent costs \$200 and the systems-level manager is priced at \$300. DSMIT version 2.2 server is from \$5,000, clients are from \$300. There'll be a further rev of SystemView before year-end to deliver other promised features. OS/2, OS/400, MVS, HP-UX and Solaris implementations are still underway. IBM has signed Accugraph, Bay Networks, Boole & Babbage, Bridge-way, Chipcom, Cisco Systems, Gradient Technologies, Ki Networks, OpenVision, Oracle, Platinum and Unison Software on to a SystemView ISV programme it's calling Advance Team, supposedly modelled on its existing NetView Association, which provides varying degrees of access to advance SystemView releases, from \$500.

#### Polycenter

All of the new NetView 4.0 features roll over into DEC's implementation, called Polycenter Manager on NetView Version 4.1 for Digital Unix. DEC isn't licensing any of IBM's object-based SystemView technologies, claiming most of the functionality is already provided by other Polycenter applications or will feature in its forthcoming Polycenter implementation for Windows NT, which is where most of its network management development resources are going. Polycenter for NT will be announced within a couple of months. DEC's NetView 4.0 pricing is \$15,500 for the server, \$700 for clients. DEC's looking to the NT work to provide it with SystemView-type functionality, including an integrated object framework for network and systems management (COM/OLE and ObjectBroker), database integration (SQL Server) and a GUI (Windows 95). NetView - and DEC's implementation of it - is rooted in the OpenView network management technologies licensed from Hewlett-Packard Co and still command royalty payments. IBM says it'll gradually move off the HP base, but offers no timeframe.

### IBM ADDS TWO HIGH-END POWER2-BASED RS/6000 SERVERS

IBM Corp has come out with a couple of new Power2-based RS/6000s this week, aiming the Model 591 at numeric-intensive applications and billing the R21 as the most powerful rack-mountable server in the line. Both use a new 77MHz Power2 processor, which IBM helpfully points out translates to a 13ns machine cycle - as fast as the 3090 generation of mainframes and both come with 64Mb memory that can go all the way to 2Gb, and a quad-speed CD-ROM drive. The 591 can be configured in a high-availability clustered system with AIX 3.2.5, and is available as an upgrade for installed Model 500 machines. The Power2 processor incorporates a dual floating-point unit, quad-word memory system, a 256Kb data cache, and a memory bus wide enough to move large blocks of data. The Model 591 is available on August 18, upgrades from other 500s from September 8. It costs \$57,500 plus \$575 a month maintenance. Upgrades cost from \$20,000 for a 590 to \$37,500 from smaller 500 series machines. The R21 server comes with 128Mb to 2Gb memory, 1.1Gb disk and can be clustered. It costs from \$64,500 plus \$645 a month maintenance, \$35,000 to upgrade from an R10, \$20,000 from an R20; dates as for the 591. The company also announced the first support for Serial Storage Architecture disks on the RS/6000 with launch of the SSA 4-Port Adaptor, which streams data at 40M-bytes or 80M-bytes per second and costs \$1,370 from August 11. Disks to go with it are the IBM 7133 SSA Disk Subsystem Model 010 for rack-mounting, and the Model 500 free-standing tower; they each take up to 16 disks, and disks are available in 1.1Gb, 2.2Gb and 4.5Gb capacities. The 010 is \$17,500 with four 2.2Gb, \$72,300 with 16 4.5Gb disks; and the Model 500 is \$18,000 to \$72,800 in the same capacities.

### UNISYS CHIEF ISSUES A STERN "MUST TRY HARDER" WARNING TO HIS COMPANY

Unisys Corp has reported second quarter net profits down 20.2% at \$39.8m, on turnover up 3.8% at \$1,495.8m. Mid-term net profits fell 23.2% to \$84.4m, on turnover up 5.7% at \$2,902.9m. James Unruh is not a happy man. The Unisys chairman blasted his company for disappointing earnings in the second quarter, when it did \$39.8m or six cents a share, down 20%. "We are disappointed with our financial results for the quarter," Unruh said: "our US and European operations did not meet plan. "Lower than expected revenue levels, lower services gross margins and higher sales and marketing expenses hurt the bottom line," he claimed. "I am not satisfied overall with our cost controls and the pace at which we are executing our business strategy." Unruh said change was imperative because business was starting to slow on both sides of the pond: orders were down in both regions, due to reduction of US government orders and a fall in Central Europe after a strong performance last year. "While our strategic direction is right, I am not satisfied with this year's progress. We clearly must improve our efforts to deliver the kind of results we are capable of delivering," Unruh added. Information services grew worldwide by 23% to account for 34% of the total. The company's target is to get it to 40%.

### INTERNET ACCESS CONSOLIDATIONS ACCELERATE

Consolidations are accelerating in the Internet access provision world and, late last week, three deals were announced in the US. Apex Global Information Services Inc, Dearborn, Michigan, has a letter of intent to acquire Phoenix, Arizona-based fellow US-wide Internet access provider Network99 Inc, with the target of creating a \$100m-a-year company by 1997. Then Fresno-based ProtoSource Corp acquired ValleyNet Communications, a sole proprietorship Internet service provider for central California. ProtoSource specialises in the fresh-produce industry, which it believes is ripe for Internet access. And in Billerica, Massachusetts, Centennial Technologies Inc has acquired interests in two companies that provide secure Internet services. It took 40% of Netsafe Limited Inc, US distributor of the UK Titan encryption technology, and 10% of Atlas Internet Ltd here in the UK. Terms were not disclosed. Both firms provide internet subscriber services, as well as Lotus Notes with secure storage. Centennial designs, makes and sells a variety of PC cards.

### VIDEO NETWORKS TO GO UK-WIDE AFTER KINGSTON TRIAL

Kingston Communications Ltd, the UK's sole remaining public telephone operator for the city of Kingston-Upon-Hull, has teamed up with Video Networks Ltd to launch the UK's fourth video-on-demand trial over the Hull operator's digital telephone network. Kingston will upgrade this network and provide ASDL (Asymmetric Digital Subscriber Link) modems into each user's home. The modems will enable 2Mbps digital feeds to be sent from the server to users' homes over existing copper cabling. Video Networks, the London-based services provider, plans to focus on sport and entertainment and will offer television classics, documentaries, education programmes and popular sports programme re-runs as well as home shopping and banking. Digital Equipment Corp will supply the Alpha RISC-based server for the trial, and Apple Computer Corp will provide 250 set-top boxes - the same modified Macs as are used in British Telecommunications Plc's trial. The initial trial, due to start mid-1996, will involve 250 customers in the Hull area but both companies expect the customer base to grow to 140,000 once a full scale service is offered. Video Networks will sub-contract the design of the television interface. It says it will offer 200 programmes in the initial trial but plans to expand this to 5,000 titles by buying in programmes from UK broadcasting companies and then repackaging them into subject areas such as history documentaries or nature programmes. It will also offer a payment plan for individual programmes. The company was unwilling to say how much services will cost but said that they would be competitive with existing satellite and cable services. Video Networks is planning a national roll-out of the service, leasing lines on British Telecommunications Plc's digital network once the network is completed.

### UNIBOL COBOL WILL EASE SYSTEM 36 APPLICATIONS OVER TO UNIX

In what looks like bad news for Micro Focus Plc, Newtonabbey, Northern Ireland-based Unibol Ltd, subsidiary of UniComp Inc, Marietta, Georgia has launched a Cobol compiler for Unibol 36, the rehosting environment designed to enable developers to move System 36 applications into Unix environments. Until now, the 15% of the 180,000 System 36 sites worldwide whose applications are Cobol-based have had to convert from IBM Cobol to Micro Focus Plc Cobol if they've wanted to use Unibol 36 to migrate to Unix. Joint managing director of the company, Dr Barry Hagan, said this had not been popular with customers, who viewed Micro Focus's Cobol as just another dialect their developers would have to learn. Hence the development of the native compiler, so that the company could target System 36 users that hadn't developed their applications in RPG II. The product will also be used as the basis of a Cobol compiler for Unibol 400, the migration kit for AS/400 to Unix. This Cobol is expected by the end of the year. UnibolCobol/36 costs £2,500 as a one-off price.

### CRISTIE USES MATSUSHITA'S QUAD-SPEED DRIVES FOR PHOTON PHASE-CHANGE TOOL

Matsushita Electrical Industrial Co is pushing phase-change as the next and best rewritable storage technology around. In the UK, its subsidiary Panasonic Personal Computer Co and Royston, Hertfordshire-based Plasmon Data Ltd are already marketing its quad speed CD-ROM drives that use phase-change as the optical mechanism. Now the guts of these combi-drives is being taken by Stonehouse, Gloucestershire-based Cristie Electronics Ltd and packaged as an external unit, which the company will market as a software installation tool. Photon, as it is called, comes with both a parallel port and Small Computer Systems Interface, back-up software for MS-DOS and Windows and cabling. However, at £1,000 it is considerably more expensive than either Plasmon's or Panasonic's systems that come in around £700. Not a problem, says Cristie. The price gives resellers a realistic margin with which to work, which the other two do not, and it's an external drive, aimed at a different market. Panasonic and Plasmon are looking more to consumers or organisations that have computer users hot desking, but Cristie is targeting people using SCO Open Server 5.0, which Santa Cruz Operation has just released on 65 floppy disks or an optical disk. Most Unix users have little reason for a CD other than for loading software. So the Photon comes with installed boot-time loadable drivers for SCO Unix and the company will be targeting firms upgrading to version 5.0 with the drive. Cristie has already sold a couple of Photons to SCO in Italy and is talking to the company in Germany. Drivers are being developed for OS/2 and Windows95, again for software distribution. Down the line, there will be software for them that supports OS/2 and NetWare.

### FLAT PANELS: FED TO INTEGRATE COMPUTER AND SCREEN IN ONE MODULE

There is growing activity in the field of flat panel displays as companies rush to try to be first to market with a convincing alternative to the liquid crystal diode, but Hopewell Junction, New York-based FED Corp is seeking to go one further by integrating the computer and display into a single unit. It has rallied a multi-disciplinary team of component suppliers and end-users to develop core technologies to integrate computer functions and high-performance flat-panel displays into a single compact unit it calls the Smart Display. The project will receive funding from the US National Institute of Technology, and it aims to revolutionise display technology by developing a multi-layer ceramic module with the FED display on one side and flip-chip integrated circuits on the other, integrating both the display and computer functions in a single component. Analog Devices Inc, ceramic substrate supplier Cetek Technology Inc, and three display users - B.F Goodrich Avionics Systems, Infimed Inc and Kaiser Electronics Inc make up the team. The heart of the new display will be FED's recently developed field emission display in which the three colour electron guns are replaced by an array of electron emitters, each handling a single pixel on the screen. The display provides highly energy-efficient light generation, is fast, high resolution, low on power consumption and very bright, with the colour reproduction of today's cathode ray tubes. Mono and colour versions of a 1,280 by 1,024, head-mounted display for medical use and for portable workstations, and a small colour direct-view instruments display for avionics are planned.



### MICRO FOCUS WORRIES ABOUT THE YEAR 2000

Micro Focus Plc is hoping that lots of companies with aging MVS hardware and equally old applications are already worrying about the year 2000. It's put together a package to analyze and hopefully fix software written by programmers who never considered what the string of three zeros in the date would do to their code. Micro Focus, based in Palo Alto, California, is shooting for a piece of a market a Gartner Group study recently estimated will cost businesses \$100 billion over the next five years to fix year 2000 related software problems. Such built-in bugs can apparently do startling things, such as calculate ages as a negative value, not very helpful when age is part of an annuity or pension calculation. The Micro Focus package consists of three pieces of code. Application Express Offloader runs on the MVS mainframe to sort through and identify affected application components to be offloaded to a desktop. In a new version of its Revolve visual analysis tool, running in Windows 3.1 or DOS, Micro Focus has added the capability to identify year 2000-related code and can trace the flow of data across an enterprise in a single pass. The new version has a set of scripts designed to simplify the year 2000 conversion process. The final step is MicroFocus COBOL Workbench, running on Unix, NT, or other operating systems, which is used to write, compile and test any changes in the application before it is sent to whatever target platform is chosen. Price of the complete package is \$3,000.

### PLATINUM REVS MULTI-QUERY REPORT WRITER...

Oakbrook Terrace, Illinois based Platinum Technology has announced version 1.4 of its ProReports multi-query report writing tool which can synthesize data from queries made across networks into single documents. New features include improved cut-and-paste support, additional report attributes, the ability to size queries and table breaks and support for SQL select statements. ProReports also includes a rules facility for controlling queries submitted to the database. ProReports can access DB2, Informix, Ingres, Oracle, Rdb/VMS and Sybase, with MDI, Sequelink and ODBC support for Paradox, Microsoft Access and dBase. Client platforms are Windows 3.1 and NT; server support includes SunOS, Solaris, HP-UX, AIX and VMS. Prices start at \$700.

### ...BOOSTS WAREHOUSING FOR SPARCS

Meantime Platinum is offering a data warehousing tool to move mainframe data on to Sun boxes, including InfoExpress and InfoRefiner for bulk transformation and replication of data and SQLAssist and ProReports for ad hoc SQL querying and reporting. No prices given. Platinum has also announced Platinum Log Analyzer for Sybase and Microsoft SQL Server, providing access to SQL Server transaction information needed to recover lost data, reconstruct past database events, tune application performance and audit database activity. Its up on Solaris, Sun OS, HP-UX, Windows 3.1, NT and IBM AIX running under the X Window System. Prices go from \$1,000.

### FTP TAPS OPEN MARKET FOR WEBSERVER

Until now, FTP Software Inc, Andover, Massachusetts, has focused primarily on TCP/IP software and applications for accessing LANs and the World Wide Web from PCs; now it's expanding its repertoire to encompass Internet, enterprise network server and intelligent agent applications. The company has formed a new business unit to coordinate the development and acquisition of technologies in this area and has initially struck a technology development and marketing agreement with Cambridge, Massachusetts-based Open Market Inc. FTP will bundle Open Market's Unix-based WebServer, Secure WebServer and WebReporter with its own Explore products, targeted at electronic business and internal company publishing. The two will also develop Windows NT-based versions of Open Market's WebServer and Secure WebServer, for early 1996. WebServer will go from \$1,500, a Secure Web Server from \$5,000. FTP has also added Explore Anywhere for Windows, to tie corporate LANs and users into the Internet and make it easier to switch between LAN- and WAN-based access. It ships next month for \$130. FTP will build agent-based applications for managing corporate networks and tools for information retrieval on the net. It'll have an agent development toolkit by the end of the year with an editor and sample applications for managing PC-based network resources. FTP is also working on management server products for workgroups and mobile computing. This stuff is much further down the 1996 pipe.

### SUN MAKES IT DEBUT IN DATAWAREHOUSING WITH A LITTLE HELP FROM IMS AMERICA'S PHARMACEUTICAL OFFERING

Sun Microsystems Computer Corp will enter the data warehousing world, as it said it would, courtesy of IMS America, Plymouth Meeting, Pennsylvania, which will use Sparcservers to build a prototype warehouse specifically for the pharmaceutical industry. Back at SunWorld in May, the company's president, Ed Zander, told us to "stay tuned" during the second half of the year for more independent software vendor and hardware announcements relating to warehousing. Now Dun & Bradstreet Corp's division IMS, a provider of decision support systems to healthcare and pharmaceutical corporations, says it will develop a prototype warehouse, based on Sun Sparcservers, running Solaris 2.4 and using Oracle 7.0 as the database. Its aim is to give customers the ability to query large volumes of data and create analysis tools using its support tools. The first offering will use just one server, but IMS intends to expand it to Sun clusters over time. It chose Sun with this expansion in mind as it reckons the company is a serious player in data warehousing and because the servers maintain a high degree of parallelism and Solaris's multi-threading can take full advantage of a parallel relational database like Oracle, something Zander alluded to at SunWorld saying it gave the operating system performance advantages over others in the data warehousing arena. IMS offers Xplorer, decision support software for pharmaceutical sales and marketing applications, which is based on a client-server architecture and had its first commercial installation on a Sun Microsystems multiprocessor system. Full roll-out of the IMS data warehouse architecture rests on this implementation.

### SUN'S TECHNOLOGY ARM OFFERS TURNKEY SYSTEMS FOR INTERNET SERVICE PROVIDERS

Sun Microsystems Inc is seeking to extend the lead it has won in the Internet world with its Netra family of servers specially configured for hosting sites, and its Technology Applications Inc unit has introduced a turnkey system for telecommunications companies and other organisations wanting to provide Internet access services. The Internet Provider Access Control system is built around anything from a Sparcstation 5 to a Sparcserver 1000, and includes all networking equipment, from routers, switches and modems to Internet security applications and publishing tools such as browsers, within one self-contained cabinet that "can be up and running almost immediately." The base model is the IPAC 9505, which can provide Internet access to about 100 users, to the IPAC 9600, which can serve over 4,500 simultaneously. Each system is custom-tailored for each customer so systems can be configured to provide features such as dial-in Internet access and communications services, information services including online catalogues, electronic yellow pages and news services, World Wide Web support services and secure credit card authentication and processing. The IPAC systems run the multithreaded Solaris 2.4 operating system, SunNet Manager and Solstice Firewall-1 products for Internet security. There was no word on prices.

### NT GETS THE OPEN SYSTEMS NOD FROM US GOVT

The United States Government recently ruled that Windows NT meets the definition of an open system. In a little-noticed landmark decision the General Services Administration's Board of Contract Appeals overturned protests lodged by Unix vendors and upheld an NT bid by Unisys Corp that gets Unisys and its team, including Microsoft, the \$187 million Coast Guard Standard Workstation III contract. Microsoft watchers say the ruling opens the door for NT to replace Unix in almost any government contract mandating open systems, which is most of them these days. Sources indicate the next big win could be a US Marine Corps contract covering that service's worldwide computer network.

### SEAGATE CREATES NETWORK MANAGEMENT COMPANY FOR UNIX, NT, NETWARE

Two of Seagate Technology's network management companies, NetLabs Inc and Networking Computing Inc, have merged into a single company that brings Unix, Netware and NT net manager solutions together. The company called Seagate Enterprise Management Software, will be headed by NetLabs president and CEO Andre Schwager. The two companies have been working together for some time, but Seagate claims the merger will allow it to produce integrated solutions and carve a larger niche in the client/server world. NetLab's 70 employees and Network Computing's 25 employees will relocate to a facility in Cupertino, California.

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Writing in the latest issue of *Upside*, chip guru Michael Slater asks himself whether he's willing to write off any of the RISC processors yet, answering himself that he "would put Sparc at the top of the list as the most endangered."

**Sequent Computer Corp** saw second quarter net up 53.9% at \$11m on turnover up 28% at \$139.2m; mid-term net rose 42.8% to \$17m on turnover up 11.2% at \$255.3m.

**IBM Corp's** new SCSI differential adapter for RS/6000 uses the 40MHz Am186EM microcontroller to help deliver up to twice the performance of its previous SCSI-2 adaptor, Advanced Micro Devices reports.

**Amdahl Corp** has reported that second quarter net profits jumped 109.7% at \$26.2m on turnover that fell 4.6% at \$378.7m; at the mid-term, net profit soared 138.6% at \$46.8m on turnover that fell 3.3% at \$120.5m. President and chief executive Joseph Zemke said second quarter mainframe margins were better than expected because of the large number of upgrades and reduced manufacturing costs, but the company did less well in the second quarter than the first, suggesting monolithic mainframe demand is beginning to fall off.

Question: what is the difference between "General Manager Power Personal Systems" and "General Manager Power Personal Systems Division" at **IBM Corp**. Answer: the first is Tony Santelli, the second is Nobuo Mii. Santelli has had a pretty low profile previously, but he has had day-to-day control of the division since last May, and he meets a couple of times a week with Mii. Many in the division apparently expected Mii to announce his retirement at the same time that the Power Series boxes were wheeled out. This did not happen: instead he emphasised his enlarged role in which he is examining how IBM's human-centred technologies can best be applied. Still, we understand that Mii really will retire within the next few months.

**Computer Associates International Inc** has reported first quarter net profit of \$88.5m against a loss last time of \$85.6m that included a \$249.3m write-off on turnover that was up 21.2% to \$577.5m.

**Legent Corp** saw third quarter net profits down 31.3% at \$8.9m that included a \$1.1m pre-tax gain on investment in affiliates and \$3.2m pre-tax loss of merger costs on turnover down 4.0% at \$115.9m; nine-month net rose 9.7% to \$43.8m that included a \$5.1m pre-tax loss on affiliates and a \$6.5m pre-tax restructuring costs on turnover that rose 1.6% at \$359.2m.

Imitation is the sincerest form of flattery they say, so we suppose that Victor Kiam will not be too distressed that according to *US PC Week*, Lou Gerstner is to appear in person in **IBM Corp's** forthcoming Notes television commercials - and in one spot, it's said he holds up a Notes box and says "I liked Notes so much, I bought the company..."

**IBM** turned down a **Novell** offer to license the NetWare Directory Services (NDS) for AIX on the RS/6000 as not attractive enough, according to Big Blue insiders who say they'd be more happy if some outside ISV did the job.

**DEC** watcher Terry Shannon at *Illuminata* figures Digital now has at last 17,000 Sables or AlphaServer 2100s out by now. The number could even be a hair low, he says.

**Hewlett-Packard Co** has delayed the migration of AdminCenter, its change management and configuration module, to AIX, Solaris and NetWare, until October.

**Open Software Foundation's** 90-strong Research Institute, based in Grenoble, France, and Cambridge, Massachusetts, has work underway on a distributed, real-time fault-tolerant kernel; a single system image for clustered systems; and it's going to NSA for D3 level security evaluation. Half of its \$15m funding comes from OSF sponsors plus Apple Computer and Korea's ETRI group. Other funding comes from the European Community, US government, Ministry of Defence and Esprit.

There are a bunch of new add-on modules in the pipe that support **Tivoli Systems Inc's** TME systems management environment including Remedy Software Corp (now); 4th Dimension Software, Securix and Unison Software (this quarter); and Axent Technologies, Dazel Corp and Legato Systems Inc (by year-end). Customers require Tivoli's Courier, Sentry and Enterprise Console applications to use the modules, which cost from \$9,000.

Denis Yaro, general manager of **SunSoft Inc's** enterprise management products - including the Solstice network and systems management environment the company gave a fanfare introduction to back in January (UX No 524) - is to be executive VP of marketing and service development at SSDS Inc. There's a few gaps in its network Sun now needs to fill.

**Sun Microsystems Inc** says it's got over 100,000 SMP systems installed worldwide, and shipped 2,200 Sparc-Server 1000 and SparcCenter 2000s last quarter.

With **IBM Corp** proclaiming itself "network-centric," and **Hewlett-Packard Co** waxing on about how "the network is the system", **Sun Microsystems Inc's** leaving the imitators behind, last week suggesting that no longer is "the network" simply "the computer," but that "the network is the business."

University of California's Riverside and Irvine campuses will use **IBM Corp's** microkernel for research into distributed shared memory and real-time technology.

**HAL Computers Ltd's** long-overdue Sparc64-based R1 workstations and RD servers have been pushed out to the end of the year from an anticipated third quarter introduction.

Remember when we said that **Canon Inc** would close down its Advanced Technology Operation in Portland, Oregon, which it created back in March 1994 to peddle NextStep and NT-on-Intel boxes, plus interface and deployment tools? (UX Nos 477, 542). Well ATO is no longer and Canon Computer Systems Inc in Costa Mesa, California, is picking up the pieces, including the boxes and including, presumably, the PowerPC work ATO had been expected to undertake. More to follow.

Although **Silicon Graphics Inc's** new Indigo2 Impact 3D workstations provide visual capabilities, including fusion of geometry and texturing capabilities, previously available only in the higher range SGI Onyx systems, it doesn't put Onyx in any doubt, says SGI UK marketing manager Andrew Cresci, who promises a new rev of Onyx later this year.

**Computer Associates International Inc** has added a new 3D navigation module called TNG, The Next Generation, to its CA-Unicenter systems management environment, use of which it likens to the way video game players can fly over landscapes and zoom in on cities and buildings. As users navigate down through individual computers to database processes and user IDs, TNG alerts managers to events requiring attention with a blinking light. Clicking on an object brings up information about that object and tools associated with it.

**Object Design Inc** will ship SQL Client, SmallTalk Client and Gateway, which along with ObjectStore 4.0 forms its ObjectStore Component Architecture, in the fourth quarter.

The so-called 'Jekyll & Hyde' APIs that a bunch of X Windows ISVs and terminal developers were drumming up have gone into "hibernation."

**Santa Cruz Operation Inc** says OpenServer runs fine on AS/400 FSIOP Intel boards and that it's working with IBM Corp to test driver support and cook up marketing arrangements (UX No 544).

**UniForum's** elected Michael Tilson, senior VP SCO and current UniForum president; Ron Lachman, chairman of Internet Dynamics Inc; Alan Fedder, president of the Washington Area Unix Users Group; Wayne Fowler, director of technology and network services, Toronto Stock Exchange; and Donna Van Fleet, VP AIX systems development, IBM Corp, on to its board. Incumbent directors are Roel Pieper, UB Networks; Jeanne Baccash, AT&T GIS; Jim Bell, Hewlett-Packard; Randall Howard, MKS; and Michael Prince, Burlington Coat Factory.

**DEC** says there will be one or two more dot releases of its Digital Unix before the Spec 1170 version with a default CDE interface appears. Now slated for the first quarter of next year, what had been anticipated as Digital Unix 4.0 may also get renumbered, the company says.

**SunSoft Inc** ships an unbundled CDE implementation this week.

Data access house **Brio Technology Inc**, Mountain View, California, has added a new version of its Brio-Query visual query system for data warehouses. It has an optional repository for management of shared queries, a multi-dimensional analysis tool and automatic distribution and version control. Up on Unix, Windows and Mac, BrioQuery comes in three configurations; Designer, Navigator and Explorer, supporting Informix, Microsoft SQL Server, Oracle, Red Brick, Sybase and DAL, EDA/SQL, ODBC, SequeLink and SQL\*Net databases.

**Compagnie des Machines Bull SA** has installed former Candle Corp marketing VP Bill Wood as VP and general manager of its ISM north America operation.

**Santa Cruz Operation Inc's** IXI-VisionWare unit is working on Invisible NFS, described as a set of extensions - or possibly a replacement, depending on which side of the company you talk to - for SunSoft Inc's "Windows-unfriendly" NFS Network File System used in SCO OpenServer, designed to make Unix appear like an extension to Windows. It's apparently similar to SMB Server Message Block Protocols which allow Windows and OS/2 client to communicate with Unix servers.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram·x

The weekly information newsletter for the UNIX™ community worldwide

London, August 7-11 1995

Number 550

## HP OFFERS CORBA 2-BASED DISTRIBUTED SMALLTALK

Hewlett-Packard Co begins its anticipated roll-over to Object Management Group Corba 2 specifications with a new 5.0 release of its Distributed Smalltalk (DST) development environment this week (UX No 544). DST 5.0 includes Corba 2's Internet Inter-ORB Protocol (IIOP) designed to enable objects and applications to interoperate over a network with other OMG Corba 2 applications and is described as three-tier, multi-language, multi-platform application development system. Last year HP (and DEC) lobbied unsuccessfully for use of a rival OSF Distributed Computing Environment-based Connection-Oriented Protocol (CIOP) as the key Corba 2 interoperability protocol (UX No 510); IIOP can be implemented upon TCP/IP, CIOP and other transports. DST 5.0 is a bundle of software services that work in conjunction with ParcPlace Systems Inc's VisualWorks 2.0 Smalltalk implementation on HP-UX, SunOS, Solaris, AIX, Windows, NT and OS/2. DST 5.0 includes a Corba 2-compliant Smalltalk object request broker, transaction and concurrent Corba services, an Interface Definition Language generator and some 150 object classes. VisualWorks' machine-dependent hardware, operating system, network and user-defined elements are encapsulated as a 'virtual machine' definition, upon which machine-independent tools, 500-odd object classes and DST reside. For backwards compatibility DST's original protocol, the Network Computing System remote procedure call (NCS RPC) is included alongside IIOP, although it's completely incompatible with the version that features in OSF's latest DCE release. HP will add CIOP to the DST request broker in a subsequent release. When its C++-based Corba 2 ORB-Plus request broker is released - development kits are slated by year-end, production copies in the first quarter - HP says programmers will be able to create different parts of an application in different languages on multiple platforms. A client component could be created using DST on HP or Sun boxes, and the server could be coded in C++ using HP SoftBench. DST 5.0 will work across other Corba 2 request brokers, and is to be extended to support distributed development and partitioning in conjunction with other Corba 2 development systems, including HP's Taligent Inc investment and NeXT Computer Inc's OpenStep. HP will demonstrate full Corba 2 interoperability with a bunch of other vendors at next week's Object World show.

### Cultural change

The DST 5.0 ORB includes Smalltalk binding and interface repository standards plus other mechanisms for building distributed applications which share objects. Based upon X/Open's DTP model, Corba Transaction services can be used to write transaction-based applications without having to create the transaction services themselves. They utilise a new subclass from DST RecoverableObject class and three new methods. Concurrency control (also used by the transaction service) mediates access to an object and administers locks on a resource. Applications using these services will run under the next cut of current TP monitor products which HP expects will be object-oriented. A new IDL generator allows developers to create IDL code from push-buttons and menus, eliminating hand-coding. DST also extends VisualWorks for remote editing and debugging. HP believes there will have to be a fundamental cultural change in favour of code reuse techniques before a market in which ISVs sell objects can emerge. In the meantime, object technologies will drive rapid application development, and easier upgrade and maintenance strategies, it thinks. HP expects Smalltalk environments to win the bulk of Cobol programmers moving to objects whilst C++ will remain the performance engine for object systems. DST 5.0 is \$5,000 on Unix, \$3,000 on PCs - it requires VisualWorks from ParcPlace.

## SUN LOOKS TO INSIGNIA FOR WINDOWS-ON-SPARC?

We have a sneaking suspicion that Sun Microsystems Inc figured IBM Corp had a good idea when it arranged some months back for Insignia Solutions Ltd to make it possible - via emulation - for the PowerPC chip to enter a RISC no-go area and run both Windows 95 and Windows 3.1. In fact, we believe that Sun was so taken with what have come to be known respectively as the Phantom and Stringfellow projects that it's rustling up its own versions of the beasts - or at least making the right approaches to Insignia to get the job done. Of course such a thing probably wouldn't come to fruition before the first half of next year and would probably require a properly outfitted Sparc machine, say one based on PCI, for instance, but the venture could repair a lot of the shortcomings of the beknighted Wabi and offer Sun a volume opportunity. Users would still need to load the real Windows 95 or Windows 3.1 but the Insignia code would allow the Sparc engine to emulate an Intel 486 and the box could still run Solaris or SunOS when it's not otherwise occupied. IBM toyed with the idea of announcing the secret projects in New York City on June 19 when it announced its belated PowerPC desktops (UX No 544) but thought the better of it. Subsequent reports indicate that further work on Stringfellow - which could have been in beta this summer - and Phantom - which is waiting on final Win95 code but could have been in volume in the first quarter - may be hobbled by the heightening warfare between Microsoft Corp and IBM. Redmond is reportedly withdrawing some needed support and Insignia can't work completely in a vacuum despite its access to Microsoft source code. Meanwhile, Insignia's 486 emulation on the Power Mac, aka SoftWindows 2.0, the first fruit of its horrific development task to emulate the entire 486 chip in software - a project that took a year longer than it ever figured - has reportedly produced initial orders in excess of all its 1993 sales, or said differently half of all its sales in 1994. It was just announced last week (UX No 549).

## SUN READIES SCALABLE SWITCH FOR COMMERCIAL HIGH-END

Sun Microsystems Inc has been rather shady about how it'll address the high-end of the commercial market. At its recent New York jamboree it flashed a futures slide to assembled customers and ISVs for all of about five seconds (UX No 549). However the company says it'll deliver the "headroom" required for decision support, data warehousing and data mining applications by clustering eight and up to 16 SMP UltraSparc servers together, each likely to accommodate as many as 32 CPUs over time, connected by a new high-speed switch coming out of its Parallel Open Systems Group, the engineering team calved from the ailing Thinking Machines Corp. Key advantage over vendors such as DEC and HP, which are going down the same clustering route, is the ability to scale the switch as the system grows, Sun claims, though it offers no performance estimates. The shared memory, message-passing model is also seen as the complimentary vehicle for Sun's object future, where data streams of object binding messages will flow between object kernels on each node. Sun says it'll implement single systems management, but not a single system image from an application point of view.

### Headroom

It's aim is to increase the size of data set available to customers by over 100% every year - with the same response time - claiming it can configure around 1Tb (1,000 gigabytes) currently, although its biggest users are now running around the 400Gb mark. It expects to be configuring tens of terabytes by the end of the century. Existing SMP and clustering techniques can accommodate users in the 100s of gigabytes space, but simply don't provide the headroom, Sun says. Meantime although shared nothing, massively parallel models appear to have grabbed much of the industry's mindshare when it comes to decision support and warehousing, Sun says it's got no designs on proprietary big-iron and is willing to bet that users - the majority of which haven't yet leaped - will prefer to mix some of what they know (SMP) with something new (parallel databases) rather than go with largely untried and untested MPP/parallel database solutions. In any case clustered and MPP system arrangements are treated pretty much the same as far as database programming models are concerned, Sun says, going so far as to claim that many MPP systems are little more than fancy clusters, pointing to IBM Corp's SP2 fusion of RS/6000s. And, turning the MPP challenge back on itself, one of the MPP's main drawbacks is that it simply doesn't scale down, Sun argues. MPP requires large investment cycles where SMP is far easier to re-size to changing budget requirements.

### SGI REVS R4400 TO 250MHz

Silicon Graphics Inc has added a 250MHz version of its Mips Technologies Inc R4400 RISC for its Indigo workstation, Challenge server and Onyx graphics subsystem lines. Challenge and Onyx are rated at 180.2 SPECint92 and 177.5 SPECfp92 when ~~configured with 4Mb level-two cache versions of the new part.~~ Upgrades will be available. SGI's Power Challenge servers use the Mips R8000. The company has also added a 200MHz R4400 version of its Indy desktop at \$14,000, replacing the \$16,000 model which ran at 175MHz. Other changes include 175MHz R4600s replacing the 133MHz R4400 in Indigo2s at the original price. Meantime, tags on the R8000-based Power Indigo2 XZ are reduced 13% to \$40,000 and the Challenge S is down 20% at \$9,900. A 200MHz Challenge S with 64Mb RAM and 2Gb disk is now \$16,000. Price of the one-to-four way Challenge DM is reduced 22% to \$35,000. A two-way 250MHz Challenge L is now \$88,800, whilst the 250MHz dual-CPU Onyx with Reality Engine graphics is \$180,000. 250MHz Indigo 2 systems start at \$31,000 with ZX graphics and \$40,000 with the new High Impact graphics, each with 64Mb RAM and 2Gb disk. All new configurations ship next month.

### CENTRO VISUAL LANGUAGE BUILDER IS BASIS OF DATAVIEWS' C++ FUTURE

DynaTech Corp's Northampton, Massachusetts-based DataViews Corp unit is offering a new C++ framework for building visual programming languages. It envisages Centro being used by ISVs, vendors and end-users to create applications and custom solutions which require large blocks of code to be represented as graphs and diagrams. CASE, telcos, EDA and configuration network monitoring companies are the crowd DataViews is aiming to attract. Centro is essentially a productised version of technology developed by researchers at General Electric's Japanese Yokogawa Electric Corp unit used to create graphics and drawing editors for its Centum CS integrated product support system. DataViews gets rights to Centro in return for providing support back to the Tokyo group. Indeed DataViews (known as VI Corp until January 1 1995) will use Centro as the core technology for its future product strategy, aiming to create a C++ version of its C language DataViews data visualisation package by 1998. There's simply not enough growth left in the DataViews product as it stands, the company says. In the meantime it envisages existing DataViews customers using Centro for larger projects. Creating a visual programming language out of the DataViews product is currently a complex and extremely expensive undertaking, it admits. Centro can also be used in conjunction with the Imperial Software Technology Ltd X Designer Motif GUI builder, DataViews markets. It separates application-specific elements from reusable components and includes the object-oriented Python freeware scripting language originally developed by the Centrum voor Wiskunde en Informatica in Amsterdam, which DataViews says "is to C++ as Tcl is to C." Centro includes 250 classes for graphics, graphical constraint management and event handling. It ships early next quarter at \$15,000 on Sun and HP Unices. DataViews will remain the company's cash cow in the short term, still commanding, it believes, 35% to 40% of the worldwide data visualisation market, and up to 50% of the market in Europe. Only Advanced Visual Systems Inc with its AVS/Express package has something similar to Centro, DataViews believes.

### ADOBE PUTS PHOTOSHOP 3.0 UP ON SUN, SGI

Adobe Systems Inc will be offering version 3.0 of its Photoshop design and production application on Sun and Silicon Graphics workstations from early Autumn, including, for the first time, individual (node-locked) licences at \$1,000. Single-user floating licences are \$1,900, with a five-user pack starting at \$7,600 and 10-user set-up from \$13,500. Upgrades - the current Unix version is 2.5.2 - are \$500 (single floating-user licence), \$2,300 (five users) and \$4,050 (10 users). Adobe says Photoshop 3.0 will be on Solaris 2.5 as soon as SunSoft ships it. Adobe, which doesn't plan any other Unix ports of its software in the immediate future, says Unix accounts for up to 5% of its overall Photoshop business. The company plans to introduce server versions of its applications for multiple platforms, but declined to be more specific.

### PROCESS SHRINKING PAIN - AND THE GAIN

The performance and cost of CPUs is closely related to the integrated circuit process technology used to create and manufacture it. *The Microprocessor Report* has been examining vendors' process technology to determine the likely availability, clock speed, voltage and cost of future products. As vendors shrink the size of the transistors used on the CPU - IBM Corp, Intel Corp and NEC Corp have already breached 0.35 microns - lower voltages must be used across the circuits to avoid burning out oxide layers that would cause the transistors to fail. Also, because vendors are reaching the point at which the wavelength of ultraviolet light used by the i-line steppers (which print the resist with a pattern then etched onto the chip itself) is approaching the size of the features being patterned, vendors are gradually switching over to the use of deep ultraviolet light, which has a shorter wavelength and eliminates the problem (for now). Other techniques, such as chemical-mechanical polishing are also adding to process costs, but allow for the creation of parts with more than three metal layers. Intel's p854 is an 0.35 micron BiCMOS, four-layer metal process used for the Pentium P54CS that runs at 3.3 volts. The P55C, expected in the first quarter of next year will use an 0.28m all-CMOS revision of the process (all the processes discussed below are full CMOS implementations) running at 2.5 volts. IBM's 0.44m CMOS-5S, four and five layer metal, 3.3 volts process is being used for the PowerPC 620. CMOS-5X delivered the 033m, five-layer metal PowerPC 601+ at 2.5 volts. IBM will move 603, 604 and 620 to this process in the first half of next year, nearly a year after it was introduced. *Microprocessor Report* says it doesn't know why IBM isn't moving the chips to this advanced process sooner, although IBM denies having capacity restraints at 0.35m. The CMOS-6S will provide a 0.27m, five metal-layer PowerPC 604+ by mid-1996 at 2.5 volts. Texas Instruments Inc's three and four layer metal EPIC-3 process is being used for the 0.47m UltraSparc at 3.3 volts and the 0.42m 486DX4. The four and five layer metal EPIC-4 will be used for the 0.29m UltraSparc II running at 2.5 volts by mid-1996. *Microprocessor Report* expects TI to move this process quickly (by the end of 1996) to 0.25m.

#### StrongArm

DEC's CMOS-6 process will deliver 0.33m, three and four layer metal 21164A Alphas in the first quarter of next year drawing 2.5 volts. The three-layer 'StrongArm' chips could reach 400MHz using this process, *Microprocessor Report* believes. DEC's CMOS-6 process will create 0.33m four and five layer metal parts running at 2.5 volts. Fujitsu Ltd's CS-55 process has been used for HaL Computer's 0.4m Sparc64, a three and four layer metal part at 3.3 volts. The CS-60ALE should deliver 0.35m, three to five layer metal parts in the first quarter of next year drawing 3.3 volts. Fujitsu also makes microSparc and HyperSparc. IDT's CEMOS 8+ process created the 0.3m R4400-200, a three-layer metal 3.3 volts CPU; it plans to move to CEMOS 9, an 0.25m process early next year. NEC's 0.35m process created its R4400-200, a three to five layer metal part at 3.3 volts. Both NEC and Toshiba will build the R10000 using this process. New techniques will make it increasingly more expensive to stay in the game, which is why some vendors have banded together to produce parts, including AMD/HP and Hitachi/VLSI, *Microprocessor Report* says. However HP, which was nearly two years behind in the race to 0.5m, may now turn to partner Intel for production of its future processors, the newsletter believes. Hitachi/VLSI are able to stay competitive even though they trail in 0.35m implementations because they are designing for the embedded market, not for leading-edge performance. Intel and IBM will pace-set process investment, *Microprocessor Report* believes.

### AUSPEX READIES ESCALA-BASED MACHINE

Auspex Systems Inc, Santa Clara, California has said that it will launch its Escala-based server in the middle of next year even though the project to integrate Compagnie des Machines Bull SA's Escala symmetric multiprocessing PowerPC AIX servers with its own Functional Multiprocessing architecture has only just started - Auspex says the project will be handled in the main by Bull, which in return would be given access to RIOS 2, the second implementation of the network servers it had produced for IBM Corp, which subsequently abandoned them.

## DEC TURNOVER DISAPPOINTS, AND PROFITS FAIL TO MEET FORECASTS

Digital Equipment Corp reported a fourth quarter net profit of \$159.8m against a loss last time of \$1,746.4m that included a restructuring charge of \$1,206m, on turnover that fell 4.4% to \$3,749.9. Net profit for the year to July 1 was \$121.8m after a \$64.5m gain from an accounting adjustment, against a loss last time of \$2,156.1m, which included \$51.0m charge for an accounting adjustment, on turnover up 2.7% to \$13,813m. Net earnings per share were \$0.59 in the quarter, \$1.01 in the half. DEC's thorough-going restructuring actions mean that its fiscal fourth quarter is no longer the strongest in the year, and turnover for the most recent period actually fell, even though the company managed a tiny increase for the full year. Gross profit margins in the most recent quarter were 32.4% of turnover, up from 29.9% a year ago, and its balance sheet strengthened in the quarter. The company was profitable for the year and solidly profitable for the quarter, but analysts had been looking for rather more. The consensus on the First Call system was \$1.05 a share where DEC managed only \$1.01 a share, and the turnover figure was much lower than Wall Street had expected - the company has been stuck just below the \$14,000m mark for about five years now, as first Hewlett-Packard Co and then Motorola Inc sailed past it, and the likes of Apple Computer Inc and Compaq Computer Corp are now not far behind. The Maynard ended the quarter with \$1,600m in cash, up 36% from a year ago. Although turnover fell slightly in the quarter to \$3,750m, after adjustments for divestments, revenue from ongoing businesses did grow 1% on the year ago figure. The changes the company has made to shift the seasonality patterns include the move to putting a larger portion of its product distribution through indirect sales channels, and changes its direct sales force measurements. DEC ended the quarter with 61,700 employees, a reduction of 16,000 positions, or 21%, from a year ago. The fourth quarter was the company's third consecutive profitable quarter.

### More work to do

It is fashionable these days to stress how much more hard work there is ahead, and "We are particularly pleased with the turnaround we have engineered within our core systems products business," Robert Palmer, chairman and chief executive said: "I am encouraged with our fourth quarter results and the significant progress we've made in a relatively short time. However, we still have more work to do." Sales of Alpha RISC-based systems grew 32% in the fourth quarter compared with a year earlier, "driven by strong demand for servers," but given the number of VAXes out there that should be being upgraded to Alphas, the rate of growth is still much too stately. Product business was down 4% in the quarter, to \$2,130m, but adjusted for divestments, product revenues from ongoing businesses were up 5%. Services - the great hope at old time companies like DEC these days, were down slightly, to \$1,610m from \$1,690m - and even the personal computer business, with those vestigial margins that can't be helping DEC rebuild its balance sheet very much, turned into a disappointment in the fourth quarter, and turnover growth moderated after "12 quarters of explosive market share gains". "With our Digital PC business at an annual run rate of \$2,500m, we expect both continued progress and to capture additional market share in the 1996 fiscal year," Palmer said. The weakness of the dollar overseas had a three-percentage-point favourable impact on its fourth quarter revenues compared with the third quarter, but non-dollar-denominated costs and competitive responses substantially offset the positive impact. It also continued to improve asset management, and for the second consecutive quarter generated positive cash flow from operations.

## CA COMPLETES LEGENT MERGER

Computer Associates International Inc is finally free to complete its acquisition of Legent Corp for \$1,800m after agreeing with the US Justice Department that it will license on a non-exclusive basis four VSE systems management products owned by Legent to a party or parties acceptable to the Department. The agreement will not materially affect Computer Associates' ability to acquire and use the Legent assets, it said.

## OMG SEEKS METHOD IN THE MADNESS

Following unprecedented agreement between key methodologists on the need for standardisation in their upper-CASE world, the Object Management Group is resuscitating its Analysis and Design special interest group (SIG). The embryonic group hopes to issue a request for information (RFI) through the next meeting of OMG's taskforce committee in Ottawa, Canada, on September 14, or at the very latest at a Tokyo meet on November 16th. It will call for OMG to formally create a group to standardise on methodologies and issue a Request(s) for Proposals after feedback from the RFI. The RFI will be reviewed at an informal meeting of the group during next week's Object World show in San Francisco. The aim is to create a common metamodel for methodologies, addressing the use of common terminology, notation, process (steps to take) and results of steps. It's intended to ensure compatibility and interoperability between methods, tools and/or terminology, providing users with a choice of standard approaches and the opportunity to reuse design elements across different projects. Users must currently choose from a plethora of objects analysis and design methods, each with its own language and processes. Increasing demand by users now familiar with procuring and implementing IT systems based upon industry standards has apparently driven methodologists to re-visit the notion of standardisation. A previous end user analysis and design interest group eventually disappeared back in 1993 due to lack of interest, or in committee parlance "was negative due to bandwidth." The RFI will seek responses in the areas of frameworks, languages for representing methods, tools for interoperability and a repository facility. Rational Software's Grady Booch, Objectory AB's Ivan Jacobson and Project Technology's Stephen Mellor of course shared a panel at Object World in Boston earlier this year (ObServer No 1). Meantime, although an RFI - much less the RFP - has yet to be issued, Unisys Corp plus four or five other vendors, including Texas Instruments, are already lining-up responses to the repository facility component of the RFI/RFP. SIG member Sridhar Iyengar, a Unisys information management systems architect, says his company's Corba 1.0 and OLE-compliant Universal Repository (UX No 537) is an obvious candidate. He expects it will take up to two years for any concrete guidelines to materialise. Unisys is currently working with ICL Plc to marry Urep to ICL's Dais object request broker.

## EXPERTSOFT SHOWS CORBA 2 HAND

Expertsoft Corp, one of the companies racing to get Corba 2 products out between now and next week's Object World in San Francisco, is renaming its technology PowerBroker for this next-generation stuff, having bought the name cheap off pliable Canadian firm Freedman Sharp and Associates Inc. PowerBroker 4.0 builds on the firm's older XShell 3.5 object request broker-cum-object management environment. It claims to be the first ORB to integrate Corba 2.0, OLE, Visual Basic, Smalltalk and C++ as well as interoperate with Corba Services 1.0. Expertsoft technology includes an IDL-based ORB, Corba Services and management tools. PowerBroker reportedly delivers the full Corba 2 features set, to wit, IDL/C++ language mapping, IDL/Smalltalk language mapping, interface repository 2.0 with browser, dynamic invocation interface, dynamic skeleton interface and interoperability protocols. It also delivers Corba Services such as lifecycle, persistence, events, naming and externalization. Meanwhile, PowerBroker OLE automates the interaction between PowerBroker objects and OLE automation clients. Using Corba IDL specifications stored in the PowerBroker Interface Repository, OLE automation interfaces are generated for PowerBroker application and system services. These interface definitions can be imported into Visual C++, Visual Basic or productivity tools to build OLE applications. At deployment, PowerBroker provides the services to integrate OLE clients with PowerBroker services. The software supports replicated services, SNMP management and object management as well as the Internet Uniform Resource Locators (URLs), the common format used on the Internet and World Wide Web to locate and contact services. Delivery is expected by Q4. Platforms include Solaris 1 and 2, HP/UX, AIX, IRIX, Digital Unix, Windows (client only) and NT.

## ROUNDING UP THE RUNNERS AND RIDERS IN THE US VIDEO-ON-DEMAND SERVICES STAKES

"When all is said and done, there has been a lot more said than done," one pundit was heard to say at the National Association of Broadcasters show held in Las Vegas last month. The song of new America has been the promise of interactive broadband television on demand. Some of the infrastructure has been built, some is on hold, some has disappeared without trace. A variety of reasons and excuses have emerged for why the network is not already upon us - though one that you will not see openly expressed very often is the fear that ~~there is not much money in the industry at the moment. To keep us on track with who is building what, where, a trawl through the~~ *Unigram* database turns up the answers. Bell Atlantic Corp has two trials in Dover Township, New Jersey and Fairfax, Virginia, totalling 40,000 homes. In April, it withdrew 214 applications that were still pending approval from the Federal Communications Commission for video dial tone service in Baltimore, northern New Jersey, Philadelphia, Pittsburgh, areas of Virginia, and Washington DC.

### Fibre-to-the-kerb

These applications had called for hybrid fibre-coaxial network architectures. But the company, which has all along favoured more fibre-intensive architectures like fibre to the kerb, saw the price drop on fibre optic technology enough to hold off and reconsider its strategy. It had budgeted \$16m to deploy fibre-to-the-kerb for its Dover customers. It received federal approval late last year, and meetings have been scheduled to arrange content providers for the Fairfax trials. The company currently has deals signed with Oracle Corp for video servers and software; AT&T Corp for network systems; Philips Consumer Electronics and Compression Labs Inc for set-top boxes; and Microware Inc for its David operating system. In March, Bell Atlantic and Pacific Telesis Group Inc received approval from the US District Court to compete with cable and broadcast television anywhere in the country via land links and satellite transmission. This means that, for the first time, a regional telephone company can offer video service outside its operating area. Nynex Corp and Bell Atlantic announced they would each invest \$50m in CAI Wireless Systems Inc, a cellular television supplier - the concept is ridiculously termed "wireless cable". Pacific Telesis acquired Cross Country Wireless Inc, another cellular television supplier for \$175m. The acquisitions are intended to enable the telephone companies to begin offering non-interactive video services while their broadband networks are still being deployed. To ensure a supply of video programming, the three banded together to form their own media company - Tele-TV. They signed Hollywood talent agent Mike Ovitz in an advisory role and inked former CBS Broadcast Group president Howard Stringer as chief executive. Nynex, with a trial under way in Manhattan serving 2,500 homes and two in Rhode Island and Massachusetts, is currently upgrading its technical trial from analogue to digital systems. Users can choose between Liberty or Time Warner Cable as content providers. Nynex hopes to have a video network running there by early 1996, and has signed Digital Equipment Corp for its video servers; Stratus Computer Inc for its video controllers; Dynair Electronics Inc for its programme switches; Scientific-Atlanta for its modulators; ADC's American Lightwave Systems for its transmitters; ADC Telecommunications Inc for its fibre-co-axial loop system; Zenith Electronics Corp for its set-top boxes; and Microware for David. Pacific Telesis, with its application still pending with the Commission, plans to have 1.3m homes in Southern California wired by the end of 1996. A planned fibre-coaxial network will initially provide 70 analogue channels and up to 300 digital channels. Pacific Telesis plans to spend \$1,600m over the next seven years on broadband networks. Southern New England Telecommunications Corp has plans to spend \$4,500m on a state-wide hybrid fibre-coaxial network called I-SNET with completion scheduled for 2009. It currently serves 1,250 homes in West Hartford, Connecticut with analogue service. Offered is near-video on demand and enhanced pay-per-view. It received federal approval last December to expand the West Hartford trial into all of Hartford and Fairfield counties in Connecticut to serve an additional 150,000 homes.

### Friendly user

It has Hewlett-Packard Co's video server; Sybase Inc server software and authoring tools; Scientific-Atlanta set-top boxes and the set-top operating system; AT&T Asynchronous Transfer Mode switching technology; and American Lightwave digital transport technology. US West Inc, which owns 25.5% of Time Warner Entertainment, has set aside \$10,000m to \$15,000m for a broadband network. It is to make its video dial-tone available to some 40,000 homes in Omaha, Nebraska. First, US West is offering a "friendly user trial" of 50 employees - just to wring out the bugs. It has tapped Scientific-Atlanta for set-top boxes and video transmis-

sion components; 3DO Co for chips and system software for the set-top boxes; Digital Equipment Corp for the video server; Century Communications Inc for subscriber management software; and AT&T for telephony components. Ameritech Corp said that it would invest \$14,400m over the next 15 years to build its video network. However, in Naperville, Illinois, it has dropped plans to build its video dial-tone network for now. Instead, it is examining becoming a cable television franchise operator. Local officials were reluctant to allow Ameritech to pursue its own video plans, since there are no regulations requiring a telephone company offering video service to pay a franchise fee to the local government or to enable for pre-emptive emergency programming. In February, Ameritech announced new contracts with DEC and Scientific-Atlanta, worth \$475m. DEC will provide media servers while Scientific-Atlanta will provide set-top boxes and the Power television operating system. In addition to those companies, Ameritech has AT&T supplying the Asynchronous Transfer Mode switches; ADC supplying the access system and Seca supplying the computer operations support. BellSouth Corp, serving 12,000 homes in Chamblee, Georgia, received approval in February. An 18-month test is set to begin any time now. The company has spent \$65m for Asynchronous Mode upgrades. Providers for BellSouth include Hewlett-Packard for set-top boxes; Scientific-Atlanta for set-top software; Sybase for server software; and Oracle for billing and subscription software. Along with Ameritech and SBC Communications Corp, it entered into a five-year, \$500m partnership with Walt Disney Co to develop interactive television content. SBC plans to offer video service to 2,500 homes in Richardson, Texas in early 1996 for a one-year trial, but has delayed filing its application with the Commission. In the meantime, SBC has invested \$4,900m in Cox Cable Systems Inc. GTE Corp has announced that it plans to deliver interactive broadcast and cable programming to over 900,000 homes in Thousand Oaks, California, St Petersburg and Clearwater, Florida and Honolulu, Hawaii and projects 7m homes over a 10-year period. It selected AT&T as the prime contractor and systems integrator for its video dial-tone networks. The multi-year contract is valued at about \$200m for the first phase of construction. GTE plans to deliver video programming to 500,000 homes by the end of 1996 and 900,000 by the end of 1997. General Instrument Corp also received a contract to supply set-top boxes for the trial. Time Warner Cable's keenly-watched trial in Orlando, Florida has resulted in a handful of homes currently receiving the full service network. Time Warner predicts 4,000 homes on-line by the end of the year, receiving interactive shopping, two-way games and movies on demand.

### Microsoft Network

For the Orlando trial, Sybase is providing database technology; Silicon Graphics Inc created the full service network system software for the set-top box navigator; AT&T Network Systems provided the high-speed Asynchronous Transfer Mode switch; and Scientific-Atlanta's home communications terminal is providing head-end and distribution electronics. In Seattle, Tele-Communications Inc is teaming with Microsoft Corp for a technical trial launched in December involving employees. A market trial to reach up to 2,000 customer homes later this year is planned. A two-year trial of viewer's Control TV venture between US West, AT&T and Tele-Communications ended in June, and Tele-Communications has dropped a Denver trial scheduled for later this year. Its latest subscriber figure is 11.65m. It took a 20% stake in the embryonic Microsoft Network and has ownership stakes in both the Sega Channel and Acclaim Entertainment Inc and owns the majority of Home Shopping Network Inc.

## QUALITY SOFTWARE TEAMS WITH IBM ON OLAS FOR DB2/6000

Gateshead, Tyne & Wear-based Quality Software Products Plc, in a joint venture with IBM Corp, has launched its Universal OLAS financial management package for DB2/6000, IBM's Unix database manager. ~~The company's chairman, Alan Mondain, said the venture~~ meant OLAS was a truly 'open' product. It will migrate seamlessly from a mainframe under IBM's MVS operating system, to a complete range of Unix hardware including Sun Microsystems Inc, Hewlett-Packard Co and Siemens Nixdorf Informationssysteme AG. "This development is of major significance for IBM and non-IBM system users," because it "transcends the hardware argument," he said. The company had waited until it was sure IBM was seriously investing in DB2/6000 and is now confident this is the case. It took only 97-man days to complete the implementation and the same source code is used throughout, proving, the companies claim, that the DB2 family is genuinely portable. It was also, said Mondain, justification of the company's investment in developing its own Multiple Cross Platform Engineering software, which enables complete interoperability between different manufacturers' systems. He said the big advantage for both developers and customers was that only one set of skills is required for both mainframe and Unix installations. OLAS for DB2/6000 is available now.

## IBM FOCUSES ON USERS, CEDES DESKTOP TO MICROSOFT

IBM Corp chairman and chief executive Louis Gerstner has reorganised the company around five customer groups, saying that the move was intended to counter the computer industry's insensitivity to the customer. The five are large businesses and institutions, small and medium businesses, consumers, the OEM market, and distributors, third party retailers and independent software developers. A spokesman for IBM later told *Reuters* that the five customer groups are areas of emphasis only for IBM and the focus on these customer groups does not mean adding a new organisational layer to IBM. "It will be interwoven across the whole company," he said. Gerstner also said IBM will continue to make acquisitions "when it makes sense" and that divestitures will also play a role, but that IBM has no divestitures planned now. Gerstner was speaking at his annual meeting with analysts, and from the same meeting, the *New York Times* again picked up the message that Gerstner has given up on OS/2. "Obsessions with operating systems is fighting the last war," he said, adding that it is "too late to go after the desktop: we have to go on to the next thing," he said. Gerstner appeared to side with those within the company that say it is a waste of money to try to go head to head with Microsoft on the desktop, saying IBM would sell OS/2 aggressively to large companies and institutions that use it on application servers - but in that case, why endorse the rival product, Windows NT, on its PowerPC machines? According to Dow Jones & Co, at the same meeting, Gerstner noted that two years ago, some were encouraging IBM to break up into pieces, "which would have been exactly the wrong thing to do." He said that many technology companies have been making alliances with other companies to expand into new areas. IBM, because it hung together, is able to compete in many areas on its own. The strictures about IBM's now frighteningly low research and development expenditure seem to be hitting home, and 1995 will be a "low point for research and development" expenditures, which will probably increase in the future, declared chief financial officer Jerome York at the meeting.

## ICL's DESIGN TO DISTRIBUTION LOOKS TO ADD MANUFACTURING CAPACITY IN THE US

ICL Plc's new contract manufacturing and marketing services subsidiary Design to Distribution Ltd wants to make it big across the Atlantic too, and says it is looking for manufacturing capability there to service its established North American customer base. It says it is currently exploring some kind of joint venture or facilities management deal that would be self-financing, but would also consider the option of a new facility or an acquisition. Its "ambitious revenue target, to achieve \$2,000m by the year 2000," is based on adding US capacity to complement its five-site European operation, which it says generates \$450m a year. ICL has been making Sparcstation boards for Sun Microsystems Inc in Europe since 1990, and Sun hints that it might well give ICL business in the US if the company succeeds in arranging or putting capacity in place.

## BIG JOB LOSSES COMING AT AT&T GIS

AT&T Corp is getting tough with its loss-making AT&T Global Information Solutions computer unit, and big lay-offs among the 42,800 employees are in the wind, although the number has not been specified. The former NCR is scaling back its areas of activity, and ~~will not be seeking new orders for the unit in consumer goods manu-~~facturing, transport or public sector markets. The unit made an \$189m loss in the second quarter, following a \$143m loss in the first quarter and a \$14m profit in the 1994 second quarter. AT&T GIS will now concentrate on serving financial, retail, communications, services and "systemedia" markets. Existing clients will continue to be served in those markets where future business is no longer being sought. It has been unprofitable overall since 1991. Two businesses are moving their headquarters away from Dayton, Ohio: the segment that serves financial customers is being transferred to London and the retail-oriented operations move to Atlanta.

## CONVEX STRUGGLES IN Q2

Convex Computer Corp has reported second quarter net losses of \$7.3m, down from \$31.8m losses last time, on turnover virtually static at \$35.1m. Mid-term net losses were \$15.3m, down from \$47.7m losses last time, on turnover up 10.7% at \$70.2m. The company says that achieving profitability by the end of the year "is a challenge" because the company plans to maintain its future investment plans, with emphasis on development of new products and sales channels. It also said second quarter revenue was hurt by intense competition in technical markets, product transition issues, and buyers' concern over its long-term working capital needs; referring to new computer models it has introduced or plans to introduce in the coming year.

## SYMBOLICS FOUNDER BUYS THE COMPANY BACK

Symbolics Inc, the one-time builder of workstations designed specifically for artificial intelligence applications written in Lisp, is being revived by a team led by the company's founder, Russell Noftsker, who believes the object-oriented programming techniques developed by Symbolics are concepts whose time has come. The team has bought the assets and name of the company, whose Cambridge, Massachusetts base was taken over by the Open Software Foundation, and is looking for a headquarters and research and development office in the Boston area. Noftsker said his motivation for returning to Symbolics is his belief that its customers and the market for its products are best served by management that understands the benefits of the technology. Included in the acquired assets is the Genera object-oriented programming system, which fuelled the company's early success. Symbolics's customer service and manufacturing facilities will stay in Chatsworth, California, and most of the current personnel will be offered employment with the new company. The initial focus will be to provide support and enhancement for current customer applications and for Genera, including a doubling of performance of Open Genera, which runs on Digital Equipment Corp's Alpha workstations.

## DEC DEEPER INTO REDMOND'S POCKET

From Microsoft Corp's point of view, the \$65m it has invested in DEC to cover the cost of training more engineers in Windows NT - DEC now has 800 people certified in Microsoft products, and its plans to train another 1,500, giving it the largest engineering team with that expertise - is the beginning of a wider transition away from Unix to NT at the high-end of the PC market and low-end server space. Whether the market will swell to accommodate NT alongside, or Unix will move up to higher ground the analysts aren't prepared to say, but Microsoft notes that DEC's OSF/1-based Unix strategy, where it the sole developer, leaves it right up the proverbial creek. Under the new deal, DEC will also second a team to Redmond to hold Microsoft to its promise that new versions of NT will continue to run on the Alpha RISC. The two will also cross-license their patent portfolios and work to diminish differences between specialised software such as their electronic mail programs, and DEC will become a major systems integrator of Microsoft products. And Microsoft will license DEC's clustering technology for use in future Microsoft clustering offerings for Windows NT, the two said.

## CAMBRIDGE ANIMATION STEALS A WORLD LEAD IN COMPUTER-AIDED ANIMATION

By Krishna Roy

In the last two months, Cambridge Animations Ltd, a hitherto unsung software developer has sold over 300 software licences to two major US film companies. Warner Feature Films, the animated film division of the Warner Bros arm of Time Warner Inc, bought 200 licences for two forthcoming feature-length animation films. The month before, DreamWorks, the entertainment studio headed by Steven Spielberg et al, bought around 100 licenses. Cambridge won't say how much the contracts are worth, but a single licence for the full set of Animo modules costs £20,000. Add training costs, which start at £1,000, and software maintenance charged at 12.5% of the contract, and it doesn't take a genius to work out each deal should pull in over £2m. The animation software company has been turning hand-drawn cartoons into digitised sequences for five years and it believes it is in the privileged position of being an early player in an immature but lucrative market. "We saw a niche market for writing software to automate the most error-prone and repetitive tasks in two dimensional animation," says Ruth McCall, joint managing director and one of the three founders of the company.

### Beastly Behaviour

Five years on, the company has grown to employ 40 staff and is set to double in size within the next year. It has an office of 10 staff in North Hollywood which deals with sales, customer support and administration for US clients, one employee based in Japan, and clients in Tahiti, Europe, Egypt and the Far East. "Use our software and you'll save time and money," is a claim most software houses would make, but it is one that Cambridge believes it can substantiate. "Animo will cut roughly a third off the cost of producing identical work using traditional techniques," says Brian Tyler, head of sales and client services. According to Tyler, UK animation studio Honeycomb Productions Ltd used Cambridge Animations' ink and paint software for the late-night Channel Four series *Beastly Behaviour*, and it cut the time taken to produce the one minute animations to 48 hours from three weeks. "It's rather like using a word processor instead of a typewriter: once you've formed ideas of what the characters and scenes should look like, the process of refining the work is much faster and easier," says Ms McCall, who believes that this fact alone will lead to the widespread adoption of animation software. Ms McCall says that European animation companies are particularly keen to find new ways of cost-cutting and increase their volume output in order to compete effectively with American producers. In the past, animation companies have subcontracted the most labour-intensive parts of the process, such as colouring black and white outlines known as "ink and paint" to the Far East to bring labour costs down. By using animation software, studios will achieve similar cost savings and keep all the animation work in-house - or at least that's the theory. In practice, however, subcontractors in the Far East have also started using ink and paint software to drive their own costs down, so many animation houses still find it cheaper to ship the process East. Cambridge chose the unusual step of writing the software to run under NeXTstep in the belief that the object-oriented operating system was most suited to graphics packages. Animo was written as separate modules so that animation companies can choose to opt for one package or buy the whole suite depending on how much of the animation process they want to move onto the desktop. Animo Studio, the cut-down version, comprises Scanner, Ink and Paint, Director and Render modules, which can be used to produce a fully animated sequence.

### Print technology

However, the software cannot be used to generate images: pencil-drawn sketches of characters and setting still need to be scanned into the computer. The Scanner software cleans up the pencil drawing, adjusts the tint or vividness of the image to compensate for colour quality lost in scanning, divides the drawing into digital cells and then stores each scanned frame as a file. The Ink and Paint module is then used to colour each cell. The design team chooses the colours needed for each particular scene and then allocates each file with the colour palette to the painter. Inking in the scene is then simply a matter of double clicking on the correct colour and then double clicking on the region to be painted. "The worst they can do is apply the right paint in the wrong place," says Tyler, "in which case you just use the undo function and rectify the mistake." The company is now refining the automated ink and paint function so users paint the key frames and the computer colours the in-between scenes. The current version will work only on simple animations where there is minimal difference from one scene to another. The software notes the colour of a each cluster of digital cells and paints them the same colour in the next frame. However Cambridge is experimenting with algorithms to make the process heuristic. Once painted, the frames are assembled in Animo Director which gives the user the ability to specify the key frame movement. The frames

become a long drawing with a transparent background. Three-dimensional effects in two-dimensional animations are created by superimposing foreground files on background files and then making the foreground move faster across the screen - an effect traditionally created by camera but now done automatically by the software. Studios can also buy Animo SPX, a library of special effects that include pixie dust - the stars that fall from Merlin's wand, ripple effects and backlighting. Animo Lip-Sync, another optional add-on, uses speech recognition algorithms to scan a Digital Audio Tape and identify the phonemes in the dialogue. The timing information on the phonemes can then be printed out and manually inserted into each frame or used to select key frames automatically from a choice of libraries which are then inserted into the animation. At this stage scenes can then be recorded onto digital tape for previewing and editing. Animo Render is then used to render the complete animation to bring it up to broadcast quality.

### Silicon Graphics

The files can then be distributed across machines on the network with the Render software installed. Once rendered, the animation can be transferred to film or video by plugging a digital image recorder into the SCSI port. Although the company is in the process of moving across to Silicon Graphics Inc Indy workstations, a move spurred by the DreamWorks deal, the vast majority of its customers find a 90MHz Pentium with 8Mb sufficient to run the software. "The market is difficult to quantify because it's so new but we use the market for animated feature films as a fair indication of demand for our products, and that's growing 30% a year," says Ms McCall. To maintain and grow its client base, Cambridge believe it must regularly provide upgrades. Version 1.6 will be out in August, Version 2 by year-end. With Version 1.6, animators will be able to apply special effects at the painting rather than the rendering stage to make editing of scenes much faster. Version 2 will involve a more substantial re-write of code to make it more open and incorporate the Product Manager module as standard. Product Manager, in beta at the moment and out in two weeks, enables the project manager to track each task and monitor work on the network. It also enables users to log on to a NeXTstep machine and see which tasks have been allocated for that day and see changes made to existing work.

### ORACLE STRONG-ARMS NEW MULTIMEDIA OBJECT GROUP

Trying to make it look like a spontaneous ground swell, Oracle Corp has quietly twisted a bunch of corporate arms to sign up members for a newly created group chartered to come up with object-based specifications for developing interactive multimedia and electronic commerce systems. The specifications are supposed to become open standards which can be used by anyone to build multimedia class libraries. That they may be, but sources in the new Object Definition Alliance (ODA) say there hasn't been any decision about which operating systems may be involved and whose data models will form the basis of the specs. Oracle, unsurprisingly, is hoping to steer the group towards a standard that will work nicely with its own software. Those Oracle has gotten to sign up for the ODA include a heterogeneous mix of software and hardware companies along with major retailers and commerce firms including both Mastercard and Visa. On the computer industry side it's signed up Apple, Compaq, Kaleida Labs, NeXT, Sun, Taligent, Verifone and Xerox. The Object Management Group has also agreed to work with the ODA. From the industry and commerce side, in addition to the credit card giants, its enrolled Home Box Office, MCI, Price Costco and the Wells Fargo Bank.



## SOFTCORE PLUNGES INTO EUROPEAN WINDOWS AND UNIX WORLDS, TAKES ODESTA DOCUMENT MANAGEMENT KIT

Recognising that it has been trying to make money out of a fairly small market, London-based SoftCore UK Ltd is using its ~~experience in electronic document management, until now concentrated in the Mac field, to move into the open systems arena.~~ It has gone to Odesta Corp, Northbrook, Illinois for its Livelink Workprocess Systems, a document management, work flow and collaborative computing package, and added to it document capture and storage technology. It will aim the product at organisations with mixed computing systems that need to process documents, paper or otherwise, and images. And while it would not talk market share it expects Livelink to boost company turnover to \$2m from \$1.2m last year. That's if people come to accept it as a Windows-type provider and not simply a Macintosh specialist, at which it has specialised up to now. Back in 1988, the company chose the Apple Computer Inc system as the host for its electronic document management software, because the Mac was then the only machine with a viable graphical interface. The move to the potentially far more lucrative market of Windows-based machines and Unix is seen purely as a commercial decision and that is why the company has bought in the technology and not developed it itself. The resulting package, the company said, is system-independent - all the code runs in the database application so once it is set up for the customer's database it can move from hardware system to system. It comes with its own tool kit so users can customise the interface. Livelink is actually release 3.0 of Odesta's software. It works on Windows-based personal computers and Macs, and will be available on OSF/Motif clients for RS/6000 and Sparcsystems by the end of the year. Integrated into Livelink is Watermark Enterprise Edition for image-enabling personal computers and Acrobat Capture which provides an alternative format, Portable Document Format, enabling documents to be viewed in Windows, MS-DOS, Mac and Unix environments. The company expects a lot of its current customers, 250 in all in Europe, to migrate from its ArchIS Mac product to Livelink. However, while all the products within the package are well known individually, the integrated stuff has not been beta tested. But the company said its customers have confidence in it and it has confidence in the products it has used and so is not expecting any problems. Originally a Belgian company, Softcore moved its headquarters to London 15 months ago, closed the Brussels office and opened one in Amsterdam, which it reckons is a better location from which to target Europe.

### Bigger impact

It will market Livelink in Europe, but probably not in North America as it, and the products the company has integrated into it, are of American origin. Also its main competitors, Saros Corp, Documentum Inc, FileNet Corp and Odesta, are all American and it believes it can make a bigger impact this side of the pond, although it may license some of the integration work it has done to Odesta. But the company said it will continue to support, ArchIS, which it developed with the help of Apple's money. Livelink costs £7,000 plus £1,500 per attached personal computer, a little bit more for Unix terminals, but the unit price falls as the number of users rises. The company said the number of users that could be supported was only limited by the power of the server.

## INSYNC UPDATES PASSPORT

InSync Software Corp, Ronkonkoma, New York, has added version 8.0 of its Passport 4GL application development environment which now includes messaging middleware, a repository browser and Visual SQL Editor. On Unix, VMS, Windows. Prices go from \$4,000 per client development system to \$5,000 per developer seat for the client/server version which supports messaging and RPCs. InSync recently won \$3m venture funding from Charles River Ventures to develop Passport. Former president of IBM's CGI Systems, Richard Ramsdell, has been installed as InSync's president. Founder Alan Tonnesen remains as chairman and will focus on product planning.

## VISUALWORKS AT CORE OF COMBINED PARCPLACE-DIGITALK PRODUCT LINE

ParcPlace Systems Inc's \$45m acquisition of Digtalk Inc (UX No 540), should be complete by the end of August; the combined company will be known as ParcPlace-DigiTalk Inc with revenues of ~~some \$55m. There will be upgraded versions of ParcPlace VisualWorks and Digtalk Visual Smalltalk Enterprise development systems in the fourth quarter with full language and syntax compatibility between the two.~~ The company has already decided to use the VisualWorks Smalltalk engine as its long-term, strategic technology base, and will - also in the fourth quarter - detail a roadmap of Smalltalk language classes for inclusion in a single product line (code-named Van Gogh) by the middle of next year. The company says it'll continue to support VSE at least until all of VSE's functionality is included in VisualWorks. DigiTalk technologies that'll survive into the single offering include the Parts workbench and visual wiring programme, Team/V development (maintaining support for Object Technology Inc's Envy/Developer), Smalltalk link libraries, Windows 95 compliance and legacy integration. ParcPlace-DigiTalk will create additional support for OLE, SOM/DSOM and Corba, optimised server enhancements and a class library allowing developers to plug different libraries into their environment. It's technology slated to appear in two other product directions; Wadsworth, an Internet module allowing users to deploy applications on the Web, and a server-centric VisualWorks implementation code-named ServerWorks. ParcPlace-Digtalk promises the net result will be a more comprehensive Smalltalk development system than Hewlett-Packard Co's Distributed Smalltalk bundle of distributed and object functions (*see page 1*) implemented on top of VisualWorks. Automatic generation of client and server components and other remote features will appear in VisualWorks 2.5 - the first step down the ServerWorks road - which is due by year-end.

## SCOPUS ENHANCES SALESTEAM FOR MARKETING DATA

Emeryville, California-based Scopus Technology Inc has added version 2.0 of the SalesTeam module to its Extended Enterprise customer information management system. SalesTeam links sales process automation to marketing data so that companies can judge how successful campaigns are. The previous version of SalesTeam tracked sales process information, but 2.0 adds pieces for campaign management, scripting and surveying and integrating marketing data with sales process data. Meantime, CalComp, a California-based plotter and printer manufacturer asked Scopus to build an application which could combine marketing campaigns and sales results. The product, which is also being used by SunSoft Inc, delivers integrated database management, telesales/telequalifying and sales process automation. Working in terms of leads generated and qualified, quotes issued and deals closed, it can track the results of leads that generate other leads or multiple sales, or deals with multiple quotes. SalesTeam can be mapped to an individual company's selling process, from a 1-800 number to distribution channels; 2.0 costs \$2,875 per concurrent user.

## TADPOLE SLASHES PRICE OF SPARCBOOK

Cambridge, UK-based Tadpole Technology Plc has slashed up to 35% off prices of its Sparcbook family of notebook computers on the back of its reported £5.94m loss for the six months ending March 31 (UX No 539). Tadpole, which has already reduced its P1000 Pentium processor notebook by 13%, is looking to match price points for high-end notebook PCs. The SparcBook 3, with 340Mb disk and 16Mb RAM is down to £5,220 from £7,650. The SparcBook 3LC, with a monochrome display is now £4,265, down from £5,350. The SparcBook 3XP goes from £7,550.

## QUARTERDECK TARGETS INTERNET

Santa Monica, California-based Quarterdeck Corp is a new company since it discovered the Internet, and it has now acquired one company and made a strategic investment in two others in an effort to penetrate further the market for Internet-targeted products. It acquired Internetware Inc, a developer of Internet software for NetWare networks that provides access control, security and centralised management for 440,000 new shares worth \$6.5m and has also invested \$1.6m in privately held Limbex Corp and made a \$1.5m investment in Lernout & Hauspie Speech Products NV, which is based in Brussels.

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Despite **Sun Microsystems Inc's** early lead in the Internet server business, **Electronic Data Systems Corp** reckons that **Silicon Graphics Inc** has the overall edge, and the **General Motors Corp** company agreed to form a strategic alliance in which it will use Silicon Graphics' WebForce hardware and software to help other companies develop their presences on the World Wide Web.

**Data General Corp** has reported third quarter net losses of \$61.4m, after a \$43m restructuring charge, up from \$12.4m losses last time, on turnover that was down 1.2% at \$280.5m. Nine month net losses were \$48.2m, down from \$81.4m losses last time, on turnover that rose 2.2% at \$846.5m.

**Toshiba Corp** has is to market **Oracle Corp's** financial and production control applications in Japan and internationally, and looks for the alliance to generate \$225m in sales for Toshiba over the next three years.

Growth by acquisition is now firmly part of the **Stratus Computer Inc** strategy, and the Marlborough, Massachusetts company has now acquired **Comercializacion TEA SA**, a distributor of Stratus software and hardware in Mexico, from **Grupo TEA**, of Mexico City. Terms were not disclosed. Comercializacion TEA will be Stratus' 18th wholly-owned international unit, and the move reflects expectations of significant growth in Mexico and Latin America.

The PC X Server market reached \$54.8 million in factory revenue the first half of this year, according to **The X Business Group**, a division of **Zona Research**. **Hummingbird Communication** leads the market with a 42% share, followed by **Network Computing Devices** at 15% and **AGE Logic** and **SCO's Visionware**, tied at 11%.

**Hewlett-Packard Co** is expected to price-list NextStep on its PA-RISC and Intel platforms; currently the object-based operating system is supplied by **NeXT Computer Inc** itself.

**Tivoli Systems Inc** has tapped **Dell Computer** information systems VP Glyn Meek as its new VP professional services. Dave Bouchard, formerly **Powersoft** manager of alternate channels, gets the new job of VP, leveraged sales.

**Sequent Computer Systems Inc** has won itself a tidy \$6.7m contract with the British Employment Service for six Symmetry SE70s, each configured with 12 100MHz Intel Pentiums and 1Gb RAM. The systems will run a 90Gb CA-Ingres database engine, with two sets of three node clustered SE70s.

Hot Chips VII is set for August 15th to 17th at Stanford University; **Hal's Sparc 64**, the **AMD K5** and **Sun USparc I** are some of the parts under the microscope. The launch date for UltraSparc I has been set for November 7th

**Taligent Inc** still plans to bet its cpProfessional development environment (formerly TalDE) this quarter and says it's got a dozen new ISVs now developing for its CommonPoint beta.

**Sun Microsystems Computer Co** has installed VP Neil Knox to head its networking and network attached devices group, responsible for the Netra line, LAN servers and network cards created under the recent reorg (UX No 548).

**NeXT Computer Inc** has resolved its naming quandary (UX No 543); NextStep will become OpenStep for Mach 4.0 in its next major revision due in the first quarter of next year, around the same time as **SunSoft Inc's** own fully-fledged OpenStep implementation currently dubbed Crescendo, is now expected.

We like the way Chris Keane, president of object-relational vendor **Persistence Software**, San Mateo, California, tells it as it is: summarising the object/relational debate he told our sister publication *Software Futures* "four years ago the object database purists basically said that the relational model was just plain broken, and the relational people thought the object people were plain loonies. Now every single object database vendor offers SQL access or back-end access to an existing data storage medium, and every single one of the relational database people access objects in some way."

**Silicon Graphics Inc** has got its Irix 5.3 Unix up to X/Open XPG4 Base profile (Unix 93) conformance.

**nCube Corp** has promoted VP hardware engineering Ronald Dilbeck to the president and CEO's job, bumping Michael Meirer out to vice chairman. Gary Rieschel is VP marketing and Sandra Chroman is VP human resources.

The **Open Document Architecture (ODA) Consortium** has won a contract from the European Commission to work on various document interchange projects.

**Andataco Inc**, San Diego, California, is offering RAID Lite for small network of Unix users with up to 150Gb capacity starting at \$5,000 for two 1Gb drives to \$150,000 for a subsystem with 35 4.3Gb drives.

**DataTools Inc**, Palo Alto, California, has added an SQL-BackTrack backup and recovery package for Oracle database users; prices start at \$4,600.

**Software Research Inc**, San Francisco, California, has added version 5.1 of its Capbak/X capture/playback code testing tool with a new C interpreter at from \$4,400 for a single licence or \$7,000 as part of an STW/Regression application testing bundle.

French PC-to-Unix house **Esker SA**, Lyon, is bundling its Tun Plus TCP/IP and emulation package for accessing networked Unix applications from PCs with the Netscape Navigator Web browser.

Software tools developer **Pure Software Inc** announced an initial public offering on Nasdaq of 2,750,000 shares of common stock last week at a higher than anticipated \$17.00 per share. Of those, 2m shares were offered by the company and 750,000 were offered by the selling stockholders. It now expects some \$31,000,000 in net proceeds.

**Solsource Computers Inc**, Carlsbad, California, is shipping version 2.0 of its Motif-based SolMail email application for SparcStations and compatibles at from \$500.

**Hewlett-Packard Co** has cut prices on its Envisex and Entria X terminals, including the recently introduced 'p' models, by up to 22% or \$800.

**AGE Logic Inc**, San Diego, California, is offering an X server and VT420 terminal emulation bundle for Macintosh at \$400. **Apple Computer Inc** offers AGE's XoftWare X server as MacX (UX No 548).

Former **IXI** president Steve Klann has turned up as president of **CP Software Group Co's Island Software Corp**.

A few days ago at the close of the last issue we were in a contemplative mood and fell to thinking about what Dennis Ritchie had said the day they sold Unix to **Novell Inc**. He quoted Genesis 25:31-34, the bit about Esau selling his birthright to his kid brother Jacob for a mess of pottage. Well, there's really more to this Jacob analogy than just that one episode. Jacob was the guy with the two wives, Leah and Rachel [for which read NetWare and UnixWare]. Leah of course was exceedingly fruitful and had many sons [in contemporary parlance, users] and Rachel was not. Rachel's offspring, however, managed to make himself quite unpopular - so much so his own kith and kin sold him off into slavery in Egyptland which - after some further adventures - is how the children of Israel wound up in bondage to Pharaoh [Bill Gates]. Unfortunately, at this point, there's no one around with the slightest resemblance to Charlton Heston.

For at least the third time running, the weather has managed to baffle a **Sun Microsystems Computer Co** sales meeting. The boys at SMCC didn't bother to pay any attention to all those dire predictions about Hurricane Erin hitting Florida last week and flew down there only to be turned back at the hotel. You can bet there was chortling back at headquarters about them spending 14 hours in the air all for naught.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram·X

The weekly information newsletter for the UNIX™ community worldwide

London, August 14-18 1995

Number 551

## H1 AND TAHOE EMERGE FROM SIX-MONTH HOLDING PATTERN

Reports from deep within the bowels of the ultra-secret Hewlett-Packard Co-Intel Corp chip collaboration hint that the effort lost about six months to the lawyers, who were reportedly intent on figuring out such little niceties as who owns what and how to market it. Apparently the two companies used the opportunity to determine better how to approach the collaboration and what impact their decisions would ultimately have on them. Now, near as we can tell, we probably shouldn't expect a chip before early 1998 and boxes late the same year. Folks from HP's Engineering Systems Labs (ESL), part of the system technology division in Fort Collins, Colorado, were supposed to move to California this summer for at least a two-year stint working with Intel on the part, code-named H1, transferring the more seminal VLIW work from the HP Labs think tank into actual design. Needless to say, it hasn't happened; indeed it may not happen at all now, as we learn HP is strapped for people and has other chips to work on. Insiders even question whether the whole thing was a good idea in the first place. Meanwhile, we originally thought that HP had dubbed the combined HP-Intel processor Tahoe (UX No 543), but now it's clear that's the code name for the hybrid VLIW scheme HP Labs has dreamed up to avoid the real-time delays traditional VLIW would create. The chip itself is H1. The new architecture will create legacy instructions at the compiler level and the effect is now reportedly a retreat from pure RISC to more of a CISC architecture, as one might expect. Insiders say that HP hesitates to put a real name on the hybrid scheme because it doesn't want to commit itself to a precise specification - lest it doesn't work in the long run, perhaps? Maybe not. HP and Intel were telling analysts back in May that simulations showed the chip would be backwards compatible. However, Intel has supposedly balked at using the Tahoe name and has been changing slides to read Next Generation, a name we hear no-one's buying into. Meantime, Brian Richardson of the Meta Group says he's been to Intel's plant in Oregon recently where it was testing P6s and saw them - P6s - with HP analysers glued to the boards.

## WHAT THE BUTLER SEES: CUT THE MARKETING HYPE AND STOP BULLYING ORACLE, SAYS NEW PARALLEL DATABASE REPORT

The marketing departments of parallel processing vendors are in for a roasting next month when a new comparative report is published by UK research company ButlerBloor Ltd. The Parallel Database Report takes what the authors - Dr Mike Norman and Dr Peter Thanisch from the Edinburgh Parallel Computing Center - claim is the first in-depth technical comparison of the 11 parallel database offerings now on the market (or nearly on the market, in some cases). Hardware is considered too (14 parallel boxes) because at the moment most of the database products are still tied to individual hardware architectures, and in some cases the effort required to move them to others will be considerable. Along with the technical stuff will be what ButlerBloor calls a "constructive" critique of the vendors' marketing literature. The marketeers have been getting somewhat jumpy with ButlerBloor, having heard from their technical people about the levels of technical detail under discussion. The first broadside will be fired in next month's issue of *DBMS* magazine under the title "Much Ado About Shared Nothing", where the authors contend that "shared nothing" architectures are a complete myth dreamed up by marketing departments for marketing reasons. They are not necessarily attacking the technologies positioned in this way (among them the Sybase's Navigation Server running on an AT&T 3600), more the way they have been presented. There is no such thing as a literal "shared nothing" architecture, says the report, as the meta data will have to be shared at the very least. "Vendors take up a religious position not realising that shared nothing defeats the whole object of parallel architectures", said ButlerBloor managing director Sean O'Reilly. Dr Norman compared the process of building a wall using one bricklayer to that of building it with 200 bricklayers, each with one brick. While the report does not deny the value of parallel database technology, the authors promise there will be winners and losers, the losers being those that have taken their rather elderly architectures and built around them. Those who have re-architected or built from scratch (such as Informix Corp, Red Brick Systems, Software AG and the UK's White Cross Systems) come out rather better. And it won't be all bad news for poor old Oracle Corp, with the report recognising that there has been "widespread Oracle-bashing" and "a number of misconceptions, particularly in regard to the distributed lock manager". We can't wait. The database products under consideration are: Adabas (Software AG); DB2/6000 Parallel Edition (IBM), Informix DSA, NonStop SQL/MP (Tandem), OpenIngres (Computer Associates), Oracle 7, Rdb (Oracle), Red Brick Warehouse, Sybase Navigation Server, Teradata (AT&T GIS) and WX900 RDS (White Cross Systems). The parallel computers are from AT&T, Cray, Convex, DEC, IBM, ICL, Meiko, nCube, Pyramid, Sequent, SGI, Tandem, Unisys and White Cross.

## SO WHAT'S AFOOT BETWEEN NOVELL AND HP?

Something is that's for certain. Novell Inc at least is playing this one close to the chest. Senior Novell staff have been made to sign an internal non-disclosure agreement before being told the secret. The rumour mill had Novell negotiating to turn Unix over to Hewlett-Packard Co in a deal brokered by HP's new pal Intel Corp. It said HP was being brought in - if indeed the idea originated with Novell - or Intel for that matter - to develop Unix (not UnixWare) as an OEM product much as Unix Systems Labs did under AT&T's administration. If that were true, the realignment could have put a speed bump in the path of Microsoft Corp and its 32-bit operating system Windows NT, especially given Intel's purported sponsorship. However, this is apparently not the case and we have Christine Hughes' word on that and she's Novell's VP, corporate marketing and sits at the right hand of CEO Bob Frankenberg. Hughes last week would only say that there are negotiations going on - aren't they always? - and that what comes on it may never be officially announced. HP on the other hand may have stumbled upon the ultimate duck: practically everybody who might know anything was on vacation or up in an airplane. The odd thing about the rumor is that if Ms Hughes is being straight with us and the deal's not on the cards, maybe it should be. Everybody we spoke with last week including a Novell board member says things can't go on as they have. *See page 3*

## VC EYES TP MONITORS

Sources say that in the last three or four weeks, Kleiner Perkins Caufield and Byers, the big-time Silicon Valley venture capital company, has approached both Novell Inc and AT&T GIS with offers to buy either Tuxedo or its competitor Top End. It reportedly doesn't care much one way or the other which. It was reportedly laughed off at first but, not taking no for an answer, it's pursuing the notion up the chain of command at both firms. Apparently Kleiner, which would set its acquisition up as a separate company, realises that these OLTP technologies could stand in for other technologies in tying platforms together and calling up applications. Both middleware products currently run on Unix and both companies are beta testing their Windows NT ports.

## SUN TACKLES PC LAN MISERY

A UK-led Sun Microsystems initiative expected to be announced this Wednesday, may eventually be picked up by the company as a whole. Sun Microsystems UK has carried out market research that suggests most PC LAN users are unhappy with their lot, so the company has put together an Enterprise Workgroup Computing strategy, presumably based around its Netra hardware range. Application server, workgroup LAN server and systems management server packages are on the cards.

## DATA WAREHOUSES, FOR THAT COMPETITIVE EDGE, BUT WATCH OUT FOR OFFICE POLITICS

By Maya Anaokar

Over the last 20 years, data manipulation tools have become more and more advanced, but this aid to people's analytical capabilities has not been matched by companies throwing open their data to employee scrutiny. Now, however, more and more companies are considering making their information accessible and meaningful to a select group of staff who could use the information to give their company a competitive edge over rivals. ~~And the medium many are investigating to facilitate this is a data warehouse. The concept is fairly simple: a data warehouse is a~~ subject-oriented database containing historical data that has been modelled and fine-tuned for analysis and decision making. It is separate and distinct from the operational database and is capable of storing data from disparate sources. At least that's the classical (if something that's only a decade old can be called classical) definition, but as more and more people jump on the bandwagon, so the definition is mutating to suit each company's particular spin.

### Blur

AT&T Corp, which gained the founding fathers of commercial data warehousing when its subsidiary NCR Corp bought Teradata Corp in 1992, has begun to blur the distinction between an operational database and a warehouse database, with its Enterprise Information Factory. Oracle Corp which, since it failed to buy Lotus Development Corp and had to abandon its ambition to go up against Microsoft Corp for dominance of the desktop, is attempting to dominate the data warehouse market, also bending the definition to suit its purposes. It has even gone to the lengths of buying Information Resources Inc for \$100m, to get its hands on high-end data analysis tools, and with not a hint of modesty, the company reckons that now it's in the data warehouse business, warehouses are here for real. But it has some fairly unusual ideas: Oracle wants to extend access to the warehouse to all levels of users. This flies in the face of the idea that the warehouse is the company's gods' tool. But even more controversially, Oracle sees nothing wrong in allowing this multitude of end users to amend the data in the warehouse, potentially giving rise to a cacophony of unintelligible information. This amend-as-you-read philosophy is anathema to the traditional view that the records in the warehouse are non-volatile. When data is transferred into a warehouse from a legacy system, operational database or external sources, it's stripped of transactional data, unified if it comes from different sources, and may be annotated to make more sense, or provide pertinent information to the end user. Once that has been done, that is it, and any changes that might need to be made have to be done by a data administrator so that there is an audit trail. But whatever definition one has for the data warehouse, its use is the same, and is such a concept right for everyone?

### Complicated and expensive

The early innovators of data warehousing all shared similar characteristics. They were in highly competitive fields; all had high transaction counts, even if each transaction was often not worth very much; and in every business, costs had reached a base level under which it would be suicidal to go on, and so services to the customer had to be improved in order to attract business. This resulted in telecommunications firms using warehouses to offer cost segmentation; retailers introduced customer loyalty schemes; banks used them to gain a complete picture of their customers, rather than viewing them as a mortgage payer or a credit card holder; and insurers worked on risk assessment. They were also the types of company that could afford to build a warehouse, which is a bespoke system involving products from numerous companies, and is expensive. Although prices have dropped and there is a myriad products with which to build a data warehouse, it's still a complicated and expensive procedure and is unlikely to become an off-the-shelf offering any time soon. The movement of a company's historical data, its unification and its transformation can be a long and arduous physical process. Although a departmental database could be established by a few Cobol programmers writing some simple scripts to move the stuff over from legacy systems, a large warehouse, being created from numerous sources, would take programmers months to establish. That's why companies that provide tools that automatically transfer, transform and scrub data - like Evolutionary Technologies Inc, Carleton Inc and Prism Solutions Inc - have all been sought after as partners by database vendors wanting to tell potential customers they have best of breed packages with which to build warehouses. And like most things associated with warehousing, these tools do not come cheap: Evolutionary reckons an average sale is \$250,000.

### Who drives?

If a company decides it's worth the cost and effort, the next hurdle usually turns out to be office politics. Who owns the data that's going to populate the warehouse; what's to be done if the data from the operational database is wrong; who will have access to the warehouse; who will be the developer and who will administer it? This, more than the

disparate nature of the hardware and software involved, is likely to keep warehouses bespoke products rather than off-the-shelf kit. The consensus about who drives warehouse development within an organisation is that it should be the end users, so that the warehouse can be designed around the functions that it will be expected to fulfil and users can identify which bits of the existing database they will require. But even if the push for a data warehouse comes from the business end, a company's information systems department is going to have to supply an administrator. Finally, an in-house job for the technical guys, after seeing all their work farmed out to facilities management companies over the last few years, few companies installing a warehouse will be able to leave its management to outsiders, given the fact that it's supposed to contain highly valuable information.

## TEMPLATE GRAPHICS EXTENDS OPENGL-ON-SOLARIS, HP-UX

Although it won't give-up details of its ZX graphics chip-set to the Sparc-compatible builders, Sun Microsystems Inc has given-up enough ZX information to Template Graphics Software Inc for the San Diego, California-based company to layer the OpenGL version of Silicon Graphics Inc's 3D GL graphics library up on Sun's Phigs XGL graphics library running on SparcStation ZX and TurboZX workstations. TGS offers OpenGL wherever it isn't available natively, including implementations for Sun, HP and Apple systems (see front page). A Win32s version is underway. TGS already offers OpenGL Solaris for Sun's GX, GXplus, TGX, TGXplus and SX graphics subsystems. TGS also offers implementations of SGI's Open Inventor C++ 3D class library which utilises OpenGL for graphics rendering on Sun, IBM, and Win32 systems, with HP, DEC, PowerMac and OS/2 versions underway. Meantime, TGS is also now shipping what it calls a complete OpenGL 3D graphics library for HP workstations it's calling OpenGL for HP-UX Software Edition. It allows OpenGL applications to be hosted on HP workstations and viewed on any X11 device, though it's not yet optimised for HP's new Visualize graphics subsystem. TGS says HP has already bid its Phigs+ implementation in US government contracts. TGS is also porting the Open Inventor C++ toolkit to HP-UX - due early next year - which will also include support for TGS' Virtual Reality Modelling Language (VRML) 1.0 and WebSpace implementations. TGS has also picked-up the UK's Numerical Algorithms Group Ltd, which will use TGS' Open Inventor implementation to port the Silicon Graphics Inc Iris Explorer data visualisation and application builder software on to non-SGI platforms. NAG is the sole supplier of new versions of Iris Explorer based upon OpenGL and Open Inventor. TGS' Bordeaux, France-based G5G unit sells and supports the NAG solution in Europe. And Concurrent Computer Corp is to OEM TGS' OpenGL implementation for its Maxion real-time SMP boxes.

## IDE SOFTWARE THROUGH PICTURES GENERATES CODE FOR OBJECTBROKER

Interactive Development Environments Inc, San Francisco, California, has put its Software through Pictures analysis, design, modelling and testing tools up on DEC Alpha platforms, where they will link to DEC's ObjectBroker ORB for designing and developing distributed object systems. Software through Pictures will now automatically generate ObjectBroker Interface Definition Language (IDL) and C++ code from both StP/OMT and StP/Booch models. IDE claims it's the first tool that will allow software developers to seamlessly and automatically integrate elements of OMT and Booch object-oriented analysis and design methods. StP/OMT and StP/Booch are priced at \$12,000. IDE has also integrated its Software through Pictures (StP) analysis, design and code generation tools with Atria's ClearCase configuration management and version control system. The company is also expected to show up at Object World this week with an early Windows version of its software.

### NOVELL TO SHED UNIX BURDEN?

Of the many mistakes Novell Inc has made with Unix since acquiring it two years and seven months ago (UX No 417) - and those mistakes have been legion - the one of crucial concern to the industry as a whole has been its failure to provide a development vehicle for Unix that its licensees have confidence in. Such development work, as the industry well knows, can be crushingly expensive, a burden Novell has been unwilling to shift, especially given its dalliance with UnixWare. But then you'd have to accept the idea that the industry can return to the old AT&T Unix system labs development model and whether it even matters anymore. The companies that represent 80% of the market are now going their own way. Folks certainly liked the idea of Hewlett-Packard Co (see front page); the company where Novell's present CEO Bob Frankenberg hails from, a company on a roll, the first port of call for commercial Unix ISVs, a company considered to have the resources, skill set and touchy-feely attributes like integrity and trust to pull such a thing off, and presumably the best choice to ward off Microsoft. It's also the only one of the Big Four, so to speak, to have a strategic relationship with Intel. The others - IBM, DEC and Sun Microsystems - are all pledged to their own RISC chips, besides, IBM doesn't have any credibility in operating systems, DEC doesn't have the resources, and Sunsoft, which has been plying its own course since buying out its royalty stream from Novell, has pretty much failed on the Intel platform. Come to think of it, Novell also hasn't sorted out whether it's going to get help with SuperNOS, the speculative blending of UnixWare and NetWare that Novell has embarked on. Back in January, AT&T GIS pulled out of a deal to co-develop SuperNOS and contribute its RAS (Reliability, Availability and Servicability) technology at the last minute (UX No 522, 523). The two companies have continued the fiction that their close collaboration is still pending, but truth to tell it ain't going anywhere, so right now Novell is on its own. Getting back to the idea of someone taking over Unix. Well, if you think about it, it probably wouldn't even cost much for Frankenberg to come out a hero to his board and the financial community. Maybe no money would have to change hands at all, given the argument that Frankenberg is cleaning up a mess left over from the previous Noorda-Rekhi administration. Considering that Novell only really paid about \$150m for the thing to begin with and got residual value out of it plus Sun's \$82.5m lump sum royalty payment, it could be reckoned that Novell isn't losing anything on the deal even if it gave it away. Novell could keep UnixWare, the foundation it's building its strategic SuperNOS structure on, get credit for a paid up royalty stream itself and get dibs on new technology going forward. What do you think, Bob?

### UNISYS OFFERS INTEL UNIX/NT SERVERS OEM

Unisys Corp has announced its first servers capable of running Unix and Windows NT as the one-to-four way, P6-ready SMP 5400 series. Originally slated for an April debut (UX No 531), the OEMed Intel Corp units were delayed by buggy dual-PCI boards. Unisys says it chose to wait for good parts and software rather than going with interim patches like other vendors. The SMP 5400 runs 100MHz Pentiums across Intel's Xtended Xpress bus and is certified for Unisys' SVR4/MP, NT 3.5.1, UnixWare 2.0 and Solaris 2.4. It comes with up to 768Mb RAM, four EISA, two PCI and two shared slots and costs from \$15,000 to \$30,000 from August. NT configurations will be offered as part of Unisys' Pathway series. Meantime, the company is working-up a bunch of announcements for its home-grown PCI/EISA U6000 server line at Unix Expo next month, which is already being offered with up to eight Pentiums as the Model 80. As well as 10-way hardware, Unisys will add a Spec 1170 cut of its Unix - SVR4 1.3 - scaling up to ten CPUs, plus promised clustering, 133MHz Pentiums and support for 150MHz implementations. Unisys says the new boxes will match IBM Corp and Hewlett-Packard Co TPC performance numbers. U6000 incorporates Unisys' 533Mbps Synchronous Coherent Multiprocessor and is now certified for Solaris and well as Unisys SVR4. Despite expectations (UX No 531), NT doesn't yet feature on the U6000. Although work is in hand, the company frets that NT's inability to scale usefully above five CPUs is an impediment to commercial SMP offerings that may support it.

### SUN CONVERTS TO OPENGL GRAPHICS

As we said it would (UX No 533), Sun Microsystems Inc has bowed to the inevitable and will offer a native implementation of the Silicon Graphics Inc OpenGL three-dimensional graphics library API for its Solaris operating system from next year. It'll take advantage of future generations of graphics subsystems and accelerators being designed with the 3D RAM frame buffer memory technology Sun has co-developed with Mitsubishi Electronics America Inc's Electronic Device Group (UX No 499). OpenGL is gaining momentum in its bid to become the 3D API of choice now that other Unix vendors plus Intel Corp and Microsoft Corp are backing it. Sun said it is these industry endorsements, plus pressure to address markets for large-scale simulation, animation and visualisation, especially from oil and gas industry customers, that have forced its hand. It's long railed against the API for its lack of application support and control by SGI (UX Nos 500, 537), but says it has confidence in a new 'open' process SGI has created to oversee OpenGL development - *see below*. It's also keen to play in the very high-end graphics space now largely populated by SGI boxes. Sun has licensed SGI's OpenGL code through graphics subsystem house Evans & Sutherland Computer Corp, that last year scooped-up Austin, Texas-based OpenGL company Portable Graphics Inc, and which together with Template Graphics Software Inc, San Diego, California, (*see page 2*) is now offering an OpenGL implementation layered upon Sun's own Phigs XGL graphics environment. Sun says it'll continue to support XGL graphics for as long as customers require - there are 100 or so applications available for it - but recommends users and ISVs creating new solutions on its graphics platforms adopt one of the third party OpenGL products until its own native port of what it now characterises as a portable, cross-platform graphics environment, becomes available. Sun says it's essentially hedged its graphics bets since developing 3D RAM, which will support OpenGL when integrated into new graphics products. An unbundled OpenGL implementation may precede an integrated Solaris version and the company says it hasn't yet decided when or whether XGL will be stripped out altogether. Putting a brave face on its decision, Sun says it's now counted 15-odd applications up on OpenGL, and plans to participate in the architectural review board SGI has created to advise on future OpenGL specs - though it's not actually a member yet. It says it's also working with SGI to extend OpenGL in areas where the API is not strong, such as imaging. Sun hasn't adopted SGI's Open Inventor C++ 3D class library which utilises OpenGL for graphics rendering, claiming it's not extensive enough - although the library is also available as a third-party layered product - but plans to establish another review board with SGI that'll oversee development and integration of Open Inventor and its VRML Virtual Reality Modelling Language spin-off with Sun's Java and other technologies. OpenGL is a software interface to 3D graphics hardware; Sun products include S24, SX, ZX, TurboZX, GX, GXplus, TurboGX and TurboGXplus hardware, supporting SunPhigs, XGL, DXlib, Xlib, XIL, Pex and PexLib graphics APIs. Meantime, E&S has also ported OpenGL on to the version of its Freedom Series graphics accelerator Sun rebadges at the high-end.

### AUSPEX ADDS FAILOVER SOFTWARE

Santa Clara, California-based Auspex Systems Inc has unveiled ServerGuard, a home-grown automated network-based failover and disaster recovery software offering. ServerGuard, the second product offering in the company's Continuous Data Service programme (UX No 516), uses the company's Fault Tolerant NFS implementation to maintain independent copies of NFS data on physically separated Auspex NetServer 7000s. A server is given the role of primary server for each file system being mounted and responds to client requests. The other server acts as backup and communicates with the primary server when it has completed the necessary actions for each client request. A server can act as a primary server for some files and as backup for others. Auspex claims that in the event of a failure, another server can take over in less than sixty seconds. Auspex maintains disaster recovery by using multicasting in Ethernet, FDDI and 10BaseT LAN networks to duplicate client NFS requests enabling clients to send out single requests, while packets reach both servers. Once a failure is repaired, the servers can be resynchronised without compromising data availability, the company claims. ServerGuard ships in November on Auspex NS7000 machines. Pricing starts at \$15,000.

## OPEN STANDARDS VERSUS PROPRIETARY STANDARDS; IS Win32 ASCENDENT?

By Jonathon Eunice, president Illuminata Inc.

For a decade the computer industry has struggled to define standards that enable interoperable multivendor products and portable application software. ~~Advocates of "open systems" have labored mightily, if contentiously~~ and not always consistently, to define such standards based around Unix. In just the operating system space, we have many iterations of SVID, OSF AES, POSIX.n, XPGn, and Spec 1170. GUIs gave us a similar number of rounds of Open Look, Motif, X Windows, and COSE CDE, among others. A dozen other areas of system behavior were defined with their own set of two or three dozen efforts. But has all this come to naught? For all the effort, these Unix-based standards still don't do the whole job. While Unix standards have significantly improved portability from (abysmal) historical norms, they have never truly delivered the extensive portability and interoperability repeatedly promised. Just because an application runs on Solaris, say, doesn't mean it will run on HP-UX, or on any other Unix implementation. More than likely, invasive changes will be required. Thick tomes exist to guide developers among the different implementations. While Microsoft's Win32 specifications are as proprietary as they come, they deliver the cross-platform application portability that users and software developers want. From the point of view of most applications, Win32 is the same running on a PC as it is on a RISC workstation, and the same from vendor A as from vendor B. Some hardware-related porting issues still exist, but these are more manageable than the many out-and-out API differences between Unixes.

### Promises

Equally important, Unix standards did not jell fast enough to capture the market. In-fighting and delays in the Unix community left Microsoft free not only to define its own set of APIs, called Win32, but also to credibly promote Windows NT and Win32 as the sensible alternative to "that Unix mess." Win32's economic promise of a robust market proportional to the total PC market is also far more compelling than Unix's weaker "unified midrange" promises. Like Unix-based standards, Win32 has begun to spread beyond its home environment. POSIX and XPG standards were implemented on heretofore totally proprietary environments from Digital, HP, IBM, Stratus, and Tandem, among others. Now Win32 begins that trek. Recent Digital Equipment announcements have disclosed that company's efforts to put key Win32 subsets on both Digital UNIX and OpenVMS. Similar efforts appear underway at other Unix vendors. Win32 will spread - perhaps not as widely as POSIX, but with great effect. API compatibility does not lend the automatic benefits that accrue from binary compatibility. Skeptics can argue that API acceptance is as much a marketing gambit as a technical issue. And Win32 cannot replace Unix APIs, any more than Unix APIs are likely to replace OpenVMS and MVS APIs. Nonetheless, Win32 provides an appealing alternative for a large chunk of the market, stealing much of the thunder from Unix standards in the process.

### The game remains the same

It is ironic that customers over the last decade have increasingly eschewed IBM, at least in part a rebellion against proprietary hegemony. The rhetoric of neutral, openly defined standards providing comprehensive interoperability sounds good. But as with the United Nations, multilateral action has both its place and its limits. In practice we also need the coherence and drive that only unilateral action can consistently provide. Microsoft, long regarded as the gatekeeper to the PC space, is making itself into the new lodestone for the industry at large.

## HP TO INTEGRATE ODBC DRIVERS WITH SOFTWARE

Hewlett-Packard Co will integrate Visigenic Software Inc's ODBC Driver technology with selected software products and will license the Visigenic Software Development Kit (SDK) for its own use in building database-independent applications. The ODBC DriverSet, Microsoft technology which Visigenic licenses for all non-Windows platforms, will be embedded in HP products to give them seamless connectivity to multiple databases. The cross-platform DriverSet supports CA-Ingres, Informix, Oracle, Sybase 10, Sybase DBLib, Microsoft SQL Server and IBM DB2. HP will use the drivers in products for HP SoftBench, HP OpenView, HP WorkManager and HP Precision Engineering, HP's 2D and 3D mechanical design solution. Hewlett-Packard has yet to announce which products will be ODBC-integrated. HP also licensed SDK, a C/C++ developer kit supported by ODBC drivers, to create future cross-platform database-independent products.

## SYBASE SPINS DATA WAREHOUSE STORY

Sybase Inc fleshed out its data warehouse story last week, naming over fifty third party ISV's to a Warehouse Works programme. Sybase is offering-up SQL Server, Replication Server, Enterprise Connect and IQ Accelerator with Open Client and ~~Open Server API's for the job (UX No 516). It claims 125 tools~~ in the programme covering four data warehouse development areas; data transformation, assembly, distribution, and access. Companies which have signed on the line include Paris, France-based Business Objects SA, Austin, Texas-based Evolutionary Technologies International with its ETI-Extract Tool Suite for automating data collection, transformation and migration, and Platinum Technology's Redwood, California-based Trinzic Corp with Forest and Trees Decision Support System and InfoPump. On-line analytical processing software includes Cambridge, Massachusetts-based Pilot Software Corp's LightShip for performance planning and analysis, London, UK-based Holistic Systems Ltd's Holos multidimensional and analysis tool and Eden Prairie, Minnesota-based Prodea Software Corporation's ProdeaBeacon decision support tool. Other partners include Prism Solutions Inc, Apertus Technologies Inc and Cognos Software Inc.

## ELECTROGIG AND ILLUSTRATEAM ON VIRTUAL SETS FOR TV

San Francisco, California-based graphics house, Electrogig will integrate its GigTime Reality Tracking 3D animation and virtual set software technology with Illustrateam Technologies Inc's object-relational database and Visual Intelligence retrieval system. The result will be a Virtual Set Creation Management System which uses embedded objects to call and change virtual sets - the computer-generated backdrops used for in television programmes such as weather reports. ElectroGig's Reality allows the camera and the presenter to interact in a synthetic environment. The company hasn't got a release date, it only inked the deal two weeks ago, but expects a product by the end of next year. The privately owned company, originally based in Amsterdam, Holland, and now relocated in San Francisco employs eighty seven people. Visual Intelligence - which Illustrateam developed with Virage Inc, San Diego, California (UX No 533) - provides a system for retrieving images and video based on the image content rather than keywords. Meantime, Electrogig has ported its Reality Tracking Gig3Dgo and GigViz products to Hewlett-Packard Co and Axil Computer Inc workstations. Gig3Dgo is a 3D graphics software system offering basic modelling, rendering and animation. Gig3Dgo costs \$21,000 bundled with HP's 715/100XC workstation. GigViz provides animation for CAD and visualisation markets.

## ORACLE BEEFS-UP APPLICATION SUITE, ADDS SMART, THIN, GUI CLIENTS

Following the restructuring of its Financials, Manufacturing and Human Resources applications group, Oracle Corp has given the line a complete makeover and will add graphical front ends to each module as well adding eight additional modules to the existing 31. The SmartClient front-end runs on Windows, Macintosh or Motif, managing presentation, validation logic and cache data locally. It's now also using stored procedures over RPCs to access and process data rather than SQL statements. As well as reducing network traffic, Oracle says RPCs can initiate multiple database actions with a single call, a task which would require hundreds of independent SQL requests. The eight new application modules include Oracle Quality, which pumps data into a central repository, due in the fourth quarter of 1995. Oracle Service manages billing, sales and accounting and tracks product installations. It's due in first quarter of 1996. An extended Oracle Sales and Marketing for remote workers is due this quarter. Internet Commerce, providing Internet connectivity to applications is expected in the first quarter of next year, along with Oracle Applications Data Warehouse for multi-dimensional analysis and Oracle Workflow. Other modules include Business Analyzer from its recently-acquired IRI Software unit, which extracts Oracle7 data into a multidimensional engine for analysis.

### SPEC95 REDUCES OPTIMISATION OPPORTUNITY, BUT REQUIRES BASELINE PERFORMANCE CHECK

The Standard Performance Evaluation Corp will finally unveil its Spec95 microprocessor performance benchmark suites for ~~Unix systems on August 21st, with delivery expected 45 days thereafter.~~ In its new suite SPEC believes it has reduced the potential for optimisation - bending the rules - which has enabled vendors to tout super-charged results by exploiting weaknesses in the Spec92 feature set and weakening SPEC's claim to accurately reflect system-level performance. However, Spec95 still requires vendors to make available two sets of results, the first employing optimised compiler environments to achieve CINT95 and CFP95 numbers, the other, baseline results achieved on the same machine using less aggressive compiler flags. Meantime there's still no provision mandating vendors to publish baseline results alongside bigger numbers derived from optimised environments. CINT95's eight C programs - up from six in Spec92 - include measures for JPEG compression, object database work, game-playing and artificial intelligence. The floating point set has been reduced to a set of 10 Fortran programs, including a routine measuring 3D performance. Each program has to run at least three times and a median taken for the result. Input/output parameters have been removed to reduce distortion, SPEC says. The group has also replaced Spec92's reference platform, the DEC VAX-11/780, with a Sun SparcStation 10 Model 40 with no L2 cache. It means the 20-odd Spec95 system results published on the 21st will range from 1.0 (for the for the SparcStation 10/40), to about 9.0 at the high-end. DEC's 300MHz Alpha 21164 is currently the highest performer at 330 SPECint92 and 500 SPECfp92. An NT version of Spec95 is underway - SPEC has offered Spec92 for NT since last year - and the group will work to port the rest of the benchmark tools, now all written in Perl, driven by market demand. SPEC says it'll encourage vendors to report Spec95 and Spec92 results for systems until it stops selling the Spec92 suite next June.

### HP PRECISION RISC SUPPORTERS CLUB GETS NEW BOSS, NEW SPONSORS

The watchword at Japanese companies appears to be that you can't take too many RISCs on board, and following its February decision to abandon the high-end Mips Technologies Inc R-series RISC servers it had been developing and adopt Hewlett-Packard Co machines to fulfill the rising demand for client/server systems from its Japanese mainframe base (UX No 525), NEC Corp has joined HP's PA-RISC supporters club, PRO, the Precision RISC Organisation as a sponsor member. Under their agreement, NEC is developing and manufacturing next-generation large scale servers with HP - bringing its mainframe technology to the party - and is OEMing HP 9000 servers running HP-UX, primarily for its home market. Although NEC is one of the leading fabricators of the Mips R-series RISC, its interest in Precision Architecture is clearly in part because its own V-series microprocessors are derived from Intel Corp's iAPX-86 architecture. As Precision Architecture will merge with the successor to iAPX-86, NEC gets in on that bandwagon by the back flap (*see page 2*).

#### Member of PRO

Meantime, Mitsubishi Electric Corp has stepped up its membership dues and now weighs-in as a sponsor member of PRO too. The company OEMs and integrates HP workstations and servers as part of its mainframe replacement solutions. Mitsubishi was a Xerox Corp mainframe licensee and toyed with becoming an IBMulator. PRO has also got itself a new chairman and president in the shape of Jim McCabe, formerly manager of HP's strategic alliances group. James Bell is stepping down after three years in the job. PRO counts French company Allegro Consulting CS, Convex, HP, Hitachi, Information Builders, Innovus, Interex, Kelly Computers, Mitsubishi, NEC, OKI Electric, Oracle, Rational, Samsung Electronics, Stratus Computer, Winbond Electronics, Wind River Systems and Yokogawa Electric as members.

### NOW CA WINS SUN FOR NETWORK AND SYSTEM MANAGEMENT UNDER ONE HOOD

Computer Associates International Inc's CA-Unicenter systems management software is a hot property these days. With Hewlett-Packard Co and Microsoft Corp already under its belt, ~~the company last week scooped-up Sun Microsystems Inc's Solstice flavour of network management,~~ saying it'll manufacture an integrated product combining CA-Unicenter with SunNet Manager using CA-OpenIngres as the distributed management repository. Both companies will sell and support the product - which hasn't been named - through their existing channels on Sun's Sparc, x86 and PowerPC cut of Solaris (2.5), saying first implementations will be out by year-end. CA-Unicenter and SunNet Manager will be accessed through a single interface and the companies claim the two together will equal more than the sum of the individual parts. Pricing, set at \$20,000 on Sparc, was still being finalised at the last minute, causing Sun chief Scott McNealy to do a double-take as he read his script; "\$20,000 on Sparc? Well the price has plummeted since I got out of the helicopter three minutes ago!" he exclaimed.

#### Future revisions

Other pieces of Solstice, including Cooperative Consoles and Enterprise Manager will be added to the bundle in future revisions and the two say they'll be working to integrate a host of products over time under their wide-ranging agreement. They will accommodate a customers' supplier preference where one exists, and where their respective technologies overlap, in areas such as software distribution, will work with whatever a user already has, or let it make the choice. They'll even work on non-CA-Ingres installations, but admit integration will be limited in these cases. CA-Unicenter is already available standalone on Solaris 2.3 and up. CA says it's right to think of the CA-Unicenter-SunNet Manager bundle as the functional equivalent of its CA-Unicenter for HP OpenView product, and claims channel issues required the creation of a new product name for the HP work. CA expects further integration of systems and network management environments under one hood, with a single logical model for administrators the desired net result.

#### IBM fruit on the tree

IBM Corp's NetView environment is of course the biggest network management fruit still on the tree, though IBM's quickly wrapping it with its own SystemView management cloak. CA says it's talking to IBM about what they could do together, but wouldn't comment on reports which reached us last week suggesting that a CA-Unicenter-NetView tie-up is already a done deal. CA, quickly ramping a \$500m systems management business, is rapidly establishing CA-Unicenter up as the de facto Unix industry standard, challenging the likes of Tivoli Systems Inc's TME, supposedly the basis of X/Open Co Ltd's embryonic systems management standard, and OpenVision Inc. Rival database houses Informix, Oracle and Sybase hang their hats on the Tivoli peg.

### POSTMODERN DEBUTS CORBA 2 ORBELINE, WORKS ON TP SYSTEM WITH HITACHI

As indicated (Ux No 550), Mountain View, California-based PostModern Computing Technologies Inc is one of the bevy of companies bringing Corba 2 architectures to Object World this week. Orbeline, which supports OMG's Internet Interoperability ORB Protocol (IIOP), now includes smart proxy agents, pre- and post-method filters, a facility for loading objects from persistence storage, compiler generated streaming operators, IDL datatypes to I/O streams and exception handling, the company says. In addition it supports shared memory and includes extensions to the interface repository for reuse and OMG C++ mapping. Up on SunOS, Solaris, SCO, NT and Win95 now, with HP-UX, AIX, DEC OSF/1 and SGI Irix ports due, Orbeline for Unix is from \$5,000 with \$250 runtimes - \$1,000 on PCs with \$150 runtimes. Meantime, Hitachi Ltd has snagged PostModern to work with it on a Corba-based transaction processing system using OMG's object transaction service, due by mid-1996.

### **HCL BEANSTALK IS FIRST INDIAN DOMESTIC MULTIMEDIA MACHINE**

Hewlett-Packard Co's Indian partner HCL Corp Pvt Ltd, the New Delhi company that opened for business in the US a few years back hoping to sell Unix systems, has unveiled the first domestic multimedia system with features tailored specifically to the Indian market. The former Hindustan Computers Ltd calls the machine BeanStalk and says it can be used to send electronic mail, teach nursery rhymes and pick up yoga lessons. HCL expects more than 1m Indian homes to have a computer within four years and said the flexible BeanStalk can be a tutor, a public platform, a library, a video disk player, a debating forum, a publishing society, an answering machine, a software vendor and even a recording studio. BeanStalk will also be usable as an Internet terminal when state-run overseas phone company Videsh Sanchar Nigam Ltd begins offering Internet access next month. The computers are being made by the HCL-Hewlett-Packard Ltd joint venture and cost the equivalent of from \$1,600 to \$3,200.

### **NCD CALLS IN INSIGNIA SOLUTIONS TO HELP WINDOWS-X WINDOWGRATION**

Insignia Solutions Ltd has really cornered the market in Windows emulation software, and Network Computing Devices Inc, Mountain View has turned to the High Wycombe, Buckinghamshire company for help in developing software that will enable Windows and Windows95 applications to run on X terminals and other X Window-capable desktop machines including Unix workstations and Macintosh and Windows personal computers. The product, already under development, uses Windows NT servers to run off-the-shelf Windows 3.11, Windows 95 and Windows NT applications from any desktop in an enterprise network. The new product will enable multiple X Window-capable desktops to share a Windows NT server simultaneously without having to upgrade the desktop or buy a separate personal computer, the companies say. Because the product uses the standard X protocol to talk to remote terminals, it supports existing X terminals, and will be the first completely open systems-based offering to support both 32-bit Windows 95 and 16-bit Windows 3.1 applications to any X Window-capable desktop in the enterprise, the partners claim. The product is being optimised specifically for local networks to provide up to Pentium-class graphics performance for high-end applications. A product announcement is set for later this month; both firms will sell it.

### **COMPUTER 2000 TO PAY \$50m FOR 62% AMERIQUEST STAKE**

Computer 2000 AG, Munich has now come with a firm revision of the terms under which it will take control of fellow distributor AmeriQuest Technologies Inc, Santa Ana, California, and will now acquire a 62% stake in the former CMS Enhancements Inc, paying \$50m for the stake. Computer 2000 will also take management control of the company by appointing its own chief executive and chief operating officer. Computer 2000 management board member Steve DeWindt will become chairman and chief executive at AmeriQuest. He had been head of marketing and distribution at Computer 2000. Mark Mulford will become president and chief operating officer; he had been managing director of Computer 2000's largest foreign unit, Frontline Distribution Ltd here in the UK. Frontline has appointed Graham Watt, Frontline's Finance Director and Alan Mack from sister company, Datech as joint managing directors.

### **MASSIVE INTEREST IN MASSIVELY PARALLEL MACHINES**

The vast majority, 88%, of data processing managers have been evaluating massively parallel processing for commercial data processing this year, says Gartner Group Inc, which asked 30,000 managers about parallel processing. It explained the interest as a factor of the high cost of using legacy systems for stuff like decision support and data warehousing. It reckons users can expect a return of up to seven times on their investment in parallel processing over a five year period - five times over two or three years. But Informix Software Inc believes customers are still far more likely to choose symmetric multiprocessing over the massively parallel variety for their high-end requirements, because the latter represent a substantial administrative overhead.

### **INTERNIC MOVES TO RESOLVE DOMAIN NAME CLASHES**

Do you have an Internet domain name registered in the US? Is it possible that it is the registered trademark or service mark of another company? If so be prepared to lose that name. The increasing number of disputes where Internet domain names clash with trademarks has forced the body which allocates names to abandon its strict first come, first served policy. Its new policy also clears the way for trademark holders to challenge existing owners of domain names. Network Solutions Inc (NSI) of Herndon, Virginia runs the InterNIC domain name registration service under a cooperative agreement sponsored by the US National Science Foundation. The InterNIC handles all the US domain names - those ending in .com, .edu, .org, .net, .mil and .gov. Previously, requests for domain names have been granted without much thought to trademark ownership - the general policy has been that disputes should be resolved between trademark and domain name holders, without intervention from the InterNIC. The new policy, which came into force on July 28th outlines a formal way in which the disputes can be resolved. Should someone prove to NSI that they hold a trade or service mark identical to a domain name, NSI will ask for similar proof from the domain name holder. If this is not forthcoming, then "the holder of the domain name will be allowed a reasonable period of time to transition to a different domain name." The disputed name then gets placed on a "hold" list, unused by anyone until the courts resolve the dispute. There have been a number of high-profile disputes over domain name registrations in the past, perhaps the most infamous being the tussle over ownership of mtv.com. However the actual policy change comes in the wake of acrimonious dispute over knowledgenet.com. The trademark owners started a legal battle against the domain name owners and cited NSI as codefendants. In the end, the dispute was settled out of court, with the trademark-holder getting the domain name. David Graves, NSI's Internet Business manager, said he knows of a dozen on-going disputes over ownership. NSI handles around 600 registrations a day and some users worry that NSI's new policy will open the flood-gates to a host of litigious trademark owners determined to get their hands on relevant domain names. However Graves believes the number of disputes was inevitable and defends a neutral policy to balance the interests of trademark and domain holders.

### **QUIX COMPUTERWARE SAID TO HAVE MAC OS VERSION FOR IBM POWER SERIES**

Despite all the incompatibilities between IBM Corp's PowerPC-based Power Series personal computers and the Apple Computer Inc Power Macintoshes, there is a version of Mac OS that runs on the IBM machines. According to the October edition of *MacWorld* magazine - these monthlies work to long deadlines - a tiny Swiss company called Quix Computerware AG, based near Zurich, has done a version of Mac OS to run on the IBM machines. *MacWorld* says it tested Quix's adaptation found "near flawless compatibility". Problem is that it requires the Mac ROMs, so Quix cannot develop or market computers based on the modified software without permission from Apple. Apple had not supported Quix's work, but IBM is interested in it, *MacWorld* says. Apple said Quix had demonstrated its work to Apple and the two companies are talking further. The company, which employs just six people, worked with Apple several years ago to put Macintosh System up on the 68000-based NeXT Computer Inc workstation line.

### **GENERAL MOTORS TO SPIN OFF ELECTRONIC DATA SYSTEMS TO CLASS E HOLDERS**

Electronic Data Systems Corp is to become an independent company once more: General Motors Corp announced that it will spin off the company to its Class E shareholders in a tax-free exchange of shares. The spin-off is subject to a favourable vote by holders of General Motors common stocks. The Class E shares rank pari passu with all other classes of General Motors shares in any vote, restructuring, break-up or liquidation, but the dividend they pay is tagged to the performance of Electronic Data Systems. General Motors would continue to retain the company for all its information technology needs. Target date for the separation is the first half of next year. General Motors may take a one-off dividend from Plano, Texas-based Electronic Data Systems ahead of the spin-off.



## MICROTECH RUSHES TO COMPLETE VRTX FOR POWERPC AS EMBEDDED MARKET GALLOPS TO THE MOTOROLA RISC

Late last month, Microtech Research Inc issued a profits warning. The company, responsible for the VRTX Virtual Real-Time eXecutive embedded operating system was quite clear about the reason. Its market is shifting rapidly towards PowerPC and the company will not have a PowerPC version of the operating system until the end of the year. Consequently, the Santa Clara, California-based company said to expect only moderate first quarter profits on net sales between \$10.8m and \$11.4m. Traditionally, VRTX has encompassed Motorola Inc's 68000 family and Intel Corp's 80960 and iAPX-86 processors. It appears that Motorola has been particularly successful in weaning its developers from embedded variants of the 68000 to the new RISC. "The move actually started happening much faster than we had anticipated," admitted vice-president of marketing Gail Hamilton. "A lot of what we see in the PowerPC market is happening worldwide in areas like the telecommunications and datacommunications market" she said. Similar noises were made by Munich-based Force Computers GmbH, which last week announced its CPU-60xRT and IBC-60x VME/PCI PowerPC boards, optimised for high-end real-time systems. "About 90% of our customer base are asking about PowerPC," said Roland Chochoiek, manager of business development at Force. Both Ms Hamilton and Chochoiek ascribed the interest to a combination of a marketing blitz, mainly by Motorola, and the actual price-performance ratio of the chips. But like Ms Hamilton, Chochoiek said the speed of uptake is surprising.

### Strictly limited

However, this enthusiasm for PowerPC is strictly limited to the lower end of the embedded market where the likes of VxWorks, PSOS+ and LynxOS run. High-end real-time business, currently Sparc-based will remain on Sparc and Solaris, Chochoiek said. The main issue is application support. Force quite simply said that Solaris has the broadest spectrum of off-the-shelf applications of any Unix, it's the preferred Unix in the embedded market, and that is quite simply that. Chochoiek wasn't impressed by AIX's attempts to enter the sector, in fact, he sounded dubious about AIX's long term ability to survive at all. Force collaborated with Geneva-based Creative Electronic Systems SA to build the PowerPC-based boards, which are based on either a 66MHz 603 or a 100MHz 604. The Swiss company has particular expertise in building PCI/VME hybrid boards, according to Force. The CPU-60xRT is a single board computer with a single VME slot. It has SCSI 2, input-output and Ethernet on board, and has one expansion slot for a PCI Mezzanine Card. Its direct 64-bit VME interface to the PCI local bus gives it the highest performance PowerPC/VME interface today, according to the company. The IBC-60x is similar, except it has support for two PCI Mezzanine boards.

## TIVOLI FISHES FOR PRODUCTION CONTROL APPS WITH NEW APIs

Looking to get more ISVs hooked into its Tivoli Management Environment (TME), Austin, Texas-based Tivoli Systems Inc is creating Tivoli/Plus software interfaces for linking production control applications to the distributed management architecture. Helpdesk, job scheduling, backup/restore and security software can all be managed from TME using the API, Tivoli says. Tivoli/Plus modules integrate launch and alert/event sharing and other functions across TME and the application environment. Tivoli claims to have thirteen ISVs developing to the modules, including Remedy Corp, 4th Dimension Software and Unison Software which are readying fourth quarter technology releases. Axent Technologies, Dazel Corp and Legato Systems Inc are set to follow. Tivoli/Plus Modules go from £7,000 per application.

## SUN FOUNDER BECHTOLSHEIM DEPARTS TO FOCUS ON GRANITE SYSTEMS

Sun Microsystems Inc co-founder Andy Bechtolsheim has resigned to concentrate on his Mountain View, California networking start-up Granite Systems (UX No 539). Bechtolsheim built the original Sun workstation while he was still at Stanford working on his PhD. He left Stanford in 1982 to form Sun along with Bill Joy, Vinod Khosla and Scott McNealy. It was Bechtolsheim that championed Sun's open computing approach based around Unix. Granite is expected to concentrate on local area network switching technologies, and will likely be in competition with its near neighbours Cisco Systems of Menlo Park and Bay Networks Inc of Santa Clara. Initially there will be five employees, according to Reuters.

## INFORMIX EXPANDS ITS DATA WAREHOUSE STORY, WITH UK CENTRE OF EXCELLENCE

Informix Software Inc is spending hundreds of thousands of pounds to establish, at its UK headquarters, an Information Superstore, dedicated to data warehousing. As it sees its rivals Oracle Corp and Sybase Inc refining their data warehouse offerings, Informix, which marked out its data warehousing stake before the others, is upping the ante by creating an environment where potential users of data warehouses can investigate which tools and hardware would best suit them. And the company hopes the superstore will act as a springboard from which it will gain access to the large companies with which it has hitherto had little success. In addition to the superstore there will be two smaller, but similar, centres in the City of London, one of which will display an application for a specific financial market niche; the other will have generic applications for the entire financial sector and telecommunications company. In the latter, AT&T Global Information Solutions, and one as yet unnamed company, will provide the hardware. Partnerships are key to Informix's ability to offer a total warehousing system, as they are to Sybase and Oracle, and the company has rallied to its cause, and the superstore, a selection of software and hardware vendors so that it can showcase what it describes as 'best of breed' data warehouses. Those signed up are AT&T Global Information Solutions, Hewlett-Packard Co, Sun Microsystems Inc and Pyramid Technology Corp for the hardware; SHL Systemhouse Inc and Data Sciences (UK) Ltd as integrators; Prism Technologies Ltd, Information Advantage Inc and Business Objects SA for software. But conspicuous by their absence are IBM Corp and ICL Plc, both of whom have been touting their massively parallel machines as ideal for data warehouses. Informix said it is talking to both about getting their kit into the superstore. The superstore in Feltham, Middlesex will offer education workshops, data warehouse audit and application testing, and charge on a range of scales. For example, potential customers of an Informix-based warehouse would be charged less than people that simply wanted to use it as a benchmarking facility. But the company does not expect to make money out of the superstore although companies using it to develop warehouses based on databases other than Informix will be charged a premium that "would make it cheaper to buy an Informix database." The centre will be linked to remote sites throughout Europe for demonstration purposes, and there are plans for similar superstores in Munich and either Paris or Madrid.

## DATA MINING COMPANIES MAKE GOOD

As is the way with marketing bandwagons, the term "data mining" has now been appropriated by just about anybody with any kind of data analysis tool, no matter how basic. Many of the more specialist data mining tools remain largely unknown in the general marketplace. But three data miners that have now begun to make a mark, attracting deals with some of the larger players in the industry, are Angoss Software, Information Discovery Inc and MicroStrategy Inc. Angoss has recently signed a deal with Cognos that will see its KnowledgeSeeker software technology embedded into PowerPlay and Impromptu. The Canadian company, based in Markham, Ontario, has also signed a worldwide distribution agreement with Tandem. KnowledgeSeeker uses artificial intelligence techniques for data analysis and prediction, and runs on DOS, Windows and Unix. A multi-processor version is due out later this year. Information Discovery Inc, of Torrance, California, says its IDIS Information Discovery System will view data automatically, form hypotheses, and test them over and over again until hard rules emerge. These can then be used for decision support and predictive models. IDIS runs on PCs, Sun, HP and IBM Unix platforms, and Unisys Corp are now recommending it as one of the decision support tools for its recently launched Opus parallel server. They expect a more formal marketing agreement to be signed shortly. And MicroStrategy, from Vienna, Virginia, has signed an alliance with Software AG. Its DSS Agent software will be bundled in with Software AG's Esperant SQL-based query and reporting tool.

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**Software AG** is shipping SourcePoint, which it says automates the simultaneous extraction, transport and loading of data warehouses. SourcePoint extracts can be written in the Darmstadt, Germany-based company's own Natural, as well as Cobol and C programming languages. SourcePoint is up under Unix, MVS, VSE and Windows at from \$30,000.

**Compagnie des Machines Bull SA** is dumping the whole of its Latin American business into a joint venture with its Brazilian partner **Algar Group Ltd**. The agreement sets up a new corporate entity called **Algar Bull Computer & Communication Ltda** to regroup and manage "the companies of both groups operating on the information technology market" in Latin America. The company will focus on information technology products and systems integration, and will have revenues in 1995 of \$200m, the communique said.

Despite the howls of anguish from Ivrea when we originally ran the story, **Ing C Olivetti & Co SpA** is still thought to be seeking a strategic ally for its loss-making personal computers unit although an outright sale is thought unlikely, analysts told *Reuters*: "A joint venture with an Asian producer is the most likely outcome," said a Milan equities analyst who declined to be named - "an alliance could turn the business round at a single stroke," he added. **Hewlett-Packard Co** has also been mentioned as a possible partner for the business.

Meantime, as we have been reporting, **IBM Corp** has been considering buying into or acquiring **Apple Computer Inc** ever since the end of 1990, and but according to *Reuters*, it finally came quite close last summer. The newswire quotes an IBM executive who declined to be identified saying that after high-level talks, the company decided against the acquisition. He says the strategic talks between top officials at both companies and an intermediary firm broke down after IBM decided Apple did not have enough to offer. "We were in talks last summer," the official told *Reuters* - "But we decided we already have a number two operating system so why buy another number two system," he asked.

Reasons to be cheerful, **Lotus Development Corp** version: *InformationWeek* cites a "Lotus source" giving seven reasons why Lotus employees should feel good about vanishing into **IBM Corp**: Lou Gerstner thinks we're cool; generous employee discounts on IBM 3090 mainframes; we're now bigger than Microsoft; Armonk "isn't just our new corporate headquarters, it's a great mantra, too;" IBM's corporate slogan ("Think") is easier to remember than the 10 Lotus operating principles; business attire is always optional on Thomas Watson's birthday - and, just do the maths - IBM paid over \$600,000 for your butt!

X Business Group parent, **Zona Research** said the X terminal market reached \$292 million in the first half of 1995 - shipments declined 5% and revenues shrank 10% over the same period last year. Zona attributes the decline to lower-volume shipments to key customers who accounted for high sales last year.

**Sun Microsystems Inc** has taken **Applix Inc's** Applixware office automation software for use internally. Sun will look at enhancing Applixware's extension language facility for building reports and queries.

There's talk a lot of people at **Novell Inc** will be bailing. Reportedly Patrick Smythe, director of UnixWare product marketing is going to DEC in September to do high-level Unix marketing for it.

**DEC** is holding itself noticeably aloof from the 11 companies joining together this week at Object World for the CORBA 2 interoperability demo. It's said it's because of its **Microsoft Corp** alignment and the misbegotten notion that DCE will triumph in the long run. Meanwhile, **NeXT Computer Inc** may join the interoperability party at the last minute.

Folks close to **Novell Inc** say there were rumours of the Provo, Utah-based company dumping Unix six months ago - *see front page* - when it was a toss up whether the recipient would be **Hewlett-Packard Co** or **IBM Corp**. OS/2 might have been more interesting then.

Even Kanwal Rekhi, the guy who ran Unix for **Novell Inc** after ex-Novell CEO Ray Noorda bought it from AT&T's Unix System Labs, says the company has to do something about the current state of its Unix affairs (*see front page*). But although he's still on the Novell board, he claims to have heard of nothing afoot. Rekhi who retired last year and is trying stay that way at least for a while, is the first to admit the mistakes it made and his partial responsibility for them; he helped mastermind the takeover of Unix in the first place. Noorda, he says, did know what to do with it, that Novell should never have gone for the desktop or brought UnixWare out before its time or set up the Univel distribution organisation which was a disaster.

Word reaches us that the **Mips Technologies Inc** R10000 CPU is now sampling. At present the CPU is being put through its multiprocessing paces and is running Oracle7 to examine database operation. Mips reckons it's on target for well over 300 SPECint92 and 600 SPECfp92, with the first R10000-based systems due by year-end.

**Pyramid Technology Corp** has promoted its technology labs boss Rich Hammons to VP and CTO, reporting to Raj Nathan, VP product technology.

**Software Research Inc**, San Francisco, California, has a new 5.1 release of its Capbak/X X Windows-based capture/playback testing tool. 5.1 offer object, as well as TrueTime and Character Recognition Mode testing. The ObjectMode records widget activity directly from the GUI; the character mode passes screen contents through an optical character reader. The tool is \$4,370 or \$7,000 as part of the company's STW/Regression testing bundle.

Providence, Rhode Island-based **Cadre Technologies Inc** has announced VantageTeam, a model-driven development environment for generating and maintaining Informix-based enterprise applications. It generates object-oriented NewEra and Informix 4GL applications and supports code generation for C++, SmallTalk and Ada applications. Its up on Solaris, SunOS, HP-UX, OSF/1 and AIX workstations. Prices start at \$7,000.

Cupertino, California, **Prism Solutions Inc** is installing its data warehouse management and development software (UX No 537, 546) in Price Waterhouse's thirteen Advanced Software Engineering Centres.

**IPL Systems Inc**, Maynard, Massachusetts, already tucked-up in Oracle Corp's business alliance programme (UX No 543), has gone to Informix's InSync solutions alliance and will deliver RAID solutions for large Informix application users.

And then there were seven; the On-line Analytical Processing Council (OLAP) has added Ottawa, Ontario-based **Cognos Software Inc**, to its roster.

**Novell Inc** is now shipping a UnixWare 2.02 update which includes IHV Host Bus Adapter and Network Interface Card Support drivers and tools.

Meantime, **Novell Inc's** Unix supporters club, the UnixWare Technology Group, is offering a new general membership category for ISVs and integrators and developing interest in UnixWare.

Rather later than expected (UX No 532), **Compagnie des Machines Bull SA** has created that single systems and services organisation in the US to peddle products from all of its divisions, as well as its Integris unit, direct to customers in North America. VP and general manager of US sales Patrick Mansfield will head the unit that'll report to Axel Leblois, president and CEO of Bull HN Information Systems in Billerica, Massachusetts.

**Unisys UK** has been lining up a decision support software portfolio for its Opus Parallel Unisys Server, and has entered into partnerships with Business Objects, DM/Backup Software, ESP, Gupta, Information Builders, Legent, Pioneer Systems, Prism, Powersoft, TechGnosis, TeamQuest Corp, Red Brick Systems and Oracle Corp. Future partnerships - including one with data mining specialist Information Discovery Inc of Torrance, California for the IDIS product - are expected.

**Open Software Foundation** says it's still collecting signatures for the CDE Next joint development agreement, the second rev of COSE's Common Desktop Environment (UX No 549). It expects to announce plans for the Unix interface the week beginning August 21st.

**DEC's** paying **Expersoft Corp** to put its XShell 3.5 object request broker-cum-object management environment up on Alphas running Digital Unix, apparently due to customer demand. We assume Expersoft's next-generation Corba 2 PowerBroker (UX No 550) will roll over to the Alphas too, though how it plays alongside DEC's own Microsoft-friendly ObjectBroker ORB strategy isn't clear.

Santa Clara, California-based **Rational Software Corp** will offer Version 2.0 of its Apex Ada development environment in September from \$22,000 on DEC, HP, IBM and Sun workstations.

**Legato Systems Inc's** NetWorker for Unix network storage management software is now available with a \$1,500 SNMP module and support for Aix 4.1.2.

We learn from folks in Europe that **Oracle Corp** shunned reporting TPC-C numbers for so long until three weeks ago (UX No 548), because of technical requirements to do with isolation that meant Oracle databases didn't run very fast. Oracle had wanted TPC to change the rules to improve its standing but TPC, whose spec was laid down ages ago, declined. Oracle has apparently resolved its technical bottleneck.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram·X

The weekly information newsletter for the UNIX™ community worldwide

London, August 21-25 1995

Number 552

## SINGLE SET OF 64-BIT UNIX INTERFACES AGREED BY 50

After all this time, Unix vendors are still struggling to achieve greater commonality between their various implementations. Now Intel Corp and Hewlett-Packard Co have identified the move to 64-bit architectures as the next opportunity to push things further along. The pair have initiated a new cross-industry effort to specify a standard 64-bit Unix application programming interface specification, winning the support of some 50 Unix vendors, including IBM Corp, Fujitsu Ltd, ICL Plc, Sun Microsystems Inc and the three big database vendors, Oracle Corp, Sybase Inc and Informix Corp. Phase One of the effort, the basic specification, will be completed by year-end, with phase two by the second quarter of 1996 adding support for "enterprise" features such as Distributed Computing Environment/Open Network Computing interoperability, backup and systems management. A common 64-bit C programming model for data representation will also be included, and the results will be endorsed by X/Open Co Ltd as a standard. The participants insist that the effort will complement existing programming interface standards such as Spec 1170, and the benefits will rub off onto the existing 32-bit Unix spec: Donna van Fleet, head of AIX at IBM called Spec 1170 "a beginning point, not an end". Initially, the database firms have most to gain from the move. Intel says it is just acting "as a neutral facilitator". (*Analysis page 5*)

## HP TOUTS NEXT AS ITS KEY PLATFORM FOR DISTRIBUTED OO

As part of the broader alliance it's working-up with NeXT Computer Inc (UX No 544), Hewlett-Packard Co appears to have delivered a blow to its Taligent Inc investment, characterising CommonPoint as the route object customers should go if they want to retain compatibility with IBM Corp environments. NeXTStep (or OpenStep as it will soon become) should be used for doing distributed object development, HP said at Object World last week. HP says Taligent - due on HP-UX mid-1996 - is of primary importance to its mainframe alternative programme. It says IBM is touting Taligent's cross-platform functionality as a way of keeping customers on Big Blue kit, telling them they'll also have the option of running applications on HP boxes. Meantime, HP says its discussions with NeXT will likely see it begin selling versions of NeXT's Portable Distributed Objects engine, Enterprise Objects Framework and application environment running on HP-UX. NeXT currently supplies its integrated Mach OS and NeXTStep environment natively on HP PA-RISC and Intel platforms. As part of any wider agreement, HP is also seeking closer integration between NeXT technologies and its own management services and development tools such as OpenView and SoftBench. HP denies claims that its NeXT/Taligent/Distributed SmallTalk/ORB-Plus object strategy is unfocused or its business model over-stretched. It says it's simply taking advantage of other companies' trail blazing market development and R&D dollars (ie NeXT, IBM and ParcPlace), leaving customers to work with whatever object systems they feel comfortable with. HP says it'll spend out to add other transport mechanisms such as HP OpenMail or IBM MQ Series to existing technologies over time.

## MORE VCS JOIN IN OLTP MONITOR QUEST

The tom-toms say that Kleiner Perkins Caufield and Byers isn't the only venture capital outfit interested in acquiring either Tuxedo or Top End. The drums also say that it hasn't just dickered with AT&T GIS and Novell. It's also chatted up Transarc Corp and Peerlogic Inc. Unfortunately the drums get very faint at times and we can't make out the names of the other two VCs but a name we do hear is Independence Technologies Inc. The colour of the money that seems to be involved is a low-ball \$15m-\$50m when AT&T, which might understand the implications of a Top End, is more likely to want in the \$100m-\$300m range. Since even VCs have a limited amount of money, it sounds like it's going to wind up an incomplete pass.

## APPLE DELAYS UNIX SERVERS - UNTIL EARLY NEXT YEAR?

Apple Computer has completed a long-running internal debate over its position on Unix. As previously reported, the well-publicised wrangle about desktop Unix culminated in a decision to scrap development. However it seems there has also been an internal debate about whether to proceed with a Unix server. Previously we reported that Apple would announce Unix servers during the first quarter of 1995. Now sources say there is unlikely to be any such announcement until November or December, and they probably will not ship until the beginning of 1996. Indeed, sources say the whole development did not become a "committed funding project" until this summer. Apple is still committed to building its own server hardware, and this is pretty much ready to roll. It is the software that has caused problems. Apple seems to have junked its relationship with the PowerOpen Association, the body charged with specifying a standard Unix for all PowerPC platforms. Initially, Apple intended to get source code through the Association, but has now struck a deal to take AIX source code directly from IBM. The process of developing and testing AIX is responsible for the hold-up in producing the servers. It is thought that Apple has two high-end pieces of hardware waiting in the wings, codenamed Milky Way and Andromeda. One or both is supposed to be a symmetrical multi-processing box. They are meant to have storage bays with hot-swappable media, lots of PCI expansion and support for RAID level 5 disks.

## UNIX: ALL OPTIONS UNDER DISCUSSION

Speaking to *Unigram.X* last week, Hewlett-Packard Co's Bernard Guidon confirmed that a plethora of wide-ranging discussions about the future of Unix were underway between his company and Novell Inc, as we have suggested, but denied there was anything substantive in place yet. Rumours had HP acquiring Unix (UX No 551). Without identifying what was on the table, he noted that the wishes and concerns of other vendors such as Sun and IBM had to be taken into account and that any agreement to unburden Novell of its load will also have to be acceptable to Unix trademark owner X/Open Co Ltd and the Open Software Foundation. Guidon suggested that the price of taking on Unix in terms of any payment to Novell and the R&D burden it would have to take on would be too high. There's not enough of a strategic reason, he said, for HP to acquire Unix, claiming that it was ahead of the pack now without having that cross to bear. He agreed that some form of consolidation is inevitable - and that consolidation is what Intel Corp, which supposedly was urging HP to acquire Unix, is interested in - but that the form of such a consolidation has yet to gel. He's sure Novell is offering Unix and associated technologies in many different combinations and to many parties.

### Deja Vu

Meanwhile, suggestions have been raised that HP may be considering buying out its royalty stream just like Sun did while old Unix hands say they are beginning to get a slight sense of *deja vu* and are reminded of the early days of the Hamilton Group, which eventually become the Open Software Foundation. Perhaps Unix will wind up in a consortium somewhere. To be fair, the Unix industry in its pell-mell rush to get the news of its 64-bit alliance out into the open for whatever reasons compelled it, probably seriously underplayed or didn't explain at all the importance of the whole thing. If you think about it, the hardware side is now leagues ahead of the software which is stuck in a bog someplace and has been for the last couple of years. But the hardware side can't deliver such a brave new world of stuff like doing all our business over the Internet without the software, and the hardware side also can't sit around waiting for Microsoft to catch up - although it surely will in time. The hardware folks right now need to take their best shot with the more advanced operating system even if that means plucking it out of that bog before it gets sucked under. Now's also about the right time for Intel and HP to make their move if they expect to have something ready for their chip, given the three-year design-in cycle it minimally takes.

### HP 3000 CO-EXISTENCE PLAN TO MAKE MPE LIVE MORE HAPPILY WITH UNIX SYSTEMS

Hewlett-Packard Co has announced the HP 3000 Co-existence Solution Strategy, a set of enhancements and guidelines intended to make its HP 3000 operating system, MPE, even easier to integrate with Unix systems. MPE gets more and more like Unix with each release and this strategy focuses on customers with HP 3000 systems that are not ready to rush headlong into migration to Unix but want to have Unix system-based applications co-existing with their current kit. HP 3000's interoperability and data exchange capabilities with open operating systems, including HP-UX and other Unix systems, has been extended. Other changes deliver industry-standard Unix system-based services to the MPE/iX operating system, while others expand on the functions of the HP 3000. An integrated MPE/iX print spooler delivers basic connections between HP 3000 and TCP/IP network printers, enabling HP 3000 users to print to any Hewlett-Packard laser printer connected via a JetDirect interface over TCP/IP networks.

#### World Wide Web server

The Internet HyperText Transfer Protocol is available as freeware from Hewlett-Packard and enables the HP 3000 to be used as a World Wide Web server without any additional hardware. The company plans to introduce "inetd" and "bootp" capabilities, which are currently common to Unix, to MPE/iX to extend security and configuration flexibility over networks. There is also a C++ compiler, the Free Software Foundation's GNU C++, for MPE/iX, which gives application developers an object-oriented tool. Cognos Software Inc, a Hewlett-Packard Channel Partner, has introduced its Axiant graphical user interface-based client-server application development system for use with HP 3000; applications developed using Axiant can be deployed initially on personal computers, with the HP 3000 as a database server. Customers can also deploy applications on the MPE/iX server and across both clients and servers. Additionally, as promised back in February, HP 3000 customers can now use the Distributed Computing Environment, which gives them access to heterogenous networks while keeping existing data and applications on their HP 3000s. The company described the DCE/3000 software as expanding HP 3000 client-server offerings, making it easier for such systems to be integrated into heterogenous, enterprise-wide client-server environments. Also part of the strategy, the company has pulled together products that make it easier to access databases in different systems. Oracle Corp's Transparent Gateway for the Image/SQL database integrates data from Image/SQL into Oracle's distributed database system, making it possible to access Image/SQL data on an HP 3000 from an Oracle application running on a Unix box. The company also expects Sybase OpenClient and OpenServer to be available to MPE/iX customers in first half 1996. HP OpenView OperationsCenter has been made easier to integrate: installation has been automated and network-level enhancements that are important to MPE/iX system managers have been added. MPE/iX software now includes variables that can be used to control log-ons at an IP-address level. System managers will be able to see who is connected to their MPE/iX systems, and better manage inbound and outbound sessions over the network, promises Hewlett-Packard.

### HP TURNS IN STUNNING Q3

Shares in Hewlett-Packard Co climbed sharply after the company again managed to exceed higher than-expected earnings and orders soared a whopping 34% in the US and 35% outside for a total of \$8,000m - and this at a company already heading for \$30,000m turnover this year. Analysts said the consensus share earnings estimate on Wall Street for the third quarter had been \$1.01 a share so the \$1.09 reported was stunning. The shares added \$3.25 at \$81.125. "It was an excellent quarter in most respects," said Lewis Platt, Hewlett-Packard's chairman and chief executive. "Order and revenue growth was outstanding, helped in part by the timing of some product introductions, which mitigated the impact of normal seasonal factors. This quarter's outstanding order growth puts us in a strong position as we start the fourth quarter," he said. Inventory growth in part reflects efforts to increase supplies to meet demand. "We'll continue to work closely with suppliers to address this issue," he said. He added that the company's sales were growing "faster than many markets we compete in." Computer business orders rose 39% to \$6,300m. Third quarter net profits soared 66% at \$576m on turnover that climbed 28% to \$7,739m. At the nine-month mark, net profit rose 56% to \$1,755m on turnover up 25% to \$22,471m. Net per share rose 65% to \$1.09 in the quarter, 55% to \$3.34 in the nine months.

### EXPONENTIAL WORKING ON POWERPCs

San Jose-based Exponential Technology Inc is working on a variant of the PowerPC processor that would "be complementary to anything on the PowerPC roadmap". Beyond that, sales director Ivonne Valdes was a model of restraint, declining to comment on the company's core activities, who its key staff are, or what the products may be. "We are a really exciting company - but not quite yet," she said. The company joins a select band of organisations that have been licensed to build microprocessors to the PowerPC architecture. In addition IBM, Apple and Motorola, Bull, Thomson, Hitachi and Toshiba all have the right to build chips, according to an IBM spokeswoman. But it is unclear whether these companies will be allowed to offer chips on the merchant market, or whether they are solely for internal consumption. Sister publication *Client Server News* has been watching Exponential for a while and believes it is designing silicon for Apple Computer. That would make sense - Apple has the right to do its own thing with PowerPC, but doesn't have much in the way of silicon design skills. The paper further believes that Motorola was considering fabricating the chips for Exponential, but has backed away. A Motorola source told PowerPC News that the company had indeed been engaged in talks with Exponential about something, but that nothing came of them. The IBM spokeswoman declined to confirm that Exponential is licensed to build chips: "Since PowerPC is an open architecture, we continue to have discussions with a variety of companies about PowerPC licences. Where we see a need or a market opportunity not met by one of the core PowerPC microprocessors, we may explore discussions with a company to enter into some type of relationship to fill that need or seize the opportunity," she said. Exponential's Valdes says the world won't see the product of its PowerPC work this year.

### SEQUOIA'S NEW LINE OF PENTIUM BOXES

Up to now, Marlborough, Massachusetts-based Sequoia Systems Inc has majored on 68000 family processors for its fault-tolerant Unix machines, with an unsuccessful foray into Precision Architecture, but its acquisition of Texas Microsystems Inc took it into the iAPX-86 camp, and it has now come out with a line of enterprise servers using 100MHz and 110MHz Pentium processors, aimed at the Pick database environment. The Sequoia Enterprise Server models 100 and 110 are aimed at the low end of the server business. They also represent a departure in that they make no pretensions to being fault-tolerant - not too surprising with a base price of \$8,000, but Sequoia says it will increase the fault-tolerance in future members of the family.

### ODI REORG AS SMALLTALK TEAM WALK

As expected (UX No 547) Object Design Inc (ODI) is reorganising in the wake of its financial losses last year and the sudden departure of much of its San Mateo, California-based SmallTalk development team. The team, five or six in number, delivered ODI's SmallTalk client back in June (UX No 541), and more recently began working on a 4GL project. An ODI spokesman said the developers had left to form their own company. Only two remain, and will transfer to the company's Burlington, Massachusetts headquarters, while the West Coast sales and marketing team stay in San Mateo. It looks likely the company will also lose acting CEO Phyllis Swver-ski, brought in when former CEO Ken Marshall was made chairman. Her short term contract is up in the next week or two, and its looks unlikely to be renewed. President and founding member Jerry Bay will take up day to day duties until a replacement is found. In the meantime the company has been undergoing a 'business re-engineering' project for the last five months. Greg Barzay, previously responsible for engineering operations will head up a combined engineering and product management division, with sales, marketing and customer support going to former senior VP of sales, Bob Potter. The idea is to make ODI more responsive to local customer needs. Lay-offs will be US-based and will account for 12% of the company's workforce, or 32 jobs, leaving 230 people employed worldwide. The job losses will be in sales, marketing and administration. It insists its business is growing 50-60% in revenue per year and still intends to issue an IPO next year. It also expects to be adding components to its ObjectStore Component Architecture, including a performance tuning tool due out in 1996. ODI reckons it gave Object World in San Francisco a miss last week, as it's like "bombing the rubble", and instead is concentrating its marketing efforts at the mainstream database market.

### CDS SELLS INTERNATIONAL OP FOR \$34m

In a story most people appear to have missed, Control Data Systems Inc is currently engaged in selling off what appears to be most of its international operations to acquisition hungry AmeriData Technologies Inc of Stamford, Connecticut for \$34m in cash. *Reuters* first reported the story back in April. AmeriData has formed its first international subsidiary, InterData Inc, to oversee Control Data operations in Canada, Mexico, the UK, Austria, Greece, Italy, Portugal, Spain, Norway, Taiwan, China and Malaysia. The deal should be finalised this month. In recent years, CDC has retreated from the hardware business into systems integration.

## SUN BUILDS HIGH-SPEED INTERCONNECT FOR THOUSANDS OF NODES WITH LSI SERIAL LINK

Some of it's already been described in other places, but it's worth looking a little closer at a new serial link implementation called S3.MP Sun Microsystems Inc has rustled-up in its labs. The aim, according to Jeff Rulifson, director of technology development at the company's SMCC hardware arm, is to deliver gigabit bi-sectional bandwidth across a mesh of up to 4,000 workstations networked using a low-cost interconnect; Cray supercomputer-type performance at workstation cost, according to the marketing spin. The network, in this case Sun's existing fibre technology, links hundreds or thousands of nodes supported by an ASIC allowing them to cooperate with few of the overheads associated with conventional parallel techniques. *Wired* magazine recently likened those overheads to committee processes which run slower and slower as more people are added because more time is wasted trying to organise everyone.

### Real estate

The serial link itself was developed by Milpitas, California-based LSI Logic Corp, which has reduced what would until now have called for a board-level solution using nine expensive Gallium Arsenide chips, down to an inexpensive two-chip CMOS ASIC set. A single chip can both transmit and receive instructions and is part of the LSI mission to deliver system-type functionality at the chip-level. Sun, which is LSI's first public licensee for the technology - the chip-builder claims a bunch of others under NDA - designed an ASIC around the serial link to meet its hardware requirements which LSI is fabricating in 0.6 micron technology. Because it takes up the real estate equivalent of only 5,000-odd gates on a microprocessor, Sun expects the technology to be hosted directly on the CPU in future. LSI is focused purely on the serial link, everything else above it is the licensees' concern. LSI will produce other versions for the general market using its 0.5m process by the end of the year. The technology is described as a 16-bit serialiser/deserialiser accommodating copper or fibre connections; LSI says it'll develop compliance with emerging Fibre Channel Association standards. The routing chip itself does all the check sum and dynamic routing and interfaces directly to the memory bus. It has two parallel interfaces and four serial links to the parent machines passing messages at speeds between 200 nanoseconds and five milliseconds. As such LSI says the link can be used just as well by servers - reducing clutter on the backplane - as in routers.

### Future requirements

Although Sun will give the technology to universities to play with, it isn't clear whether S3.MP will become a commercial product. There's understood to be "enormous discussion" going on within the company about where it should go for its future shared memory interconnect solution. The issue concerns requirements much further out than the big-pipe, multi-node solutions expected for initial generations of UltraSparc systems (UX No 550). It's not simply a question of choosing a new big bus either, the company emphasises, pointing to the fact that at 1Gbps S3.MP already runs at least three times as fast as solutions such as Tandem Computers Inc's 300Mbps TorusNet (UX No 547). All traditional message-passing and shared memory mechanisms will fall by the wayside over time in any case, argues Rulifson, who foresees a future in which network controller chips will pass object message bindings between object-oriented kernels on each node at gigabit speeds with no global cache coherency or a full-scale shared memory model. It's the kind of route that IBM Corp will likely take with its SP parallel processors, Rulifson says, adding that there are already two or three programming models supporting S3.MP. Other stuff Rulifson's team is working on include techniques to bring the cost of MPEG 2 encoding systems - currently at the \$200,000 to \$300,000 mark - down to \$100,000 or less, and radio-type LAN and WAN connections.

### HYPERSPARC AT 200MHZ

Fujitsu Ltd's Ross Technology Inc unit is upping the Sparc ante once more, winding clock speed of its HyperSparc RISC to 200Mhz. The two-way superscalar iteration - Colorado IV - is done in 0.35 microns and comes with 512Kb or 1Mb secondary cache and 16Kb on-chip cache. Ross claims the part will deliver UltraSparc-level performance - it estimates 235 SPECint92 - but has no floating point numbers. Tape-out is in six weeks with samples expected for the first quarter of next year. Meantime the 150Mhz HyperSparc is now in production, performing 180 SPECint92 and 245 SPECfp92 with 512Kb L2 cache.

## NEXT LEAPS ABOARD THE INTERNET WITH WEBOBJECTS...

Steve Jobs' NeXT Computer Inc leaped aboard the Internet bandwagon last week with WebObjects, programming tools to help companies design complex Web services and tie them into corporate databases, which it claims enables users to automate the process of creating Web pages. The company says Web Objects reduces the time taken to a tenth what it takes now. It is due in the first quarter of next year. WebObjects consists of a WebObjects Framework, Web server software, Enterprise Objects Framework (EOF), the Portable Distributed Objects (PDO) object model and Secure Sockets Layer security. PDO is the company's object database engine uncoupled from the NeXTStep interface and allows Unix or NeXTStep objects to co-exist on multiple systems. It's at the heart of NeXT's operating system-independent OpenStep implementation of the NeXTStep application environment. EOF is used to hand-code persistent objects from Oracle and Sybase relational database elements. It uses a relational wrapper library which maps tables to simple objects. EOF applications can be deployed across DEC, HP and Sun servers running their native operating systems with PDO on top. Using WebObjects, corporations can "easily" build applications without having to use the Common Gateway Interface and complicated Perl scripts, the company says. WebObjects is aimed at corporations interested in constructing complex Web sites that facilitate electronic commerce, dynamic data publishing or internal distribution, providing an alternative to their current in-house tools; it is claimed to be the only offering on the market to enable rapid construction of applications that are integrated into existing databases and corporate systems. WebObjects adds a dynamic HyperText Mark-up Language presentation layer to data stored not only in object-oriented applications, but also in industry standard relational databases. WebObjects is designed to enable standard Web browsers such as Mosaic and Netscape to access powerful Web applications running under Windows NT, Solaris, SunOS, HP-UX, Digital Unix and the NeXT MachOS server operating systems. And through NeXT's new Distributed OLE for Windows (D'OLE), WebObjects can communicate with OLE/COM objects so Windows applications can share information with Web-based applications, accessing data in Object Linking & Embedding-based applications such as Excel, and exchange that data with Web clients on any system, NeXT says. WebObjects will be available through NeXT's professional services organisation within 60 days, as a stand-alone product early next year. The company is also offering a new 3.3 version of its NetInfo framework for deploying NeXTStep applications across networks, with enhanced scalability, binding, diagnostic messaging and administration tools. It's priced at from \$500 for departments, \$1,000 for corporate servers.

### ...CORBA 2.0 DUE MID-1996 IN PDO 4.0

Meantime, NeXT Computer Inc says it'll develop Corba 2.0 compatibility in PDO 4.0, a new version of the object engine and request broker at the heart of OpenStep, the evolution of NeXTStep. The company is currently extending PDO's bridge mechanism with the aim of providing seamless interoperability between OpenStep, OLE/COM and Corba objects. PDO 4.0 is due in the second half of next year. PDO, which has already been stripped out of NeXTStep to run on Solaris, HP-UX and Digital Unix will also go up on Windows NT from next quarter as D'OLE - Distributed OLE for Windows - with a Windows 95 release to follow. NeXT says that'll provide communication between OpenStep and OLE objects. EOF for Windows 1.1 goes up at the same time. The first release of its next-generation environment, OpenStep for Mach 4.0, is due in the first quarter of next year; OpenStep for Windows 4.0 follows in mid-1996.

## SCHEERDER STEPS IN AS KANNEGAARD QUILTS SUNSOFT PRESIDENT ROLE

Jon Kannegaard, president of SunSoft since mid April, up and relinquished the job the same day he was busy answering questions about this 64-bit API business. Sun immediately moved Janpieter Scheerder back to SunSoft to replace him. Scheerder had been in charge of SunSoft's Solaris Products Group but went to Sun's hardware arm as VP and general manager of the Network Servers and Information Products Group when Ed Zander moved from the presidency of SunSoft to the presidency of Sun Microsystems Computer Corporation (SMCC). Kannegaard only gave "personal reasons" for his action and it is believed he may have just decided the job was not for him. At this point he is staying with Sun in some sort of a technology evaluation and acquisition role. Sun may prove to be happier with Scheerder, a veteran of Data General and erstwhile vice president of Aviiion System Engineering, because he is thought to be more aggressive and decisive. Sun is currently looking to replace Scheerder who was responsible for all of its servers and storage products.

### LIGHTHOUSE READIES ANALYSIS TOOLS FOR NEXT

NeXTStep developer Lighthouse Design Ltd, San Mateo, California, is readying new ObjectPlan analysis and design tools for OpenStep and NeXTStep that'll ship in the second quarter of next year, including Booch, Rumbaugh, use case and entity-relationship modelling extensions to its existing Diagram! design product. As well as graphical analysis and design, ObjectPlan will provide code generation and reverse engineering features. Integration with Next's ProjectBuilder and SunSoft Inc DOE will follow. Lighthouse is now also shipping version 2.0 of its OmniWeb web browser for NeXTStep, capable of viewing documents stored in Adobe's Portable Document Format, and release 2.0 of its Quantrix multidimensional spreadsheet.

### ROGUE WAVE WINS SUN, SNI, SGI FOR STL C++ IMPLEMENTATION

Some folks at Object World last week were wondering whether the establishment of Hewlett-Packard Co-derived Standard Template Library (STL) containers as an ISO and ANSI standard for storing C++ object classes won't harm Rogue Wave Software Inc's business in that area. The Corvallis, Oregon company hit back by signing SunSoft Inc, Silicon Graphics Inc and Siemens Nixdorf Informationssysteme AG as OEMs for its Standard C++ library, which includes STL. Rogue Wave will build future versions of its Tools.h++ C++ development environment (which SunSoft, SGI and SNI already use) upon STL; Standard C++ is the migration route up to those future versions, the company says. Rogue Wave's also release Net.h++, a development environment for creating applications that run in mixed Unix, Windows and NT environments across TCP/IP networks. The company claims applications written using Net.h++ are protocol independent and cross-platform. It includes a C++ implementation of the Berkeley socket interface and three architectural layers - communication adapter, portal and communication services - which provide object programming modules at low, middle, and high levels of abstraction depending on requirement. Net.h++ is up on Sun and HP Unix and Windows NT at from \$500.

### DATA GENERAL AViiON 10000 SCALES TO 32 PROCESSORS

Data General Corp is taking its AViiON server line up into the stratosphere with the launch of the AV 10000 symmetric multiprocessing server that scales to 32 processors, doubling the peak performance of the current 16-processor AViiON AV 9500 system. The new boxes, due in December, feature the initial incarnation of the company's Non-Uniform Memory Access 'big bus' architecture which, along with Intel Corp's future P6 and P7, the company is betting its future on. DG claims 1Gbps over the backplane and 400 Mb per second I/O bandwidth, up to 3.5Gb RAM and support for 10 terabytes of disk. For even higher levels of performance and availability, the AViiON systems and DG/UX Unix operating system provide DG/UX Clusters, which enables multiple systems to appear as one system to users and system administrators to ease data access, system management and software upgrades. Aimed at the high-end database market the Motorola Inc 88110-based AV 10000 starts at \$590,000 for a 16-processor configuration; 32-processor systems start at under \$1m.

### THINK SYSTEMS REVS OLAP TOOL

Parsippany, New Jersey-based Think Systems Corp has announced version 4.0 of its FYI Planner on-line analytical processing tool for logistics, sales and marketing and planning and forecasting. Functional enhancements include faster access to the FYI proprietary database and support for TCP/IP, SPX and NetBios, with the server running as a Novell Netware Loadable Module. Data can be copied to Windows applications supporting DDE (Dynamic Data Exchange) or OLE (Object Linking and Embedding). FYI Planner has embedded SQL links to Sybase and Oracle. The client is up on Windows and Macintosh now, with a Solaris version due next month, HP-UX support in October, AIX in November and NT thereafter. Prices go from \$50,000.

### INFORMIX NEWERA REPOSITORY DUE WITH VERSION 3.0 FOR WINDOWS 95 AND NT IN Q1

Informix Software Inc has pushed delivery of the Versant Object Technology-based NewEra repository out to the first quarter of next year when it'll likely debut as part of a 3.0 release of the front-end client-server development tool on NT, Windows 95 and international character sets. Last week the company released new versions of its ViewPoint and ViewPoint Pro graphical access tools, providing access to non-Informix databases, including Oracle and Sybase over ODBC, and to DB2 implementations through a new version of its Gateway with DRDA software. ViewPoint is \$300 - ViewPoint Pro is \$500 - on Windows now, with Sun, HP and IBM Unix implementations due later this quarter. Despite these capabilities, Informix says it'll continue to press the infant development system on to its installed base, where the 20,000 or so seats it already has accounts for only a few percentage point of the 500,000-odd installs the company now claims for its database. Version 2 of NewEra's server class libraries, bringing full application partitioning to the toolset will roll-out in September. At Object World last week Informix was talking to three ORB suppliers, a couple of which it expects to partner with. Informix says it's after the VSAM and CICS developers who've been told to go to client/server and objects and who are in pain. Casting itself as a component builder, the company says it doesn't expect object technology to turn into another CASE or repository war amongst the database community.

### SUN UK PITCHES FOR LAN BUSINESS

Sun Microsystems in the UK is so confident about the recent additions to its SolarNet PC networking software, Solstice systems management and SunLink wide area networking communications, that it is touting fully integrated hardware and software packages to Enterprise PC LAN users, as an alternative to NetWare 4 and Microsoft's NT. Sun UK, which says that up to 65% of sales to new accounts are now in the commercial server arena rather than workstations, groups the packages into three types: Application Server, LAN Server and Communications Server, and lumps in the two existing Netra packages (aimed at systems management and Internet server applications) for good measure. There's nothing really new about the packages, other than the marketing and training that Sun is giving its sales force and channels, and they don't approach the ease of use achieved by the Netras themselves. The hardware base depends on the power required for individual installations. But Sun thinks it is in for a big share of a fast expanding business, and has geared up four of its major UK resellers to help with the push: Business Systems Group and Computacenter Ltd, both of London, Simmons Magee of Richmond, Surrey, and Technology Plc of Manchester. The list will be expanded. Sun worldwide is said to be watching closely. Sun claims that the rival Netware 4 still has no support for applications serving (and won't have until UnixWare is integrated), while NT is hamstrung through its lack of a Global Naming Service. Hot tips for future Netra "plug and go" packages are dedicated Oracle and Notes servers.

### TALIGENT ADDS C++-TO-RDBMS LINK

It won't be until the middle of next year that Taligent Inc's CommonPoint application environment will be able to exchange objects with non-Taligent environments across heterogeneous systems. Meantime the company's CP Professional development environment is now out at 15 beta sites and will ship in the first quarter. Taligent claims 50 ISVs, six integrators and enough funding to see it through to 1997. Last week the firm snapped-up Milpitas, California-based Sierra Atlantic Inc's Object Gateway, which it will integrate into CommonPoint as Object-SQL-Mapper, allowing application to update relational databases using C++ instead of SQL. Taligent has also packaged up a new bundle of services and products, offering consulting, education, one copy of IBM Corp's CommonPoint for AIX development kit, five copies of IBM's CommonPoint application environment, a copy of TakeFive Software's Sniff++ browser, one copy of OpenObjects' Look! debugger and a Netscape browser from \$40,000 for one development seat - \$12,000 for each additional seat.

## UNIX UNITY: THE 64-BIT API

by Maureen O'Gara

It must be the summer miasma that impells the Unix business on its seasonal lurch toward "unity." Why else - forgive us for being jaundiced but we've done this before - would it round up the usual cast of characters, get them to agree to some vague charter, then set them down to spout platitudes before the international press corps about how commonality and convergence - this time better and more substantive than ever before - are again within reach? This time the instigator appears to be Intel Corporation supported in its endeavour by, its chip partner, the Hewlett-Packard Company. Apparently they started off modestly enough with the notion of creating a standard 64-bit API so they'd eventually have a decent enough number of applications to run on the P7 or whatever it is these days that they call the 64-bit silicon platform they're building together, for in true Unix fashion they can't seem to agree on a name. Anyway, why this issue in particular became a matter of moment right now when, let's face it, the chip is not exactly around the corner, is something their colleagues are still scratching their heads over. Remember now this thing they originally had in mind was, shall we say, an Intel-only affair, but after Unix' diffident owner Novell sat down at the table followed by other Intel-only vendors like AT&T GIS and Unisys, they realised that they were missing half of the business. Well, that wouldn't do so it became a cross-platform initiative and that meant rounding up IBM and DEC and Silicon Graphics and Sun. If it wasn't cross-platform then Unix would look fragmented and hand the moral high ground to Bill Gates, and no one wanted to get left out lest Unix look fragmented and hand the moral high ground to Bill Gates. So they drummed up some kind of draft technical spec, which they then deny actually exists, because there's no real agreement and skip over process because they don't have one, and run it up the flag pole on a moment's notice before any enterprising journalist accidentally stumbles over their conclave. We gettin' this right, guys? Anyway, there yer have it now. In the name of making life easier for ISVs, particularly the database three, Oracle, Sybase and Informix, to add value and get to market rather than spend all their time tweaking their programs on myriad Unix platforms, in the name of ignored users everywhere who have talked themselves hoarse begging for a common operating system, in the name of outrunning the Microsoft juggernaut, the Unix industry says it's going to come up with a 64-bit API even though, as one of them volunteered last week, the world is still trying to digest 16-bits. It will come as extensions and additions to the 32-bit Spec 1170 which, by the way, nobody conforms to yet two years after it was created. It means 1170 will eventually become Spec 1270 or 1370 or something, because they're going to push into virgin territory and start spec'ing DCE and ONC interoperability and systems utilities such as backup, recovery, archiving and systems management, stuff they call "enterprise issues." The basic spec is supposed to be worked out by the end of the year; the enterprise stuff by the end of the second quarter. Lots of luck. The part we liked the best was Intel cast as "neutral facilitator" and a natural for the role of "program manager." The downside to all this goodness is the same risk the industry runs every time it tries one of these gambits: further fragmentation. Unless it steps lightly over of some of the issues immediately raised by a 64-bit API, it will fractured further. And it's also possible that the spectre of the Intel-HP alliance, driven home by this initiative, could create breakaway axes like, say, Sun and IBM. The first puddle to negotiate concerns the 64-bit C programming model for data representation that's on the agenda. Reportedly DEC got it put back on the table as a condition to joining after it became clear that the Intel-HP-Novell crowd or ILP party was hell bent on specifying 64-bit integers rather than the more gentle and gradual 32-bit integers beloved of the LP set represented by SGI and Digital who have a vested interested by being the only out there purveying 64-bit systems today. In another setting, DEC once made it clear that anything was negotiable except this one point and although it's apparently willing to be reasonable there is a limit. Whatever process they come up with - and companies like DEC are very concerned that there will be one though a meeting held last Tuesday in between press conferences did nothing to advance things - it seems they will stay outside any of the consortia and only turn the spec over to X/Open for ratification after it's all decided. Of course they promise to be backward compatible and compliant with Posix, XPG4 and SVID.

## OBJECTIVITY 3.8 ADDS REPLICATION FOR HIGH-AVAILABILITY - KILIMANJARO ON HORIZON

Following the trend towards fault-tolerant software solutions, Mountain View, California-based Objectivity Inc is offering a Fault Tolerant add-on option on top of a new 3.8 cut of its Objectivity/DB database. Critical enabling technology is a new feature in release 3.8 which supports automated recovery from a hardware failure, rolling back transactions and freeing-up locks if the system dies. Only limited partitioning was previously available. The Fault Tolerant option requires no change in the programming model and existing applications can also take advantage of the option when they move up to release 3.8. Objectivity's offering comes hard on the heels of rival Versant Object Technology Corp's Fault Tolerant Server module (UX No 542). Objectivity says its fault tolerant technique, which replicates processes, lock servers, data dictionaries and catalogues across distributed instances of the database, is fundamentally different to Versant's approach, based on duplication of data, which Objectivity claims not only impairs read performance - it also has to write all data twice - but can also put the integrity of data at risk. Under the Versant model, Objectivity explains, production and failover versions of a database serving local clients could get out of sync if the WAN separating them goes down. Clients local to the production system notice nothing wrong and continue to log transactions against the production database. The transactions don't make it to the duplicate database because the WAN is down. Over a LAN too, only one point of failure would be tolerated under the Versant scheme, Objectivity says. Hardware-based, fault-tolerant solutions - duplicated CPUs, RAID or uninterruptible power supplies - would be far more appropriate to use in the situations, Objectivity says. Its mechanism allows any instance of a database distributed over an enterprise network to know where any piece of data is stored, but only records key information - such as account balance in an ATM environment - at each site. Historical account information would be held only on at a local site under its model. If the network goes down, local sites can continue logging transactions using data stored there and its locks and data dictionaries can be updated by (and update) the remaining instances of the database when it comes back on-line. The finer-grain solution will prove more attractive than Versant's approach, Objectivity argues. Up on most Unixes, NT and Windows from October, on VMS and other Unixes by year-end, Objectivity 3.8 is from \$3,000 for a single server. Upgrades are free to customers with support contracts. The Fault Tolerant option is from \$750. Meantime Motorola Inc has picked-up Objectivity/DB which it will use to develop the monitoring and controlling software for its Iridium satellite-based telephone system. Most of Objectivity's customers are using the database embedded within other application solutions. MIS simply isn't ready for object databases yet, it says. Objectivity is currently working on a new release of its core database due in the first quarter of next year. Dubbed Kilimanjaro - the mountain can be seen from a greater area than any other feature on Earth - the new release will provide continuous availability features as standard, the company claims. Much of the technology promised for a late summer 4.0 release was bundled-up in version 3.8, it says. The company is also working-up a Macintosh release of its database, though that's apparently not yet reached beta.

## NEW VERSIONS OF DEC MULTIA TERMINALS MAY BE ON THE WAY

We are hearing rumours that DEC is preparing to launch a "re-architected" version of its Multia PC/terminal hybrids that come pre-loaded with NT Client and allow access to Unix and legacy systems. The launch is due in around a month, say sources. A DEC spokesman claimed to know nothing about any such plans. The Multias were last updated in April with a faster (233MHz Alpha) chip and more networking and terminal emulation support. First announced last November (UX No 514) DEC claims that due to the length of technical adoption cycles, Multia is still in the pilot evaluation stage at the moment, with "100s" of pilot sites worldwide. The UK currently has around 4,500 Multias out at sites, mostly in financial institutions, where systems management and security are major issues. DEC says that it will respond to market demand over new versions of Multia, which could include Intel-based versions or support for other operating systems. It claimed, however, not to have seen those demands yet.

## ISIS AND IONA DELIVER FAULT-TOLERANCE FOR DISTRIBUTED OBJECTS

Marlborough, Massachusetts-based Isis Distributed Computing Systems Inc and Dublin, Ireland company Iona Technologies Ltd began deliveries of what they claim is the industry's first fault-tolerant object request broker as Orbix + Isis last week. The much-flagged development combines Iona's eponymous Orbix request broker with Isis' reliable software development kit, runtime and message distribution service (UX No 484). The two claim the combination - which cost something over \$1m to develop - will deliver fault-tolerant distributed object applications - or Non-Stop Corba as they put it - plus load balancing and parallel execution. Applications developed using the Isis kit have their key processes (objects) replicated on each node. If one node goes down, other process running on remaining nodes will keep applications afloat. Requests are re-routed to available servers. Isis manages the multiple copies using its own messaging protocol. It admits it could as easily run over DCE, but says it hasn't decided whether DCE is going to make it in the market yet. Essentially the Orbix programming model has been extended to accommodate the notion of object groups. The object groups implement Isis' concept of process groups on to Orbix application server objects. Orbix + Isis provides IDL-to-C++ translation so that client and server applications can be written to take advantage of the object groups. Developers create server objects using Orbix conventions and extend them to create the object groups. At Corba 1.2 now, the product will be revved for Corba 2 compliance, and "yes," Isis says of its kit, "it's a way to keep your applications up and running in environments with multiple NT implementations." Up on Unix initially at \$12,000, a Windows NT implementation will follow. Both firms will sell the package.

### Coy

Isis, which grew out of a Cornell University distributed computing initiative, was subsequently acquired by Stratus Computer Inc. It puts its software up against anything the hardware vendors offer for high-availability across distributed systems, arguing that with the Isis kit there is none of the downtime associated with having to bring a system up on another node. Isis is now at 85 people, up from 20 when Stratus bought-in a couple of years ago. It shares its office space with Iona's recently-created East Coast operation. The company is coy about three additional implementations of its replication technology promised by year-end, but claims to be working with Intel, Microsoft and the database vendors. Its success also reflects well on its troubled Stratus Computer parent, which is poised to search out other markets and business models given the anticipated long-term demise of its ailing fault-tolerant hardware business.

## TRANSARC EYES ORBs

Transarc Corp, IBM's Pittsburgh, Pennsylvania-based transaction processing monitor and Distributed Computing Environment company was sniffing around Object World last week eyeing up the object request broker vendors. It reckons folk will be using DCE over ORBs and has a bunch more integration work up its sleeve. Transarc, which now reports into IBM's UK Hursley Labs, expects to do \$43m in its business plan, and maybe up to \$48m, on Encina, CICS/6000 and associated DCE services, compared to the \$30m-odd it expects Novell Inc to do on Tuxedo. Meantime, there's little chance IBM will give Transarc's development to Hursley because it can build technology at around a third of Hursley's cost, the company claims.

## OUT OF THE CELLAR NEXT YEAR?

Much of the focus of this year's Object World was again on plumbing and competing object request broker implementations. With - hopefully - Corba 2.0 nailed down into products by this time next year, and full-blown object environments actually shipping, the industry should begin competing on the creation of real object-based applications and solutions, not just the utilities. Like many others, ORB house Expersoft Corp anticipates the time when an ORB connection becomes simply another standard socket on the back of every computer. Vendors at the show reported a general shift from "why should I use objects?" to "how can I use objects?" from attendees.

## FUJITSU RAMPS OBJECT CAMPAIGN WITH INTEGRATED DATABASE, DEVELOPMENT, ORB; SYMPHONET MANAGEMENT

With the Computer Associates International Inc alliance already under its belt (UX No 543), the recently-created object software division of Fujitsu Ltd's San Jose, California-based Open Systems Solutions Inc plans to build a business around an integrated object database (ODB-II) and high-level development system (IntelligentPad) integrated with an object request broker and services environment called ObjectDirector that calls for profitability by 1997. It's looking for other partners and more channels to raise its visibility in the US. Headed by VP and general manager Dan Fishman who developed Hewlett-Packard Co's Open ODB database out of the Iris object database - now known as HP Oadapter - the 30-strong unit's first task is developing the next generation of Fujitsu's Intelligent Pad visual programming system currently up on Windows, with Unix and Macintosh implementations underway. Applications are created using peel-on/peel-off components - tables, graphs, images, text - it calls pads, from a pad library or created using a procedure pad (UX No 499). Currently with its own scripting language, Fishman's team will make IntelligentPad more extensible by integrating Sun Microsystems Inc's Java and other tools. The Fujitsu and ICL Plc GraphicsPower C++ or Visual Basic environment already provides an interface builder for Unix or Windows applications. The Corba 2.0 object request broker component, already available in Japan, is expected to reach the US by the middle of next year. Meantime, the unit is also creating a management package code-named Symphonet, it says will bring mainframe management techniques to the client/server world using the Fujitsu ORB as its distributed mechanism. Symphonet will provide authentication, configuration, resource and peripheral management of PCs from Unix. It'll eventually put all of its stuff up on Windows NT too. Fujitsu's also looking at how its own object technologies, and those its ICL sibling sells can be unified around a single ORB mechanism.

## DEC ADDS NEW OBJECTBROKER PORTS, STILL SHY OF CORBA 2.0

DEC last week added four new implementations of its ObjectBroker object request broker, for IBM MVS, OS/400, Silicon Graphics Inc Irix (the port was done by Logica Plc) and Windows 95. The company says it will allow ObjectBroker to encapsulate applications on MVS servers with minimal source code changes and make them accessible from Visual Basic and other OLE tools and desktop applications. DEC will offer CICS and IMS object adapters for use with ObjectBroker over the next six months. DEC was also showing an early version of the next 2.6 rev of ObjectBroker which will include the DCE Generic Security Services API, permitting use of third party Kerberos packages with the ORB. 2.6, will include Corba 2.0 C++ bindings - or at least as much as is there now; DEC will fill holes in the spec with its own technology. 2.6 will allow remote access to unmodified Corba object servers from Windows 95 and NT desktops through OLE Automation, Controls and custom interfaces. What 2.6 won't achieve is Corba 2.0 compatibility. Version 2.6 will include the same DEC-proprietary RPC mechanism as in 2.5. The company says it will implement Corba 2.0's mandated IIOP protocol or the EISOP DCE-based subset - or maybe both - by the end of next year, though it says it isn't hearing any demand from customers and won't move until it does so. ObjectBroker 2.6 betas later in the Autumn and will ship in the first quarter from \$5,000 per Unix developer licence to \$150 for a PC client. Development and multiple client packages start at \$20,000. ObjectBroker on MVS starts from \$40,000 - runtimes are from \$9,300. No prices for the OS/400 version. Both are available now. DEC is gearing its Desktop Connection object browser and services to run atop Microsoft Network OLE from later next year. Meantime DEC has turned to I-Kinetics Inc, Burlington, Massachusetts, for access to Oracle and Sybase databases from ObjectBroker 2.6. I-Kinetic's RDBMS component will supposedly provide functionality equivalent to Oracle Objects for OLE or Microsoft Data Access Objects.



## BOTH DIGITAL VIDEO DISK NORMS STAND UP TO SCRUTINY

That ad hoc committee of computer majors - Apple Computer Inc, Compaq Computer Corp, Hewlett-Packard Co, IBM Corp, and Microsoft Corp, and Fujitsu Ltd and Sun Microsystems Inc, which joined subsequently - that took it upon itself to review and pronounce on the two rival digital video disk formats as they relate to computer applications has now come out with its findings, and does not come down unequivocally in favour of either. They do conclude that with some additional work, either the Multimedia Compact Disk format proposed by Sony Corp and Philips Electronics NV, or the Super Density format proposed by the group led by Toshiba Corp, could by itself satisfy all nine technical recommendations that the team released in May 3. But since there are still two formats instead of a single or unified proposal, it says, the first of the experts' recommendations - that there should be only one format - remains unfulfilled. To meet the needs of computer-based applications, both format specifications need further definition in two areas, it declares - read-write applications and cross-system interchange compatibility. The experts ask that the format owners continue working toward making their products satisfy all of the needs of computer-based applications, recommending that each group adopt the Optical Storage Technology Association's Universal Disk Format interchange standard for non-sequential recording of data, since with some additional refinements, this would enable full interchange compatibility between read-only and read-write products developed for both television-based and computer-based applications. In detail, the team says backward read compatibility has been demonstrated by both formats. The need for even the most basic digital video disk player or read-only memory drive to have capability to play back compatible content, irrespective of whether the content is presented as a CD-ROM, recordable read-write disk or recordable write-once disk is stressed. The team wants a single file system for entertainment and computer-based content and all types of disk, and therefore recommends against the ISO 9660 volume and file system for current CD-ROM and CD-R applications. This was designed specifically for pre-recorded disks. Instead it recommends the Optical Storage Technology Association-compliant domain of the ISO 13346 standard for volume and file structure of write-once and rewritable media using non-sequential recording for information interchange, with the restricted implementation informally known as "micro-OSTA" being adopted as the file system of even the most basic player. But to provide a bridge during the transition from ISO 9660 to OSTA UDF, the initial read-only media specification for any high-density compact disk format should include the volume and file system structures for both standards, it says. The team is happy that disks and drives will be cheap enough to make, and that neither proposal includes a mandatory caddy or cartridge, and it believes that the average number of uncorrectable errors per disk will match or be lower than that of current compact disk technologies.

## SGI EXTENDS SOFTWARE LEAD

With the acquisitions of Alias Research Inc and Wavefront Technologies Inc, Silicon Graphics Inc has extended its already giant lead, and the new Alias/Wavefront subsidiary has previewed its Project Maya software, special effects technology that will "set the groundwork for how digital media will be used," according to Silicon Graphics president Tom Jermoluk. "(Entertainment-based) business is growing 100% year to year," Jermoluk told *Reuters*. Project Maya, with initial products due in about a year, is designed to help bridge the gap between the artist and the computer, using tools such as a pen-based system to replace mouse-based graphic creation. Alias/Wavefront wants to speed the graphical interface, giving digitally-created characters more precise human characteristics - facial expressions and arm movements. It will spend \$10m to \$20m in research and development on Project Maya and will provide initial products free to its installed base to help migrate users into the technology.

## E&S BUYS INTO STRATA

Evans & Sutherland Computer Corp, Salt Lake City, Utah wants to see its high-end simulation and graphics technology exploited in the fun-and-games market, and has turned to Strata Inc, taking an undisclosed stake in the developer of "quality software tools for multimedia producers," and signing a technology co-operation agreement. The aim is to deliver high-performance software and hardware for modelling and rendering on both Windows and Macintosh machines for simulation, games development and multimedia applications." Evans & Sutherland has just launched Graphics for the PC, a low-cost board that provides three-dimensional graphics acceleration for personal computers running OpenGL graphics with Windows NT.

## SUN, IBM, MICROSOFT WANT TO BEST SGI IN HOLLYWOOD

Just as the Macintosh totally dominates the graphic arts business, so that there should always be a future for a smaller, more focused Apple Computer Inc if the Mac were ever knocked out of the mass market, so Silicon Graphics Inc looks to have an unstoppable lead in Hollywood - but rivals like Sun Microsystems Inc, IBM Corp and Microsoft Corp are all star-struck too, and *Electrical Engineering Times* reports that all three are making eyes at the movie moguls. Sun says its workstations are helping Walt Disney Co to produce the first completely computer-generated feature-length movie. IBM has turned an SP2 supercomputer in Hawaii into a part-time rendering farm, converting raw animations in fully-fledged digital images. And Microsoft, whose last such ambitious diversification, Microsoft at Work, flopped without trace, hopes to push its Windows NT operating system with the media-creation tools developed at its Soft Image subsidiary, into entertainment.

## TWO NEW POWERPCs SEEN FROM MOTOROLA, MORE ON 615

With Motorola Inc in on the party, the PowerPC family is evolving much more rapidly than ever it would have done had it all been left to IBM Corp, and as well as picking up on some new developments on the iAPX-86-emulating PowerPC 615 - in which Apple Computer Inc is said to be extremely interested, *MacWeek* hears of a PowerPC 604e, for extended, processor that Motorola plans to start sampling next quarter, and a 603++ for portables. On the 615, the paper hears that the chip can be instructed to perform at start-up time as a Pentium, as a PowerPC or as both processors at once - but the snag is currently that while when running as one chip at a time, performance is that of a high-end Pentium and of a PowerPC 604, when running in dual mode, performance is considerably slower - and fixing this problem means it will likely not ship until at least a year from now. It is pin-compatible with the Pentium and can be just "dropped into an Intel-class logic board, which clone vendors will love," a source told the paper. Apple is said to be looking to use it in a box conforming to the Common Hardware Reference Platform that it could ship by the end of next year. On the chip, IBM said only "emulation of existing architecture is important to us and we are doing a lot of important work on that in the lab." As for the Motorola 604e, it is said to start at 150MHz and will be smaller, cooler and less expensive than the standard 604, using fewer transistors and a smaller die size. It will have a unified slightly larger than the one on today's 604, and will be fabricated in Austin in 0.35 micron CMOS. Code-named Valiant or the 603++, the successor to the 603e is to ship in notebook and entry-level desktop systems by the end of next year, and was developed with significant input from Apple, *MacWeek* says. It will offer a larger cache than the 603e, while retaining the small size, low price and cool operating temperature, and likely start at 150MHz.

## GORDON BELL JOINS TO EXPAND DEC MAFIA AT MICROSOFT

Microsoft Corp already has Dave Cutler, who was responsible for VAX/VMS at Digital Equipment Corp, looking after Windows NT, and now it has increased its DEC guruage even more dramatically by hiring "father of the VAX" Dr Gordon Bell, former head of research and development at DEC to join the Microsoft Research Group. His responsibilities will include exploring the use of video and high-speed networks to expand and facilitate human-human interactions and to reduce physical travel. He will also continue his work on scalable computing. Bell will contribute to products not only in the applications and content group but also to projects in Microsoft developer and business systems divisions, the company says. DEC is now majoring on Windows NT as its flagship future operating system, and will soon be so dependent on Microsoft that it might consider merging with it.

## NCD WINS SAMSUNG FOR X TERMS

Network Computing Devices Inc, Mountain View, has won a major OEM order for X-terminals from Samsung Electronics Co Ltd of Seoul, South Korea. Samsung will market the HMX X terminals under its own name, and the agreement is estimated to be worth \$5m to Network Computing over the next three years. The two expect to sign further agreements on new hardware and software technologies.

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**Compagnie des Machines Bull SA** reported that turnover for the first half of 1995 fell 10.4% to the equivalent of \$2,515m; sales were up 3% at \$944m but leases and services plunged 12.2% to \$564.8m. It said that when the negative effects of currency are stripped out, sales fell 1.4% in the first half while sales in the second quarter rose by 10.8%.

**Intel Corp** has confirmed there is a new bug in some of its motherboards, only months after one found in its Pentium microprocessor cost the company more than \$475m. The bug in the RZ-1000 PCI controller chip made by Intel supplier **PC Tech Inc** of Lake City, Minnesota, produces data errors, and affects multitasking operating systems, but not Windows 3.1 or Windows 95, and is curable with a software patch. New motherboards with the Triton chip set are also not affected, the company said.

According to the *PC Week* gossip column, **Novell Inc** is seeking a buyer for NetWare for SAA, **IBM Corp** is rumoured to have bid \$150m for the gateway, but Novell is asking \$300m more than that. **Wall Data Inc** is also said to covet the product. Meanwhile, *Reuters* reports Dan Dorfman on CNBC as having heard a whisper that **IBM** has offered \$10.3bn for **Novell Inc**.

We hear on the grapevine that beleaguered **Open-Vision Inc**, which absorbed a pretty penny in its day - \$75m - trying to piece together a system out of a patchwork quilt of parts acquired during a corporate buying frenzy, has taken another hit. Dan Geer of Project Athena fame whose firm Geer Zelot was acquired by OpenVision in 1993 and who became its chief scientist last year, has moved on to **Open Market**, the Netscape-like start-up trying to make the Internet a commercial vehicle, an opportunity he could hardly resist. Geer has been a financial bulwark for OpenVision lately, heading up its security consulting arm.

**Pencom Systems Inc** has gotten the contract to port Notes to AIX on-site at **Lotus**. Meanwhile, it's rumored Pencom's year-old high-growth systems administrator outsourcing arm, believed to be doing about \$15m-a-year now, has cut a strategic alliance with **Tivoli Systems Inc**.

Could it be, do you suppose, that **Computer Associates International Inc**, having spent that amount of money buying Legent, may be a tad disappointed in what it actually got?

For some inexplicable reason, **Sun Microsystems Inc** stock set a new record last Wednesday, closing the day at \$57.50. Next morning when it opened it was still pushing up then we stopped following it. Our Wall Street cronies said it could either be what they called a "short squeeze" manoeuvre shaking out those who were short in the stock or simply perhaps a reflection of the sterling numbers **Hewlett-Packard Co** turned in that day.

Vicki Brown dropped us a note last week so we would be the first, she said, to know that she was no longer director of technical systems marketing or even - more recently - director of entry-level desktop product marketing at **Sun Microsystems Computer Co**, but had returned after two years to her old haunt at **IDC** this time as head of marketing. We'd hate her to know we already knew.

Fremont, California-based **Aries Research Inc** has released its Sparc compatible Marixx SS and SI systems configured with upgrade kits for single, dual or quad 125Mhz HyperSparc processors from **Ross Technology Inc**. A quad processor system performs at 13059 SPECrate\_fp92 and 11429 SPECrate\_int92. Shipping now, prices go from \$24,400 for quad upgrade kits, single kits go for \$6,800.

Several vendors we spoke to at Object World last week expressed concern over fragmentation in the object-oriented database world, where opposing forces, including the **Object Database Management Group**, Oracle's **Object Definition Alliance** and others are struggling for the high ground. They'd like the industry to mature around a Corba model and suggest a more rigorous user feedback loop at **OMG** might push the issue along.

Following the fashion for data warehousing programmes, **Hewlett-Packard Co** has fleshed out its own story, announcing the integration of **Oracle** warehouse products with its SureStore Optical Jukeboxes and OpenView OmniStorage hierarchical storage management (HSM).

**Hewlett-Packard Co**'s latest Windows-on-Unix effort - HP 500 Windows Application Server - is out of the gate (UX No 543). Thirty seat configurations with a dual 90Mhz Pentium Vectra that comes with 64Mb RAM, 1Gb disk SCO Unix and Locus Merge goes from \$24,500.

Wags were heard to describe the biggest news at Object World last week as no news: **SunSoft Inc** and **Taligent Inc** rented huge booths in anticipation of some major promotions but neither delivered. Taligent scrapped an event it had originally planned some days before the event. **Microsoft Corp** didn't even show, pulling out and forfeiting its fees just a few weeks before the show.

**Westmount Technology BV**, Delft, Netherlands is now officially **Cadre Technologies Inc**'s European HQ following its acquisition by the Providence, Rhode Island company. Westmount's tools, technologies and assists have been integrated into the Cadre line, including the VantageTeam database application development environment and ObjectTeam object development system.

**Rational Software Corp**, Santa Clara, California, has added version 3.0 of its Rational Rose/C++ development environment, which includes support for the Object Modeling Technique as well as Boch '93. Prices go from \$2,400 to \$8,400 on Sun, HP and IBM Unices and Windows from next month.

**Hewlett-Packard Co** wants us to know it's serious about object technology and is making a big deal of a US Object-Oriented Solutions Center it has created within the existing HP Professional Services Organisation, though it isn't saying how many staff are assigned to it, how many projects and customers it has under its wing, or how much funding it's got. The 'virtual' center will pull together object expertise from around PSO; Patricia Gill-Thielen is managing consultant of the center. European and Asia-Pacific object centers are planned.

**Object Management Group's** Corba 2.0 interoperability demo finally came together around 2am in the morning before the opening of Object World last week. The distributed application showcase featured a bunch of vendors calling each others' ORBs, sending and retrieving players' logon and score information from different games running at each participating booth. A central database stored details at the **OMG** stand. **PostModern Computing Technologies Inc** reportedly stepped into the breach and wrote the IDL using its ORBeline after **Genesis Development Corp's** attempt broke down.

**Apertus Technologies**, Eden Prairie, Minnesota has released Enterprise/Integrator, an object-oriented development tool for integrating data as part of its Enterprise integration suite (UX No 528). The tool can remove logically redundant data such as multiple instances of names and addresses and resolves value conflicts. It's up on HP and AT&T now, with IBM and Sun ports due by the fourth quarter. Prices for a three-user development seat go from \$130,000.

**IBM Corp's** Software Solutions division claims over 100 projects internal and external now underway devoted to object-oriented technologies.

**SunSoft Inc**, which now admits that until a year or so ago it had done a terrible job of trying to explain its object strategy, will be using its own object request broker to host the **NeXT Computer Inc** Portable Distributed Objects component of its OpenStep implementation. It's stripping the NeXT ORB out and isn't using **Iona Technologies Ltd's** Orbix either; it interoperates with Orbix to leverage the firm's OLE capabilities.

**Object Management Group** is getting ready to reorganise itself.

**Reuters Holding PLC's** Palo Alto, California-based **Teknekron Software Systems Inc**, a developer of tools for creating publish-and-subscribe and request-reply financial applications for Wall Street, has joined the growing Corba 2.0 chorus, adding an object request broker it calls ObjectBus to its existing Teknekron Information Bus technology. On Unix, NT, Windows and VAX/VMS, ObjectBus is from \$2,000 to \$8,000 depending on configuration.

**SCO's** merged IXI/Visionware unit will release Wintif 95, its Windows 95 terminal emulator on the 24th (UX No 540). It's based on the Motif toolkit, with code level modifications linking it to the Wintif library. Shipping in October on SCO, Sun, SGI and DEC, its priced at £555. Meantime SCO holds its annual SCO Forum bash in Santa Cruz this week, the 22-24 August.

**Hewlett-Packard Co** claimed to us last week that PA-RISC backward compatibility issues raised by its so-called H1/Tahoe chip development project with **Intel Corp** (UX No 551) have already been resolved and that the two are already working on other unspecified concerns.

Whatever else it may be doing notwithstanding, we're led to understand that **Novell Inc** has, under the covers, put its long, long-gestating object strategy into place, and promoted an unnamed executive to run the initiative.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

London, August 28-1 September 1995

Number 553

## VISUAL EDGE LEVERS OBJECTBRIDGE TO LINK DISTRIBUTED OBJECT SYSTEMS

A bi-directional object translation technology Visual Edge Technology Ltd has been working on for the last couple of years, is being championed by a bunch of vendors as a solution to the problem of incompatible object systems. Its technique is going down so well that as well as licensing what it calls ObjectBridge to IBM Corp, Oracle Corp, Apple Computer Inc, Taligent Inc and Iona Technologies Ltd, the Quebec, Canada-based company's object map - of which ObjectBridge is a coded implementation - has been submitted to Part A of the Object Management Group's COM-to-Corba RFP by Hewlett-Packard Co, IBM, Iona, Siemens Nixdorf Informationssystemes AG, SunSoft Inc and Visual Edge itself. The ObjectBridge - first outlined here last September (UX No 504) - intercepts requests and messages from one object system, say OLE, deciphers it, and uses a calling convention description supplied by an Object System Adapter for the target system - such as Corba - to create pointers that it will interpret as native calls. "In through one slice of the object cake and out through any other," is one description we heard of the mechanism, though Visual Edge describes its map as a more sophisticated version of basic interoperability models provided by the likes of Iona, which can wrap a Corba object to look like an OLE object but can't then go back the other way or deal with errors and exception handling. It's not a panacea, Visual Edge president Mike Foody stresses, but it works well for cross-platform interoperability between different event and transaction models, including Corba and OLE Automation, environments for which it has already created Object System Adapters that go with the ObjectBridge. The technology will work just as well for COM, OpenDoc's Open Scripting Architecture, SOM, Orbix and others, Foody says; adapters for SOM and Orbix have already been created. Some licencees will use ObjectBridge as the basis of next-generation object environments, others will create adapters for existing products. Oracle will reportedly use ObjectBridge in a 1996 iteration of its Developer 2000 tool for creating objects that can be used across distributed systems on multiple object systems. Setting itself up as a kind of object clearing house Visual Edge's business model calls for partners to licence adapters they create back to it; it will supply them to other ObjectBridge licencees. Once an adapter for a system is linked in, the object system automatically gains interoperability with all other supported object systems for which an adapter has been installed, Foody says. Further revisions of the system will add multi-level client/server support. Visual Edge's UIM/X development system already dominate the world of X-based GUI builders. It expects to do \$60m this year - \$10m better than last - on the tools which it first shipped in 1989. Foody says many ideas for ObjectBridge, which has cost it several million dollars to develop, came from insights gleaned into vendors' strategies as it was selling them on UIM/X.

## KOVISOFT READIES COMMON DESKTOP ENVIRONMENT TOOLSET FOR UNIX EXPO

A 1994 San Jose, California start-up, Kovisoft Inc, is going to make a run at the likes of TriTeal Corp and other Common Desktop Environment (CDE) developers with a slew of new tools designed to run under any implementation of the Unix desktop. Kovisoft, also offering its own implementation of Novell Inc CDE source as the Universal Desktop, says it'll unveil more than a hundred tools all developed in-house, at Unix Expo in New York next month. As well as applets already offered by TriTeal and others, such as an HTML 2.0-based Web browser and fax software, Kovisoft president Ramana Kovi says it'll offer systems management, desktop publishing, imaging and technologies that should by rights have been included in CDE ages ago. Three developers have been working on the tools for the last two years and three new marketing positions have been created to bring the software to market. Kovi says he doesn't know if there's room in the market for another CDE implementation - its Universal Desktop 1.0 is up on HP-UX 9.0.5, UnixWare 2, SunOS 4.1.3, Sparc Solaris 2.4, and Solaris x86 2.4 - but it's the tools that are strategic. Not only will they, Kovi claims, work atop all other CDE implementations - though not on vanilla Motif or Open Look - but they'll debut along with half a dozen or so client/server tool suites the company has designed for internet, printing and other services. The company will go through resellers and direct. OEM negotiations with CDE vendors broke down after three or four months following Kovisoft's refusal to hand over future control of the product set and disagreement over terms. Kovi - who maintains CDE should never have taken so long to get only this far - says he's not interested in acquiring or licensing third-party applications *a la* TriTeal, nor will the company be looking outside the Unix space for Windows-on-Unix-type solutions. It's strictly appealing to the Unix shops. The Universal Desktop costs \$260 on workstations until October 31 - \$350 thereafter - or \$700 for three licences, \$2,000 for ten-packs (including Motif licences). Developer editions for creating CDE standard-compliant applications are \$600.

## STB TO TARGET HIGH-END EMBEDDED STRATEGY

Insisting that it's not simply responding to the slew of recent PowerPC announcements in that area, Sun Microsystems Inc's chip unit, the Sparc Technology Business will unveil a new strategy for Sparc-based embedded systems development at the forthcoming Embedded Systems conference which runs from September 12 to 14 in San Jose. Instead of throwing whole workstation-based solutions at embedded problems, STB says it'll define new chip-, board and operating system-level strategies taking it through the Sparc V9 architecture on which its forthcoming 64-bit UltraSparc is based. It says it's not interested in the low-end, consumer device-oriented sector of the market but will instead focus on 20 page per minute and above networked printers (IDC predicts the US market will swallow 475,000 of them a year by 1998), 31 page per minute and above digital copiers (a market reckoned to be worth 347,000 units a year by 1998), telephony servers and related equipment (Goldman Sachs expects to reach 250,000 units by 1998), and intelligent switched hubs and routers (which IDC says will carry 588,000 units per year by 1998). It claims it will have significant product announcements in these areas within six. It touts Sparc/Solaris' advantage for solutions as the absence of a cross-compilation requirement between development and deployment systems. STB currently offers microSparc I, II and SuperSparc-based embedded solutions direct, OEM and via other licensing arrangements. Deployment partners include Matra MHS, Force Computers, Pinnacle, Themis and Philips. Embedded Sparc development packages are available from Chorus, Lynx, Cadence, Mentor Graphics and Wind River. Embedded business accounts for 50% of STB's external (non-Sun) business. Sparc-compatible builders make up the rest.

## CORBA-TO-OLE: LET THE SHOW BEGIN

As well as the Visual Edge contingent - a party we're told Taligent Inc is likely to join when it gets it act together - a second grouping of Expertsoft, Sybase and Genesis Development; plus DEC and Fujitsu have each submitted proposals to Part A of OMG's RFP. Microsoft Corp has not, despite the Visual Edge team's best efforts to woo it in their direction (although turning Microsoft's pal DEC out of their San Jose meet probably didn't help). Microsoft can still of course reply to Part B of the RFP - letters of intent for which are due by October 24 - which calls for Distributed OLE-to-Corba interoperability mechanisms. It's between now and then that the jockeying for position and consolidation amongst the Part A submitters will take place. Whichever way you look at it OMG needs a map to go from one world to another, says Visual Edge's Foody, who argues the whole Corba initiative has got mixed up in a debate over wrappers and protocols.

## CLIENT/SERVER LABS AIMING TO SHAKE-UP BENCHMARKING WORLD WITH RPMARK

Atlanta, Georgia-based Enabling Technologies Group's Client/Server Labs division hopes to set the black art of benchmarking on its ear with a new set of test suites for multi-function, mixed-environment client/server performance measurement it is currently touting to vendors, users and analysts. Long-term it would like users to mandate benchmarked systems as part of their procurement processes. To get its show on the road, Client/Server Labs promises RMark - Reference Platform Mark - numbers on a mixture of AIX, HP-UX, NT and PowerPC systems by the end of this month. But to really get itself noticed it'll be running one, two and four-way Alpha, Mips, PowerPC and Pentium-powered Windows NT systems off against each other in what it claims will be the first comparative NT evaluation. Results are due mid-September. It then takes its show to Europe, where it'll pitch UnixWare, SCO and NT-based Pentiums against each other at a UK trade event in November. RMark was originally developed by IBM's AS/400 division to evaluate overall client/server performance and is based on a composite rating of transaction processing, file serving and decision support (with PCs initiating queries on the server over ODBC). It includes a subset of the Transaction Processing Council's TPC-C OLTP suite modified for additional client support. RMark was built around optimal AS/400 parameters and used in a run-off against HP 9000 Unix and Compaq NT servers at Comdex last year. However, with its Ramp-C experience in the forefront of its mind, IBM turned the test over to Enabling Technologies realising no-one would take a true blue benchmark seriously (UX Nos 533, 545). Client/Server Labs took the AS/400-weighted content out and replaced other IBM-specific technologies such as Token Ring with Ethernet-TCP/IP; it's got Aberdeen Group and Gartner Group vouching for its work. A composite rating RMark is based on the weighted average of the three workloads, the higher the rating, the better the performance. The configuration and price of each system will be published on the Web alongside individual RMarks. Baseline RMarks will be derived from a basic system configuration, packaged exactly as a customer would receive it. Vendors will pay Client/Server Labs a further amount to test optimised set-ups. The benchmark is targeted at systems supporting up to 100 or 150 clients and results are broken out into classes for systems over \$100,000, over \$500,000 and so on. Any tweaking vendors may undertake will only be good news for users because optimising a single performance aspect can only adversely affect results of other components, Client/Server Labs claims. Therefore, it says, the only way to tweak a box will be to improve its overall design spec. An advisory committee of CIOs and users will comment and report requirements back to Client/Server Labs.

### TPC question mark

Although in public Client/Server Labs and TPC regard their efforts as complimentary - the Atlanta group says it'll advise vendors and users with specific OLTP and decision support requirements to go to TPC directly - there's little doubt that if RMark stands up to scrutiny and gets itself widely adopted, then - as people we spoke admitted off the record - there's sure to be question mark over TPC's future. A cynical view holds that TPC numbers are already little more than confusing boutique figures with minimal relevance to off-the-peg systems, though to be fair TPC has recently gone to some length to alleviate rule-bending. And with vendors reporting costs of up to \$100,000 a time to configure and test systems against TPC suites, Client/Server Labs' proposed \$10,000 charge for RMark benchmarks - which will be iterated as RMark 95, 96 and so on - looks more economically sustainable. Still there's much Client/Server Labs must prove. Legitimate concern includes how the "lightweight" RMark suite will evolve, who will control it and how, with such a broad range of tests, can users be sure that like is being compared with like. TPC on the other hand is widely used - it's measures are understood in the circles that care - and hardware and software vendors have already invested large sums configuring and tuning their kit for it. And that, frankly, is why we're sceptical of all of the benchmark mechanisms around right now. Vendors use results to promote and sell products, touting their numbers over their rivals' figures. They have a vested interest in doing whatever they can to produce the best possible results and have proved adept at exploiting most benchmark efforts, TPC and Spec 92 included. However if, as Client/Server Labs claims, vendors will be unable bring any creative juices to bear on RMark, then this should be a good enough reason for the rest of the industry to start taking notice of it.

## FIRST SPEC95 NUMBERS - DEC, HP, IBM COME IN ONE, TWO AND THREE

The Standard Performance Evaluation Corp unveiled its anticipated SPEC95 benchmark suite and first system numbers last week (UX No 551). The CINT95 suite - C for component level - contains eight integer-intensive C benchmarks. SPECint95 (S for system-level benchmark) is the geometric mean of eight normalised ratios - one for each integer benchmark - when compiled with aggressive optimisation for each benchmark. SPECint\_base95 is the same with conservative optimisation for each benchmark. SPECint\_rate95 is the aggressively optimised throughput ratio - SPECint\_rate\_base95 is the same with conservative compiler settings. The ten Fortran-based floating point tests - collectively CFP95 - carry equivalent SPECfp95, SPECfp\_base95, SPECfp\_rate95 and SPECfp\_rate\_base95 measurements. The suite is \$600 (\$300 for universities and upgrades). Version 1.0 represents the performance of a SparcStation 10/40 with 128Mb RAM and Sun SC3.0.1 compilers in each case. In descending SPECint\_base95 order the first results are:

- DEC's 3000 Model 900, with a 275MHz Alpha 21064, 32Kb on-chip, 2Mb off-chip cache, 256Mb RAM, 4Gb disk running Digital Unix X3.2C-6 rev 121 achieved 4.24 SPECint\_base95 and 6.29 SPECfp\_base95.
- The IBM Corp RS/6000 PowerServer 43P with a 133MHz PowerPC 604, 32Kb on-chip and 512Kb L2 cache, 192Mb RAM and 2Gb disk running AIX 4.1.3 did 4.07 SPECint\_base95 and 3.27 SPECfp\_base95.
- An HP 9000 Series 700 Model J210 with a 120MHz PA 7200 and the same system configuration as the J200 - see below - hit 4.21 SPECint95 and 3.93 SPECint\_base95; 7.60 SPECfp95 and 7.51 SPECfp\_base95. A two-way J210 with 120MHz 7200s delivers 10.1 SPECfp95 and 9.91 SPECfp\_base95.
- An HP 735/125 with a 125MHz PA 7150 and the same configuration as the 735/99 - see below - achieved 3.97 SPECint95 and 3.88 SPECint\_base95; 4.61 SPECfp95 and 4.54 SPECfp\_base95.
- The DEC 3000 Model 700, with a 225MHz 21064, 32Kb on-chip and 2Mb off-chip cache, 128Mb RAM and 4Gb disk running, clocked at 3.66 SPECint\_base95 and 5.71 SPECfp\_base95.
- Intel Corp's Xtended Xpress with a 133MHz Pentium, 16Kb on-chip, 1Mb L2 cache, 64Mb RAM, 2Gb disk and UnixWare 2.0 is rated at 3.68 SPECint95 and 3.64 SPECint\_base95; 3.04 SPECfp95 and 2.37 SPECint\_base95.
- Siemens Nixdorf's RM6400 Model 630 with a 200MHz Mips R440, 32Kb on-chip cache, 4Mb L2, 512Mb RAM and 4Gb disk running Sinix-N V5.42 C 00, performs at 3.86 SPECint95 and 3.62 SPECint\_base95.
- An RS/6000 PowerServer C20 with a 120MHz PowerPC 604, 32Kb on-chip and 1Mb L2 cache, 256Mb RAM and 2Gb disk achieved 3.38 SPECint\_base95 and 3.48 SPECfp\_base95.
- An HP Model J200 with one 100MHz PA 7200, 512Kb off-chip cache, 256Mb RAM and 1Gb disk delivered 3.52 SPECint95 and 3.27 SPECint\_base95; 6.33 SPECfp95 and 6.22 SPECfp\_base95.
- The Model 735/99 with a 99MHz PA-RISC 7100, 512kb off-chip cache, 64Mb RAM and 1Gb disk running HP-UX 10.01 turned-in at 3.22 SPECint95 and 3.13 SPECint\_base95, and 4.06 SPECfp95 and 3.97 SPECfp\_base95.
- The RS/6000 PowerServer 39H/3CT with a 66.7MHz Power2, 156Kb on-chip and 2Mb L2 cache, 128Mb RAM, 2Gb disk and AIX 4.1.3 is rated at 2.88 SPECint\_base95 and 9.28 SPECfp\_base95.
- DEC's 3000 Model 500, with a 150Mhz Alpha 21064 uniprocessor, 16Kb on-chip and 512Kb off-chip cache, 128Mb RAM and 4Gb disk running Digital Unix V3.2 rev 214, achieved 2.15 SPECint\_base95 and 3.65 SPECfp\_base95.
- IBM's RS/6000 PowerServer C10 with an 80MHz PowerPC 601, 32Kb on-chip and 1Mb L2 cache, 256Mb RAM, 2Gb disk running AIX 4.1.3, achieved SPECint\_base 2.06 and 2.94 SPECfp\_base95.
- Sun's SparcStation 20 Model 71 with a 75MHz SuperSparc II, 36Kb on-chip cache, 1Mb L2, 64Mb RAM and 424Mb disk running Solaris 2.4 is rated at 2.06 SPECint\_base95 and 2.14 SPECfp\_base95.

### OBJECTSPACE SHIPS CATALOGUE SYSTEM WITH C++, SMALLTALK COMPONENTS

Dallas, Texas-based consulting, services, training and object software house ObjectSpace Inc, recently started shipping ObjectCatalog, the fourth component in its initial slew of products (UX Nos 512, 542). The ObjectCatalog is conceived as a way to allow different development teams to locate reusable components written in C++ and Smalltalk that are stored around an organisation, which could be pieces of software, design patterns, frameworks or documents. Users fill out questionnaires from a graphical front-end which define search patterns for finding entries stored in local and remote catalogues. Matching entries collected using fuzzy logic techniques are displayed on a bull's eye graphic according to their degree of similarity to the request. ObjectSpace VP and co-founder Dave Norris says full-text searches of code simply aren't specific enough. A search for a sort routine might yield hundreds or thousands of instance using a straight forward text search. ObjectCatalog allows developers to search for a sort routine, written in Smalltalk, running on Windows for array processing. A function to publish headers from new C++ work to ObjectCatalog is already included in many C++ development environments, Norris says. Headers can be copied from existing C++ code as it's parsed and sent to the ObjectCatalog. The same publish functionality is present in all Smalltalk development environments - ObjectCatalog is written in ParcPlace VisualWorks - though existing Smalltalk work must be opened and a definition published to the ObjectCatalog. Companies such as Hewlett-Packard Co are looking at incorporating ObjectCatalog wholesale into their environments. ObjectSpace is currently cataloguing what it says is the largest archive of Smalltalk code at the University of Illinois, a mirror site of the UK's Manchester archives which was forced to close its site after 10 years because of traffic congestion. ObjectSpace, which is readying a C++ class library system toolkit for stuff like sockets and inter-process communication for introduction next month, says it's also looking at extending ObjectCatalog to other environments such as Microsoft Corp Word documents. ObjectCatalog runs on Sun, HP and IBM Unix, NT, OS/2 and Windows 95s priced \$8,500 on the server, and between \$500 and \$800 for each client depending on volume. ObjectSpace, which claims to have created its own distributed C++ and Smalltalk environments a few years back, will play its next set of technologies into the distributed object world. It's currently doing NDA work with Microsoft Corp on OLE 2 and its Network OLE successor, and DEC's ObjectBroker, will Corba-enable the ObjectCatalog as well. The company, not currently an Object Management Group member, and not interested in ORB technology per se, believes that one distributed object mechanism will prevail over time.

### JAC TOUTS CROSS-PLATFORM DEVELOPMENT TOOL

Hertfordshire, UK-based JAC Ltd is touting a database-independent application development system called jBase which, unlike other environments that live on top of the operating system, operates as a native OS element with applications compiled to machine code. The host operating system is required only for execution purposes. jBase includes run-time, development and administrative components and is said to provide migration facilities from other databases including Pick, Universe, and Microdata Reality. jBase can work against multiple databases concurrently - including Oracle, Sybase, Informix - has its own query language, a Basic-like jBC programming language and integrates with other development languages such as SQL, C and C++. jBase divorces applications from the underlying file systems and is claimed to support any data structure. US headquarters are based in Portland, Oregon. The company has thirteen employees. Prices start at \$540 per user on Unix, NT and Windows 95.

### SCO AND CHORUS COSY-UP ON TELCOS

Santa Cruz Operation Inc and French microkernel house Chorus Systemes SA have finally got around to tying their knot (UX No 521). They are broadening their technical and marketing agreement into a longer term relationship which will see SCO ramping-up its real time operating system business with a new 2.0 release of Chorus/Fusion for SCO. It has a plan to merge Chorus/Fusion for SCO with OpenServer Release 5 next year. Under the terms of the deal SCO will implement its OpenServer Release 5 on top of Chorus' microkernel technology to provide real-time features supporting telecommunications and other embedded applications. The agreement builds on the current partnership between the two which goes back to SCO's Open Desktop release 3.0 (UX No 463). SCO will take on future development and support of the Chorus/Fusion for SCO is part of its plan to attract a wider application crowd to its Unix for Intel, including telephone switching and computer telephony integration, e-mail and voice mail ISVs.

### LANDMARK REVS UNIX PERFORMANCE MONITORING TOOL FOR TIVOLI, SYBASE

Vienna, Virginia-based Landmark Systems Corp is touting a new version of its performance monitoring package - The Monitor for Unix - which allows SNMP management platforms to capture and view performance alerts from Unix systems (UX No 507). Already providing integration with Sun, HP and IBM network management environments, users can now graft the tool on to Tivoli Systems Inc's Tivoli Management Environment and can launch reports from the Tivoli Enterprise Console. The Monitor for Unix 3.1 is priced from \$5,000 for the management station and \$1,750 for each Unix server agent. Meantime, the company has tailored a version of the package specifically for Sybase Inc database environments as The Monitor for Sybase, claiming it's the first performance monitoring package for large-scale distributed SQL Server sites. Landmark says the Monitor gathers performance metrics from up to hundreds of SQL Server implementations with no performance degradation and can display all the information on a single console. It publishes data to third party reporting tools such as Excel, SAS/Access or Forest & Trees via ODBC, and displays data and alert notification through its own built-in graphical viewer or third party SNMP manager console. It costs from \$5,000 for the management station; agent software required for each instance of the Sybase database is priced from \$3,750.

### IQ TEAMS WITH MULTIDIMENSIONAL DATABASE HOUSE FOR BUSINESS INTELLIGENCE

IQ Software Corp, Norcross, Georgia, has teamed with on-line analytical processing house Sinper Corp, Warren, New Jersey and will incorporate Sinper's TM/1 multidimensional database with its data access tools including Intelligent Query (IQ) and IQ SmartServer. It hopes the deal will drive it into the business intelligence market. In the first instance, IQ will use Sinper's TM/1 database with its technology for "dice and slice analysis" and presentation. It claims there are a whole bag of other applications in the offing but is fighting shy of details. IQ claims 1.5m users for its software, which includes a suite of query, reporting, charting and desktop integration tools. It comes with character, Motif and Windows front-ends hosted by Unix servers and works against most SQL databases including Oracle, Sybase and Ingres, with support for legacy Cobol sites and ODBC. IQ SmartServer, shipping since July, enables IQ Report Writer and IQ Access - the desktop integration tool - to choose where to manage the execution of queues and preparation of reports. SmartServer consists of three components - SmartScheduler, ResourceManager and Personal DataStore - designed to minimise network traffic, improve system performance and utilise the heavy processing on the server. SmartScheduler provides options for scheduling and batch processing of queries and reports on the server from the client, with the ability to specify the timing and frequency of execution. The production of a report - query, extraction and formatting - is done on the server, cutting down network traffic, which comes from the client to the server. SmartScheduler also provides the ability to restrict access for job submission. The ResourceManager optimises client and server resources, enabling background processing, to control the number of queries and to check utilisation of the server. A subset of data from the server, including metadata can be extracted and transferred to the workstation. IQ Software has 160 employees worldwide, and had revenues of \$21m last year. IQ goes from \$1,875 - SmartServer is priced from \$5,000.

### IQ ACCELERATOR SET FOR OCTOBER, TWO FURTHER RELEASES IN 1996

Harry Cochran, VP of Sybase Inc's advanced indexing products, says the company will release IQ Accelerator, its high-speed interactive ad-hoc query software with so-called bit-wise indexing technology by the end of October (UX No 536). There are two upgrades penciled for 1996 that'll deliver internationalisation and enable queries to be made across multiple databases running in heterogeneous environments. There'll also be an optimiser for reducing time to reach data. The second update will include a 'heuristic' tool to aid data analysis. The sixteen-strong team, based in Burlington, Massachusetts, (formerly Expressway Technologies, which Sybase acquired in October last year) expects to produce associated products for use with text retrieval, SQL workgroup and desktop access tools. Cochran - the former Expressway president and CEO - expects IQ Accelerator to sell for between \$40,000 - \$50,000. Compression and bit-wise indexing techniques will supposedly allow data to be stored at between 50% to 75% of its original size.

### IBM ENHANCES ITS RS/6000 SP LINE WITH 77MHz WIDE NODES

Critics and purists may say that IBM Corp's RS/6000 SP machines are no more than clustered RS/6000s, and that their massively parallel ~~tag is a misnomer, but IBM takes the things very seriously, and adds~~ to the line rather more frequently than it does with many of its more widely used offerings. Last week the company added six new SP models using the 77MHz Wide Nodes - Thin Nodes are used for compute-intensive applications, Wide Nodes are more flexible in their expandability and are designed to be used as versatile servers. The new machines use the recently-introduced 77MHz Power2 processor (UX No 549), and supplement the existing 66MHz Wide Node models, offering performance improvement of about 15% for technical computing applications, which is consistent with increasing the clock to 77MHz from 66MHz, with a little bit getting lost on the way. The new models are available as a two-node entry system consistent with the existing SPs, can have a mix of Wide and Thin Nodes, and are scalable to the full 128-node configuration. The new models are Model 205, with base 79" frame without High Performance Switch; Model 305, base 79" frame with High Performance Switch; Model 405, base 79" frame with Multi-Switch; Model 2A5, 49" frame without switch; Model 3A5, 49" frame with High Performance Switch-LC8; and Model 3B5, 79" frame with High Performance Switch-LC8. The company also now offers software pre-load services, Powerquery Solution support for AIX Version 4, memory exchange capabilities, and co-existence with SP1 models for the 205, 305 and 405, all from next month. The 205, 305, 405 and 3B5 start at \$101,300 with \$650 monthly maintenance but the prices exclude the switches; the 3A5 starts at \$73,300.

### LBMS PAYS £2.1m FOR CORPORATE COMPUTING, CHICAGO

Putting its legal problems, the cost of its headquarters move and financial woes behind it, Learmonth & Burchett Management Systems Plc, now living in Houston, Texas, last week bought Chicago-based Corporate Computing Inc, a process management software and consulting firm, for £2.1m in new shares. Corporate Computing last year had a turnover of \$4m and net profits of \$155,000, and will now become a wholly-owned Learmonth subsidiary. The company makes and sells GUI Guidelines, a hypertext environment for defining and managing graphical user interface development standards, and RADPath, a rapid application development management tool that helps control, monitor and execute the building of client-server systems for small workgroups and individuals. Learmonth said it intends to use its new subsidiary to build its indirect distribution channel, use GUI Guidelines to attempt to establish itself as the leader in development standards management, and, with RADPath, offer a range of process management products from small workgroups up to the enterprise. The company also provides training and consulting services on graphical user interface and rapid application design, and client-server development. It was founded in 1991 and its president, Christine Comaford, now reports directly to Learmonth president and chief executive John Bantleman.

### HEWLETT-PACKARD HAS UNIX BROADBAND ANALYSER FOR FIRMS MOVING TO ATM

Palo Alto, California-headquartered Hewlett-Packard Co has introduced a Unix-based broadband analyser targeted at companies installing Asynchronous Transfer Mode networks. The E5200A is a briefcase-sized analysis tool that enables real-time testing to be performed at rates between 1.5Mbps and 155Mbps, with all layers of the protocol stack monitored and tested, including the physical Asynchronous Mode adaptation layer and services layers. A total of 1,023 channels can be monitored in real-time, said the company. It also features a graphical user interface to pinpoint network errors, and incorporates a link monitor and on-line help that automatically provide status information and potential solutions to errors, said the company, while "smart" troubleshooting techniques enable network installers to measure the quality of a new service accurately by automatically setting up simulation and monitor tests for which the user sets the pass/fail criteria. Simulation capabilities include customised traffic patterns, including cells and payload data units, and the transmission of captured "live" traffic. Base units for the offering start at \$30,000, with configured systems ranging from \$54,000 to \$80,000, depending on interfaces. It ships next month.

### JAPANESE SUGAR DADDY BAILS OUT ENCORE: SIXTH TIME IN FOUR YEARS

The company that used to be called Nippon Mining Co - Japan Energy Co and Nikko Kyodo Co are the last two names we saw - has been quite remarkably patient with Encore Computer Corp, in which it unwillingly acquired a one third stake when it lent Encore the \$140m cash the latter needed to buy Gould Computer Systems from Nikko Kyodo. The latter acquired Gould Computer Systems in 1988 when it bought Gould Inc for \$1,000m because it wanted Gould's copper foil business, and immediately put the computer arm on the market. In 1991, it exchanged \$60m of debt for new convertible and redeemable preference shares. In 1992, it put up another \$150m, \$80m in new debt and \$60m in a new credit line. In 1993, it gave Encore another \$20m revolving credit and extended the terms of existing loans. In 1994, it converted another \$100m of debt into new preference shares, and earlier this year, it put up another \$25m of credit and converted \$50m more debt to yet another class of preference shares. Still not enough. Last week, Encore announced that Nikko Kyodo - through its Gould Electronics Inc arm, has converted yet another \$55m of debt into new series G (we've had D, E and F already) convertible preferred stock, and added yet another \$20m to Encore's credit lines. Encore says gratefully that the latest - but surely not the last - rescue significantly improves its financial structure and positions it for growth as it introduces its new Infinity SP 30 universal storage processor on which OEM talks are now taking place. The recent exchange rates for the convertibles have all been at \$3.25 a share but the Encore shares are currently trading at just \$1.625.

### ITN CALLS IN SONY, ORACLE FOR NEW NEWSROOM AUTOMATION SYSTEM

Independent Television News in London will use the digital newsroom system jointly developed by Oracle Corp and Sony Corp to produce its satellite World News Programme. Sony and Oracle announced the newsroom automation system in April in a bid to take on Avid Technology Inc in the broadcast market. The system is claimed to enable journalists to research, script and edit news, sift through compressed video clips and then transmit broadcast quality material direct from 12 networked personal computers. Oracle's Media Server will be used to store 10-to-one-compressed digital images, two additional Oracle databases will store high quality non-compressed digital video, scripts and one month's worth of archived news footage. Previewing compressed video clips before selecting broadcast quality pictures avoids the need to install a fully asynchronous network, ITN said. More complex editing such as video mixing and audio processing will be carried out on five Unix workstations. Finished stories will be stored in the on-air buffer, a RAID-based workstation. The system will be Unix-based but Oracle has not yet decided whose Unix boxes it will use. ITN said that the system would "blur the distinctions between roles within the newsrooms" by enabling journalists to carry out a wider of tasks which some interpreted as a thinly veiled threat of redundancies. A full roll-out of the system within ITN is expected in 1997 although the company said that the newsroom system currently being tested might not necessarily be the one it eventually implements. The agreement represents a snub to Basys Ltd, the company formed by ITN to market the original newsroom system it developed; Basys is now owned by Avid, and no-one would say why Basys was shunned in this instance. And neither party would say how much the project, which starts next spring, will cost.

### CERIDIAN GROWS SERVICES IN AGREED \$900m BID FOR COMDATA

Minneapolis-based Ceridian Corp, rump of and successor company to the old Control Data Corp, has definitive agreement to acquire Comdata Holdings Corp for shares worth about \$900m. The deal will create a company with \$1,300m annual revenues, primarily from information services. Comdata holders will receive 0.57 share of Ceridian common stock for each Comdata share owned. Brentwood, Tennessee-based Comdata provides transaction processing and information services to the transport and gaming sectors, and had 1994 revenues of \$243m. "Comdata has a strong position in two large and growing markets," Lawrence Perlman, chairman and chief executive, said. Comdata will operate as an independent unit of Ceridian, retaining its name, management team and 1,850 employees. Comdata is a profitable, growing company, says Ceridian, which also likes the deal because it will enable it to accelerate using up of its tax credits. The price is a modest premium to the \$19.75 at which Comdata shares closed ahead of the news: it has an indicated value of \$23.87 a share.

## CABLETRON PLAYS SYSTEMS MANAGEMENT HAND WITH SLEW OF APPLICATION PARTNERS

The worlds of network and systems management are drawing inexorably closer. And following the likes of Computer Associates International Inc, Hewlett-Packard Co, Sun Microsystems Inc, Microsoft Corp, Tivoli Systems Inc and IBM Corp down that path, Rochester, New Hampshire-based hub and router company Cabletron Systems Inc last week pulled-in 13 partners (with 14 applications) to provide much-needed systems management to its Spectrum network management environment. The company has opened-up its APIs so that its partners' applications are integrated at either the alarms and events level - where alarms and events from those applications are passed to Spectrum - or at the knowledge base stage, where objects created by end-users or developers for use with these applications reside alongside Spectrum objects in the company's repository which are then subject to Spectrum management policies. First stage integration is at the interface. All will be available for use with Spectrum by the end of the first quarter of next year. Spectrum currently distribute management tasks across Unix servers - an NT implementation is promised by year-end. So-called 'full-service' management support applications for use with Spectrum will be available from CA, Tivoli Systems Inc and OpenVision Inc. For network operating systems there is Spectrum management gateway server for NetWare, a Spectrum Banyan Vines file server management module plus Seagate unit Netlabs' LANAlert for domain management of NetWare networks. Gradient Technologies Inc is offering its license server management module, Metrix SA's its WinWatch SNMP agent and Software Professionals its Enlighten/Events for administration system. Cabletron has its own workstation management modules and SNA management modules. For print management there is an application from Dublin company Sylogix Ireland Ltd. Database support comes from Oracle's management module and CompuWare Inc EcoTools. Other integration will be available to SAP AG's R/3 - from Intelligent Communications Software GmbH - Empire Technologies and for BGS. Cabletron is especially pleased that Calypso Software Inc, Manchester, New Hampshire, has a new version of its MaestroVision called Atrium EMS for use with Spectrum from next month, which automates tasks such as software distribution and policy management. Calypso will put Atrium EMS up on other management platforms and plans a standalone version too. Cabletron claims the four-year Spectrum is the only truly distributed object-oriented management environment available. In future versions of the software it plans to incorporate technology from the Seagate Technology Inc-owned Los Altos, California-based NetLabs Inc, presumably the company's event correlation module which Sun and HP have already adopted for their respective products. None of the applications are being packaged with Spectrum, although the company doesn't rule out integrated offerings further down the line. It's currently offering Spectrum free to users that trade-in HP, IBM and Sun network management environments, though it isn't saying how many have jumped since the promotion began. IDC's 1994 numbers have Cabletron rising to third spot in the (SNMP) enterprise management platform table with a 13.5% share, behind Sun's 29.3% and HP's 28.4%. but ahead of IBM NetView with 9.9%, Network Managers Ltd's 4.6% and others at 14.4%. IDC doesn't count technologies OpenView for Windows or Novell NMS in its enterprise standings. Spectrum grew out of a robust management system Cabletron had developed to support its router and hub technologies. Its key technological advantage - which for some reason it seems to hide from public view - is apparently the ability to have multiple interfaces to the same database, functionality IBM and CA/Sun haven't yet delivered. Cabletron is reportedly strong in European markets, especially sites which have no Cabletron hardware. If its strength is its technology, the company's weakness is surely its marketing.

## CANDLE PUMPS UP ITS R&D

Candle Corp, Santa Monica, California, which says it's already ploughed \$86m into developing its Candle Technologies (CT) DCE-based, object-oriented systems management framework between 1992 and 1995, expects to pump a further \$141m into the framework between 1996 and 1998. Another \$273m will go on developing its traditional mainframe management solutions over the period. The \$500m R&D plan will account for around 30% of Candle's total revenues over the period, the company claims. Candle says it'll have introduced 19 CT-based Command Center solutions by the end of 1996, 13 distributed and 6 on the mainframe. Most - 10 distributed and all of the mainframe products - are due over the next 12 months, including Candle Command Center for AIX, HP-UX, SunOS, Oracle, Sybase, Windows NT, NetWare, NetView, CA-Unicenter and Distributed Console Management; and Candle Command Center for Sysplex, CICSplex, MQSeries, IMSplex, DB2plex and Mainframe Console Management. The AIX, HP-UX, SunOS, Sysplex and CICSplex are generally available this month.

## POWERBROKER NAME GAME

Looks as though Calgary, Alberta-based Freedman Sharp and Associates Inc could end up paying dearly for something it didn't put its hand in its pocket for in the first place. Unless fortune somehow smiles, it could easily end-up losing use of the name PowerBroker to object house Expertsoft Corp, whose latest ORB incarnation is also called PowerBroker. Freedman developed and began selling a Unix security product called PowerBroker in Canada and the US a year or so ago (UX No 502). After Expertsoft told us it'd bought the PowerBroker name cheap off a pliable Canadian firm (UX No 550), we made five out of two-plus-two, and mistakenly identified that company as Freedman Sharp. Indeed the first Freedman got to hear about Expertsoft's PowerBroker was when it started getting calls after our piece ran. What we didn't know was that Expertsoft had just handed over \$500 (plus all the associated lawyers fees) to acquire the rights to the PowerBroker name from a Financial Workstations unit of defunct Canadian distributor Crown-Tech. PowerBroker was the name given to a suite of trading room applications. Expertsoft received assignment of the trademark from the Canadian government just last week. After creating its security product Freedman searched on the name PowerBroker, however on finding it was still held by Financial Workstations and that their was no heir apparent to the name - ie there had been no re-assignment of the intellectual property - it, in what it now admits was a "poor decision," decided to simply trade on the name without paying the fee (and legal bill) to wrest the name from Financial Workstations. It's been advised that because it's been trading with the name for more than a year it can (and will) defend its right to use the name, unless the companies come to agreement on shared use, though that seems unlikely. What's even more surprising is that Freedman didn't register the name and then wait for the PowerPC crowd to come knocking on its door, always hungry for anything pre-fixed with Power. Meantime, Freedman will have soon have its stuff up on NT, then maybe (but only maybe) OS/2.

## ORACLE SCRAPS ORACLEWARE, CLAIMING USERS DON'T WANT BUNDLED SOLUTIONS

Oracle Corp said last week that it is discontinuing its OracleWare bundles with Novell Inc. The first OracleWare solutions appeared two years ago as integrated NetWare and Oracle technology solutions, then expanded to include a separate edition for UnixWare. Two Oracle VPs maintained that although the product was demonstrating a 70% growth rate - better than Oracle as a whole - and was one of Oracle's top 10 products on a revenue basis - predominantly on the NetWare side - it is being terminated because people aren't particularly interested in buying integrated products anymore, preferring to buy the database and operating system separately, in part because they are costly to maintain. Oracle also said the bundles had done their job of raising awareness that the company is active in those markets. It also noted in passing that Workgroup/2000 offers a client/server solution on NetWare that's cheaper than OracleWare. The integration that is the hallmark of the technology will be moved into the standard Oracle7 Workgroup Server and Enterprise Server. The latter fully integrates with NetWare Directory Services and Oracle still expects to be the first third party to support NetWare SMP. Registered customers will get free upgrades to Oracle7 Enterprise Server and NetWare 4 or UnixWare 2. The two VPs never did manage to iron the inconsistencies in their story. Oracle said sales have been up 2000% since UnixWare 2, surprising even the company's VP, Intel Unix products Richard French.

## CLARIFY SPINS OUT INTERNAL HELPDESK

Customer information house Clarify Inc, San Jose, California, is creating a second version of its ClearSupport software tailored for in-house help desk systems. ClearHelpdesk will work with all existing add-on modules, that provide replication, web services and diagnostics. To create the Helpdesk and distinguish it from ClearSupport, Clarify has added interfaces to HP OpenView and Sun NetManager which open trouble tickets, filter out duplicates and dispatch them to support staff. The existing Diagnosis Engine reasoning engine has been enhanced for ClearHelpdesk with a CBR Express Interface, technology based on Inference Corp's case-based retrieval software. A ClearHelpdesk Knowledge Utilities module will allow users to integrate ServiceWare Inc and KnowledgeBroker Inc knowledge bases into their systems for use with Microsoft Word, Excel and other popular packages. Clarify's also developing links to Microsoft's Systems Management Server to provide configuration information. Clarify says it'll gradually differentiate the product lines; it wants to push its internal help desks business from 20% of revenue now, to 35% in the near-term. Clear HelpDesk is \$15,000 per server licence and \$3,750 per concurrent user now. The Network Management Interface is \$10,000 per server licence from September. Knowledgebase Utilities for ServiceWare Knowledge-Paks and KnowledgeBroker KnowledgeBases is \$5,000 per server from next month. CBR Express Interface is \$5,000 per server from December.

# unigram·X

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Trying to put a name in the frame is a mug's game because its Internet connections would appeal to a host of companies, but **AT&T Corp** and **Bolt Beranek & Newman Inc** must be fairly high on the list: **Unipalm Group Plc** has received an approach that could lead to an offer for the company.

**Novell Inc** has reported third quarter net profits up 32.6% at \$102.0m, on turnover up 10.0% at \$537.9m; nine month net profits rose 17.9% to \$279.4m, on turnover up 9.0% at \$1,560.7m. Net earnings per share rose 28.6% to \$0.27 in the quarter, 17.2% to \$0.75 in the three quarters.

The *PC Week* gossip column reports that one of its most garrulous and unreliable **IBM Corp** tipsters is saying that IBM is ready to form an autonomous software company (much like it did for hardware with Lexmark International Inc years ago - yes fellahs, but IBM retained only a vestigial 10% in Lexmark) to rival Microsoft Corp - but first it has to make some more acquisitions beyond Lotus, and Borland International Inc, Sybase Inc and Novell Inc are supposedly on the shopping list. The "time frame is November or December, with a kickoff in January, according to this under-30%-hit-rate tipster," says the paper, adding "IBM is considering the name StarDivision for the spin-off" - really? So it's going to buy the German firm? IBM buying one of the companies named would make sense (Novell) but otherwise?

After much delay OEMs will soon begin building systems around **DEC's** 21171 Alcor chipset carrying the highest-end chips available, Alpha 21164s.

**Bristol Technology**, one of four companies with access to Microsoft source code, has pushed back the release date for its port of OLE to Unix, but has an October beta date for Wind/U for OpenVMS. The OLE port, which Bristol intended to have this summer, will not go into beta until sometime in the autumn, with a release of what it calls Wind/U 3.0 coming in the fourth quarter, though it could slip to the beginning of next year.

The rumour mill claims **Sun Microsystems Inc** may kill off its X terminals.

We still think it reeks of the smoke-filled room. The 64-bit Unix spec brigade say the reason **Intel Corp** is holding the NDAs on the specs is because a multi-way NDA (the list runs to 50) proved beyond the capabilities of their lawyers and as Intel already holds NDAs against each of them it was decided to use Intel instead.

Deciding that crime can pay, **Sun Microsystems Inc**, has formed a dedicated Criminal Justice Operation in the US to push its hardware, software and networking technologies to law enforcement and court agencies.

Toronto-based fax software house **Delrina Corp** - currently being acquired by Symantec Corp - has put its FormFlow electronic forms software up on Sun, SGI, IBM and HP Unix.

San Diego, California-based **RDI Computer Corp** will reduce pricing for its Sparc-based, portable Unix PowerLite workstations (UX No 523) on September 6th, saying its bringing its high-end machines under the \$10,000 price point. At the same time the company promises it will be adding new product features.

**IPL Systems Inc** president and CEO Greg Grodhaus has joined **Amdahl Corp** as VP and general manager of its enterprise storage division.

**Harris Computer Systems Corp**, Fort Lauderdale, Florida, has added a model 6800 to its Night Hawk 6000 series of VME-based real-time SMP units. The 6800 comes with from one to four PowerPC 604s, five to 21 slots and runs Real-Time/Power Unix. It costs from \$50,080; upgrades are from \$37,400.

**Comdisco Inc's** going to begin reselling Motorola Inc PowerStacks running AIX 4.1 and Windows NT.

**NEC Corp** is creating a **Computer Technologies Group** at its California-based NEC Systems Labs subsidiary to peddle its Percio object database, NetShepard batch job management, NetAdmin and TP-Base OLTP software (UX No 500).

Although **Fujitsu's Hal Computer Systems Ltd** still doesn't sell computers, it's already talking about a second generation of its 64-bit Sparc RISC, the five-layer metal Sparc64+, said to perform 30% better than Sparc64.

Version 6 of Raleigh, North Carolina-based **Tangram Enterprise Solutions Inc's** AM:PM distributed resource management software now supports Solaris, HP-UX and SCO, as well as other Unixes, NT, NetWare, mainframe and OS/2 platforms. Unix configurations start at \$70,000. It's also added a new version 6.1 of its Open Advantage for Unix SNA-to-SCO gateway with a Motif GUI, which at \$1,000 is half the original price.

**Santa Cruz Operation Inc** has licensed Seattle, Washington-based **Go Ahead Software Inc's** Go Ahead Doctor systems management technology which it will use in a layered product due in the first quarter of next year. Meantime Mainsort Corp will put its Mainwin Studio Windows-on-Unix software up on OpenServer from year-end. And Santa Cruz, California company Olympus Software has a new TuneUp performance management package for its Santa Cruz Operation Inc neighbour's SCO Unix, Open Desktop and Open Server, which it says can configure 75 operating system parameters. It costs from \$500. SCO has licensed **Cheyenne Software Inc's** ARCserve/Open backup and restore software for use with SCO OpenServer.

SCO's paid someone a lot of money to do a fancy re-draw of its corporate logo - which keeps the tree and loses the shoreline - in blue and gold.

**Hyundai Electronics America's** Wichita, Kansas-based **Symbios Logic** (the former NCR Microelectronics Division) is offering a new line of MetaStor RAID and tape subsystems for Unix and LAN VARs. The company claims its two RAID units are 50% faster than Data General Corp CLARiiON and DEC StorageWorks, and 40% cheaper the DG solution. Other direct network-attached units will ship at the beginning of next year followed by a Fibre Channel product in the fourth quarter of 1996.

**Hewlett-Packard Co** has promoted systems technology division marketing manager David Logan to director of corporate development, replacing Thomas Uhlman, who has left the company. Previously focused on HP's microprocessor partnerships, Logan has presumably been guiding the company's relationship with Intel Corp.

**Autodesk Inc** has added AIX and Irix ports of AutoCAD 13 at from \$3,750..

Fairfax, Virginia-based **OC Systems Inc** says its PowerAda implementation now includes an OMG IDL-to-Ada 95 compiler.

Herndon, Virginia-based **Network Imaging Corp** has ported its IView:ObjectManager client/server object management system to DG-UX.

**Market Vision Corp** has created a market datafeed application using Sun's Java language for integrating market ticker information and other datafeeds in real-time on to trader's desktops, which then re-calculates data for export into other applications, graphs and spreadsheets. The application uses Market Vision's MV Link software to access any data feed.

Now that William Hearst III has resigned as a director - he was recently appointed a general partner at VC outfit **Kliener Perkins Caufield & Byers** - **Sun Microsystems Inc** has appointed Judy Estrin, founder of Precept Software Inc and co-founder of Network Computing Devices Inc, and Robert Fisher, executive VP and CFO Gap Inc, to its board. They join John Doerr, general partner at Kliener Perkins, Robert Long, senior VP and director of corporate planning at Eastman Kodak, Kenneth Oshman, CEO Echelon Systems Corp and Michael Spence, dean Stanford University's graduate business school.

**Open Market Inc**, Cambridge, Massachusetts, is offering an Open Market WebReporter it says allows companies to measure and report site activity in ways that freeware Web software can't. It costs from \$500 on Unix.

Quoted in *Forbes* magazine, **Sun Microsystems Inc** chief Scott McNealy describes much of a CEO's job as "acting...hiding the terror behind your eyes and giving assurances a situation is an issue, not the end of the world."

We hear that **Hewlett-Packard Co** would like nothing more than to get out from under the estimated \$500m a year monkey on its back that it's paying to develop HP-UX.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper



The weekly information newsletter for the UNIX™ community worldwide

London, September 4-8 1995

Number 554

## HP/INTEL AXIS TO LURE UNIX CONVOY AWAY FROM NOVELL?

Hewlett-Packard Co has, if you will, a "field of dreams" theory that, if it holds up, could get it a whole lot of influence over Unix without it buying the darn thing off of Novell, something it's told us repeatedly over the last few weeks it doesn't want to do. HP reckons that second- and third-tier Unix OEMs will find its part in the Intel-HP chip axis irresistible and draw them within its thrall. These companies, particularly those with Intel-based platforms, who also find the burden of Unix development crushingly expensive, don't necessarily have to buy the whole operating system off of HP; they might make do with components, understanding that as HP develops the stuff, it will be optimized for the upcoming Intel-HP P7 chip, known variously as H1 or New Generation, depending on which company you work for (UX No 551). It is unclear whether HP is doing more than leaving a trail of cookie crumbs for potential hangers-on to follow and HP CEO Lew Platt said last week the notion isn't central to the company's strategy but it's undoubtedly a nice ego-stroking little fill-up. Any number of industry people have already reasoned through such a possibility and it is believed Sun, which would like to resell its own Unix system, is concerned it will come to pass. HP, however, reasons that Sun no longer has the sex appeal to entice OEM accounts, not to mention its lousy track record with clones, and IBM is still too frightening, or would be if it showed real dedication to AIX. There aren't many other alternatives considering the way the present Novell administration is playing the cards it was dealt. That leaves HP and the months it will take the rest of the OEM community to realise it. HP figures they don't have very much time left, maybe six months at the outside if they want to have the appropriate development in place by the time the chip hits market, probably in 1997.

## H1/NEW GENERATION MOVES TO IMPLEMENTATION - AS HP EXAMINES A MODULAR HP-UX

Meantime, having apparently cleared most of their theoretical and legal hurdles (UX No 551), senior VP and general manager of HP's Computer Organisation (see page 3), Wim Roelandts, told us last week that "all design on the chip is done... there's one instruction set" and it's been pushed out to the implementation phase. The model's been proven in the labs and it works, he said. Just as well, because HP and Intel are throwing all their eggs into this basket. HP's nine-year-old PA-RISC - development of which, was a "much more scary" decision to make than stepping-out with Intel, according to CEO Lew Platt - has no separate life after this. Although H1/New Generation draws on very-long instruction word techniques - traditional VLIW compiles programs into long instruction words for simultaneous execution across multiple processors - with the bulk of the intelligence residing in the compilers, Roelandts says other devices done in hardware are also key. He estimates that from day one the part will deliver 50% better performance than whatever the competition has at that time, and is spec'd to achieve an initial 400 or 500 MIPS at 100MHz. HP's already working on backplane designs to utilise the parallelisation the hybrid VLIW design affords. Although not revealing its hand to competitors is one reason for HP's reluctance to discuss the architecture, the main reason, it emerged last week, is Intel's product cycle: the company has banned discussion of H1/New Generation matters until it's got P6 out of the gate. At the same time, HP is beavering away on the operating system itself apropos, it would seem, of the chip. None of its executives care for the word microkernel but HP's lab jockeys are looking to H1's parallelisation and are thinking about separating HP-UX into pieces such as I/O and file systems that will run on different sets of CPUs. But remember now, this is not a microkernel job no matter how suspiciously it sounds like one. However Roelandts admits to having every available microkernel in the world up and running in-house for evaluation to see whether there's anything useful in the technique. The architecture will also be the vehicle for HP to have Windows interfaces running on Unix.

## MISSISSIPPI WILL FLOW ON SEPT 28TH

Compagnie des Machines Bull SA will unveil its Mississippi clustering technology on September 28th. Initially, Mississippi will link four PowerPC 601 SMP Escalas over Fibre Distributed Data Interface links topped with job scheduling, configuration management and other software borrowed from the GCOS mainframe side of its house. Eight-way configurations will be supported from the first quarter of next year with the next-generation ISL interconnect due in the second half starting at a 64-way link. As well as support for IBM Corp's AIX-based HACMP high-availability clustering software, Bull will announce relationships for Oracle Parallel Server and Informix's anticipated Online Extended Parallel Server 8.0 (OnLine XPS). IBM's not taking Mississippi for its RS/6000s, though Bull claims the Austin, Texas-based folk are interested but hand-tied by high-end RS/6000 development work now handed down by the company's Kingston, New York development facility. Bull says it's got working alphas of the PCI bus technology that'll bring NT, Solaris and other operating systems on to its currently AIX/Micro Channel Architecture-only Escalas and the variants supplied by Motorola Inc and others. Bull's Zenith Data Systems, which already markets low-end Motorola-based ZPower boxes, is expected to invest more heavily in PowerPC development now that Motorola has a 10% holding in the French parent company. It'll be the conduit all of the two firms' low-end, indirect PowerPC system business. Bull says it's got PowerPC 620 samples up and running in its labs and still expects products by mid-1996.

## NOVELL: NEW CHUMS FOR SUPERNOS, OR MORE TO IT?

Rumours circulating last week had it that Novell may have found a playmate to co-develop SuperNOS, the anticipated UnixWare-NetWare merge it desperately wishes had some other name. Sources inside the Novell hierarchy, terrorized by a strict security cordon, would admit no details, raising the spectre that it could be Intel or AT&T - as in the old Ma Bell. Better yet there was the rumour that would not die; Novell is ensconced in talks with IBM that could involve a merger (UX No 552, 553). DEC folk, for instance, swore last week that the two were off concocting something. If so, the Janus-like SuperNOS might take on another face, to wit OS/2. Novell already has what it calls the Gemini project or NetWare for OS/2, which allows the two environments to co-reside on a box, set for next year. Maybe they'll just substitute OS/2 for UnixWare. Speculation has the Unix question holding any such deal at bay for either of two reasons. First, that like its deliberations with Apple, IBM is concerned that having Unix would be like hanging on to the past rather than buying into the future, and two, that holding Unix isn't a play that'll go down well with the rest of the Unix community. In which case maybe Unix could get shoved into a separate company that would have not just IBM and Novell owning it. Meanwhile, HP VP Bernard Guidon told us in the last few days, before the SuperNOS playmate rumour surfaced, that HP was relatively uninterested in SuperNOS unless Novell decided to make it into a groupware platform that could balance the IBM-Lotus play. Even then HP seemed indifferent about co-development. Still, one could suppose that it could be brought in despite its own hesitations if its buddy Intel were hot to trot. There have been any number of reports lately that Intel is pursuing a course that will see it go headlong into house-brand box development.

## Eiger and NU7

Meantime, Novell's schedule calls for a NetWorld+Interop announcement - with pre-briefings a week earlier at Unix Expo. It has been looking for a SuperNOS partner since January when a deal with AT&T GIS crashed and burned (UX No 523) though it subsequently claimed discussions were continuing. The NetWare+Interop soliloquy is supposed to outline the sketchy SuperNOS roadmap in which "Eiger," aka UnixWare 2.1, expected later this year, gives way to SuperNOS - apparently and perhaps suggestively known as "NU7" in some internal overheads - in 1997, plus the company's nascent object strategy. It appears there is no planned NetWare release beyond the current 4.0 revision. Of course, if it announces a merger, the new Novell business plan - presumably absent an IBM - could go by the boards. Word from inside has it that SuperNOS development, widely regarded as highly speculative, is on track. Whatever Novell has up its sleeve insiders were gung-ho about it, though they doubted Novell could deliver on all of its promises.

## STRATUS'S S2 SOFTWARE DIVISION OUTLINES PLANS FOR HARDWARE-INDEPENDENT APPLICATIONS AND ACQUISITIONS

With Stratus Computer Inc ailing in its traditional markets (*see page 6*) the company is looking to some of its subsidiaries, such as S2 Systems Inc, to alter its profile. S2 is different, claims Steve Canning, manager of distributed operations in the UK, because it is part of a hardware company offering hardware-independent software. Dallas, Texas-headquartered S2 was formed when Stratus merged two of its software subsidiaries, Shared Systems Corp and SoftCom Systems Inc at the start of the year. Its main market areas are banking - both retail and wholesale - securities, retail and health care. Hard on their heels are travel and transport, telecommunications and gaming. Though new, S2 cannot be called a start-up company, with projected revenues this year of \$75m, which the company predicted would rise to \$150m by 1997. At present over 80% of revenues come from financial services. This year, revenues from outside the US make up 42% of the total, but this will rise to just over half in 1996, S2 says. It intends to pursue an aggressive acquisitions policy to fill in certain holes in its product line, according to Scot Anderson, regional director for Europe, Africa and the Middle East. But he was vague as to where these holes might be. Thus far, the product line is headed by ON/2, the credit and debit card processing system that the company claims is installed at more than 300 sites around the world. Despite the company's claim to be an open systems supplier, ON/2 runs only under proprietary Stratus VOS operating system, although support for further unspecified operating systems is also promised.

### Up to 70 different protocols

Network Express is the basis for a range of products linking various systems, application development tools, devices and database applications into a transaction processing network. Network Express itself runs under Unix on IBM Corp's RS/6000 system, as well as two proprietary Stratus systems. It can link up to 70 different protocols together, claimed Canning. He also claimed that the system developed using Network Express for American Airlines was the largest reservation system in the world. The company has worldwide distribution rights for Mint, a financial message switching system for the routing, reformatting and monitoring of payment and settlement transactions. OpenTrademark is a wholesale banking management system that runs under Sun, HP and IBM Unices supporting Sybase and PowerBuilder. The Tcam Integrated Settlement System is a suite of applications supporting trading and settlement of equities and other securities, running under various Unix variants, as well as Digital Equipment Corp's Alpha and personal computer operating systems. S2 still has a bit of reorganising to complete. According to Anderson, there was a degree of overlap between some of its products, mostly between ON/2 and Network Express, and even some competition. He emphasised that the company would not settle for organic growth alone. Acquisitions and further alliances will be the order of the day. The number of markets will grow, as well as the number of products, the company said. Headquarters for Europe, Middle East and Africa are in London, with other offices in Edinburgh and Keighley, Yorkshire. There are six other offices in continental Europe. S2 products are also distributed in South Africa, eastern Europe and Greece.

## INFERENCE SPIN-OUT BRIGHTWARE TOUTS OO DEVELOPMENT SYSTEM

Inference Corp, El Segundo, California, recently spin-out its Front Office Solutions division as Brightware Inc, Novato, California. Now Brightware is touting an Enter Art\*Enterprise package as an object-oriented development environment which can utilise structured (relational) and unstructured (object) data. It comes with its own ARTScript development language, class libraries for use with a GUI builder, a data integrator and retrieval tools. It includes a debugger, a system re-use manager for organising and retrieving re-usable components and a repository where ARTScript definitions are stored. Art\*Enterprise supports Unix, Windows, NT OS/2 and MVS (kernel only) platforms - Oracle, Sybase, Informix, DB2, Q+E and ODBC databases. Inference will sell and support Brightware products in Europe and retains the former division's CBR2 front-office product. Each Inference shareholder received an equal number of Brightware shares in the spin-out.

## CGI, LAUNCHES LAST PIECE OF CLIENT-SERVER DEVELOPMENT KIT, PAC/CS

The increasingly IBM-ised Paris-based Compagnie General d'Informatique SA has launched an application development tool that its parent company hopes will improve IBM's identity as a software supplier. PAC/CS is the final piece of CGI's client-server development product jigsaw, Pacbase, and the company claims it enables developers to build applications robust enough for transaction processing requirements. IBM has, since it bought CGI in 1993, looked to the French company to develop its almost non-existent reputation as a software supplier on a range of computer systems, IBM or otherwise. But despite what IBM wants CGI to do for it, the French company has ambitions of its own and chief among them is to grow to rival SAP AG in the world of financial and personnel software with its SIGAGIP products for personnel and financial management. It also intends to take advantage of its sudden kinship with Lotus Development Corp, by setting itself up as a Lotus Notes expert. In the New Year it will release new versions of PAC/CS and PACDesign, and a Team Connection repository that it has been working on with IBM. With PAC/CS, the company claimed, that it has moved beyond existing development tools that concentrate on creating pretty interfaces, but produce very little of substance underneath. Instead, it said its object-oriented development tool, with its own repository, but with links into the existing PAC/Repository so that it can re-use model objects from previous applications, is capable of generating and compiling code, for both the server and client sides of a system. The other advantage of this is that the developer need not be versed in C+ or C++. The company described it as capable of supporting a multi-user approach to application development. It is model-driven, that is, there is an information model that manages the application across the network, freeing the developer from having to code commit phases and points. The advantage of this, said CGI, is that business rules, rather than the technical processes of software development, drive the development. And it can be used on a variety of systems: it has interfaces to the various databases that masquerade under the DB2 name, as well as Oracle and Sybase; it has OS/2 and Windows interfaces with Motif in the pipeline; and it can support CICS, Tuxedo, OS/2, IMS and Unix. But more importantly, the company claimed that the tool can build applications that will give mainframe users the performance they expect from mainframe applications. It said high volume compute-intensive stuff - up-dating bank accounts over night - is still probably beyond the bounds of PAC/CS, but transaction processing in other environments - retail for example - was possible. CGI described the two years since IBM bought it as a process of assimilation, something Lotus has to look forward to. For the French company it has involved the loss of its senior management, all replaced by French IBMers. But it maintains that IBM wants to run it as an independent company even though it will use its IBM connections to push its products, which include supply chain management, manufacturing and services software, in markets that it's had little presence. At the moment, France is its largest market, then the US.

## OBJECT/RELATIONAL OSMOS IN UNISYS' COSMOS

Unisys Corp is seeking partners for an object-relational database management system it calls Osmos which has been quietly developed by its 2200 and A series mainframe teams and now runs on Sun, Sequent, NT and its own Unix SVR4 boxes. It's not far advanced enough with potential licensees to be able to name names. Six years in the making, Osmos is said to combine non-persistent relational storage with object-based application logic. Unisys expects Osmos to play in the embedded market near-term, and to be used for OLTP and decision support further out. It explains that OLTP, where many short transactions access a small number of objects, and decision support, where applications access objects in read-only mode, combining large data sets in calculations which eventually deliver small amounts of data to the user, are well-suited to the Osmos architecture. It supports ANSI SQL3, ODBC, Call Level Interface and proxy-object APIs for relational or object access, with full backup, recovery, logging and X/Open DTP two phase commit. Unisys has one customer for the C/C++ system running a 13Gb database off a U6000, storing 200m objects, containing names, addresses, telephone numbers and relationships of all geographic objects in US census files. The information is apparently used to verify addresses, compute distances and identify paths between locations.

## HP FORMS COMPUTER ORGANISATION; PROMOTES PC CHIEF

HP CEO Lew Platt has consolidated computer operations, moving the 41-year-old overseer of the company's PCs and hugely successful printer line, Richard Belluzzo, over his peers, Unix chief Wim Roelandts and head of support James Arthur, both of whom now report to him. Belluzzo in turn will report to Platt who gave Belluzzo one of HP's rare executive VP chevrons. He will run the three combined units as the Computer Organisation. He is now considered Platt's heir presumptive and could eventually succeed him as CEO, speculation Platt did not deny last week, provided he does a good job. It'll be a while yet before any succession takes place. Platt is only 53 and has a ways to go before thinking about hanging up his spurs. HP chiefs have been given to retiring at 60. The 50ish Roelandts said he was "disappointed" but also expressed some doubts about wanting to be CEO of HP. "I'm a systems guy," he said, "and don't want to lose my focus" worrying about the nuts and bolts of the company's test and measurement business. Roelandts, however, is still believed to have CEO aspirations and Belluzzo apotheosis could spur his departure. Platt attributed the move to a need to integrate the business, leverage R&D and distribution channels, rationalise the time and effort it previously took to get the three units working in tandem to fulfil customers cross-platform demands, and cut costs, bringing the others in line with the printer unit's high-volume cost structures. In many ways, the consolidation can be said to result from HP's strategic tie-up with Intel and might be called the Intelisation of Hewlett-Packard. Belluzzo, a 20-year HP veteran and an accountant by training, who started as a bookkeeper, will control 80% of the company, a \$20bn empire that includes the industry's envelope-pushing chip development. Meantime CEO Lew Platt said last week that the company put all its eggs in one basket when it tied up with Intel and has no secret or fallback PA-RISC chip development going on anywhere. He also felt pretty safe in assuming that the same holds true for Intel. Otherwise, he said, as historic as the Intel-HP chip may prove to be - and as pricey - it's nowhere near the magnitude of the commitment HP made way back when it first set out to build the first PA-RISC chip, which was, he remembered, the first commercial RISC. Compared to the size of HP then, the amount of resources deployment was enormous. Somebody else who worked at HP back then thought it must have run \$700m-\$800m and maybe that figure wasn't fully burdened.

## HP "TO OVERHAUL SUN IN WORKSTATIONS BY EARLY 1997"...

In its drive to the commercial space from its technical beginnings, Sun Microsystems Inc has lost its way, believes Bernard Guidon, VP and general manager of Hewlett-Packard Co's computer systems group. "It used to be at the centre of the computer world but it lost it and now what is its identity? It's a bit of this and a bit of that. Microsoft is at the centre of this world now." Guidon says he doesn't covet that spot because once a company is there the only way is down. (HP, the nearly number one company, then Bernard? "Yes, but for ever!") HP plans to exploit Sun's perceived weakness ruthlessly, according to Guidon, who claims HP will be the overall number one supplier to the technical market by 2000, expecting to surpass Sun in workstation shipments in early 1997. It points to Dataquest numbers which shows HP's technical share gradually increasing as Sun's share slowly declines. Guidon plans to target traditional design and automation technical markets with totally revamped technical and engineering lines. He says solutions will be organised around the processes customers require to get their work done, not just on hot box claims. The company says it'll deliver 150 times performance increases this year and next, aiming for 1,000-fold improvements by the year 2000 with its H1/New Generation CPU.

## ...AS SUN HITS BACK WITH RE-VAMPED HP TRADE-IN PROGRAMME

Sun of course isn't going to take any of this lying down and is targeting HP 9000 Series 800 server users with a migration and trade-in programme. It says HP users have four major product transitions ahead of them: the HP/Intel CPU, HP-UX 10.0, Tornado network management and a three-way object strategy. Sun's offering an HP-UX 9-to-Solaris migration guide, support for the HP system throughout a customer's transition to Sun, a trade-in of up to 20% of system value on existing HP 800 systems, and a detailed migration plan.

## SCO UNVEILS ITS TWO-YEAR ROADMAP

At SCO Forum a few weeks back, Santa Cruz Operation ran through the kind of products we should expect it to release over the next few years, adding codenames and timescales. SCO now divides itself into three main divisions: Business Critical Servers, handling its core operating systems business; Layered Products for networking and systems tools that fit above the operating system; and the newly named Client Integration Product division, the result of SCO's IXI and VisionWare acquisitions. The server division is working on four platform products, codenamed Meteor, Comet, Voyager and Olympus. Meteor will be first out, in the first half of next year, and is a small memory footprint version of SCO's OpenServer Unix implementation aimed at retail and point of sale applications. It will run in 1.2Mb, and is slated to support diskless clients. Comet, due in the second half of 1996, is SCO's SPEC 1170, Unix 95-compliant OpenServer that'll address up to 4Gb RAM and come with a compiler for migrating custom applications developed on SCO up to Intel's P6 chip. Voyager is a first quarter 1997 embedded version of OpenServer 5.0 for small-to-medium telcos, running in 2Mb. And Olympus, due at the end of 1997, will be SCO's 64-bit entry, supporting the still under-wraps APIs the Unix vendors are creating (UX No 552). It'll also include Win32 APIs, Microsoft Corp Foundation Class Libraries, OLE 2.0, ODBC and support for Microsoft Mail clients, all of which have their own code-names.

### Layered and client

The Layered Server division of SCO, created back in June (UX No 544), is charged with handling the company's Advanced Server for Unix (ASU) implementation, the successor to LAN Manager for Unix for which AT&T provides the core software. ASU will give SCO users full interoperability and equivalent file and print network functionality with Microsoft Corp's Windows NT Server 3.5, and should allow SCO to compete in the world of NT without having to give up the (in its view) superior application server capabilities of Unix. Only Data General Corp has so far shipped a production version of ASU, though AT&T has around a dozen OEMs now working on products. SCO signed up for ASU at last year's SCO Forum (UX No 497) and originally expected to introduce it along with OpenServer 5.0 in May. It should now emerge early in 1996 as part of a product SCO codenames Cowell, that will also include network backup and preventative systems management features, culled from its new deals with third party software houses Go Ahead, Olympus Software and Cheyenne Software Inc (UX No 553). In the second half of 1996 we should expect Waddell, an expansion of Cowell that will also be extended to provide Internet services. In the first half of 1997 Pacifica will emerge, including Microsoft Directory Services, support for mobile computing, hierarchical storage management and business integration tools. While its layered tools will initially be provided only to users of SCO operating systems, the company plans to expand its scope to include HP, IBM and Sun platforms. The Client Integration plans a whole family of products under the Vision Project label, with new products for Windows95, 3.11 and NT, from next month (*see back page*). Beyond that there is the TigerShark project, which promises server software providing "everything a Windows user needs to plug straight into a Unix network and get to work", such as Server Message Block, Dynamic Host Configuration protocols and TAPI support. That's due in the first half of 1996. By the second half of '96 we should have the results of the Sole project, that aims to exploit OLE and Network OLE for seamless and "deep" application integration, as well as 64-bit server and client support. The company expects the client integration side to account for around half of its revenues by the turn of the century - it currently does around 15%, with the core Business Critical Servers division taking the other 85%.

## OEC SWALLOWS TOOL HOUSE JARRAH

Boston, Massachusetts-based DCE house Open Environment Corp, which now positions itself as a three-tier application development outfit, is readying version 3.0 of its Entera development environment for Unix Expo, along with WorkBench for Windows, which it says will bring three-tiered application development to desktops. Meantime, the company's acquired Australian development management tool company Jarrah Technologies Pty Ltd in a stock issue which values Jarrah at \$7.2m. Jarrah, which will become the company's Open Environment Australia Pty Ltd subsidiary, created the repository-based TeamWindows development tool which is resold by Gupta Technologies Inc as part of its SQL Windows toolset. Jarrah has 60 employees: founder and CEO Philip Copeland becomes the subsidiary's CTO, David Miller remains MD.

## WIND RIVER FLOATS TORNADO EMBEDDED DEVELOPMENT SYSTEM

Wind River Systems Inc will announce Tornado, its next-generation development environment for embedded applications this week. The Alameda, California company says it will deal a body blow to time-to-market problems for ~~developers by eliminating functional dependencies between the host and target~~ that characterise traditional cross development systems. The problem with embedded systems until now, it argues, is that product development has been hampered by poor communication between the host development system and the target code runs, limited target resources including, memory and I/O and a lack of tools. To address these issues it has developed Tornado, claiming the technology is scalable across small, resource-constrained targets up to large scale embedded systems. Tornado is a development environment based upon VxWorks 5.3, plus a suite of cross development tools and utilities for Ethernet, serial line, in-circuit and ROM emulation.

### Tools broker

Wind River has tackled the host-target problem by shifting development tools - including the shell, loader and symbol table - to the host system. Migrating tools from the target to the host is made possible by the use of a scalable agent on the target. The agent, which acts as a representative for the tools, connects the tools to the target run-time system. The agent is run-time independent and deals with specific tasks and system-wide requests, switching between the two on demand. Working in much the same way as the target agent, a host-based target server ensures tools are independent of the target system. It acts as a 'tools broker' such that all host tools access the target through a single server, whose function is to satisfy tool requests by breaking each request in to the necessary transactions with the target agent. The target server manages details of the target connection, enabling individual tools to ignore host-to-target transport mechanisms. Features include target memory cache, host-based memory management and a streamlined host-target protocol to reduce communication traffic and improve cross development. Tornado APIs include Tool Command Language and the use of dynamically linked libraries for loading and unloading object files. Wind River has a clutch of third party ISV's signed up for Tornado including Natick, Massachusetts-based Mathworks; Canadian company Objec-Time Ltd; Sunnyvale, California-based Real Time Innovations; and San Diego, California-based XLNT Designs Inc. Wind River claims it will have other third parties by November when Tornado ships. It has a full simulator back-end, with a hook to Unix file systems. Tornado tools include Launcher, which enables the management and monitoring of target servers; WindConfig for configuration of support packages; CrossWind, its source level debugger; C and C++ compilers; a host-based shell interface for interaction with Vx Works; an incremental loader; and system diagnostics and performance monitoring modules. Tornado is up on Motorola 680x0, Intel iAPX-86 targets plus a selection of Unix and PC hosts. Wind River expects to support all embedded architectures by April 1996. Prices start at \$23,500.

## SYSDECO MOVES HQ TO BEDFORD, MASS

Oslo, Norway-based software and systems group Sysdeco Group AS is relocating its operational headquarters to Bedford, Massachusetts, where it'll team-up with an existing sales force. The company is still deciding how many of its execs will make the move, which it says will be complete by the beginning of next year. Its research and development operation will remain in Oslo. The group, which claims to be Europe's eleventh largest software house, has just recorded half year net profit to 30th June of £2.1m, and revenue of £19m. It's bullish about its role on the international stage, and the move to the US is seen by the company as necessary to establish international standing. The company recently acquired a 51% interest in Atex, a pre-press software supplier based in Bedford, Massachusetts. Other acquisitions include Finnish pre-press company SyPress and Danish desktop publishing systems and database outfit Uniware AS; and an agreement in principle to acquire Illinois editorial system supplier Dewar Information Systems Corp. The acquisitions mean the company's workforce has risen by fifty, to six hundred and fifty worldwide.

## CERIDIAN EYES FURTHER ACQUISITIONS

Ceridian Corp's \$900m acquisition of Comdata Holdings Corp (UX No 552) has not sated the company's quest for takeover targets, and it said it might be able to announce one or two more modest ones this year. The Minneapolis-based information services and defence electronics company has made about a dozen acquisitions since it was formed from the old Control Data Corp in 1992 and told *Reuters* it will continue seeking companies in 1996, in a bid to expand its revenues from information services. Defence electronics accounted for more than 50% of revenues in 1994, but with the Comdata acquisition, that will fall to only about 38% in 1995 and should shrink further in 1996. Analysts are predicting an eventual spin-off of the defence operations.

## DICK PICK LEAVES COMPANY CASH LEGACY; GIVES PICK SYSTEMS OPPORTUNITY TO MODERNISE, DEAL WITH IBM EVEN

It is not even a year since Pick Systems Inc's founder and leader, Dick Pick, died but with matters of probate now resolved, the Irvine, California company ~~says it is the beneficiary of some substantial insurance poli-~~cies that will enable it to speed up planned enhancements to its database product, and to grow the business. The message from Dick Pick's successors seems to be that while his loss was deeply felt on a personal level, the company has been given the opportunity to alter its management style to something more conventional; confirming our suspicions that without the colourful entrepreneur at its helm, Pick Systems will become just another company. In fact, this is precisely its strategy, according to George Olenik, the company's new president and chief executive, who was appointed in January. Dick Pick has been replaced by an entire management team, which intends to re-position the company as a modern, marketing leader. Pick has recruited Stephen Cobb, a former sales manager at Unidata Inc, as vice-president of sales, and admits that it is looking for a president of marketing from outside the Pick world, in other words someone familiar with the likes of Oracle or Sybase, to help it position itself as a serious competitor in the database market. To this end, the new management has decided to concentrate on its database product, which it considers to be its core business.

### Abandoned work

It has abandoned work on its own graphical user interface and has done a deal with Unidata to market the company's wIntegrate terminal emulation and communications package, which, it said, provides users with a familiar-looking front end into the Pick development software. It has also bought in Picklan, a local area network product from Modular Technologies Inc, which it has incorporated in Pick. In another departure from the old style, the new management has adopted a new strategy towards IBM Corp. Where Dick Pick apparently once threw members of IBM out of his office, vowing never again to do business with them, his successor said he is "actively wooing IBM," and that promising things are on the horizon. With regard to its core products, the company said it will continue to develop and enhance native Pick, which is the Pick database management system running under the Pick operating system, but the future, it said, is definitely open systems. To underline this aggression, it chose Ninja as the working title for the new release of the database due in mid-1996, which will include Open Database Connectivity support, SQL interface and multimedia applications. Ninja may not be the final name, but nor will the word Pick appear when the new version is released, such is the company's desire to update the image of the product it first introduced in 1973. The company said Advanced Pick is a highly machine-efficient, mid-range product that scales down to run on as little as an 80386 personal computer, and the company claims it will support up to 50 users on a single 80486 machine. Advanced Pick for SCO Unix costs £240 per user. The new team said it is committed to continual enhancement of the product, both through in-house development and buying in bolt-on products. It said it has put out a call to anyone who has developed a useful Pick utility, however small, and it will consider adding anything that will enhance the product for existing users. A Windows NT version should also be available by the middle of next year. So, is competence a substitute for charisma? Only time will tell how well Pick does without its eponymous leader, but with finance apparently no longer an issue, the company should be well placed to give its competitors a run for Dick's money.

## HITACHI TO UNWRAP POWERPC GAME PLAN 'BY YEAR-END'

Whatever happened to Hitachi Ltd's PowerPC strategy? We've been asking the question periodically ever since the company signed on the dotted line with IBM Corp back in April 1994 (UX No 485). "By year-end," is the company's latest estimate of when it'll spill the beans. As well as the reported struggle between supporters of the company's PA-RISC strategy (presumably PA-RISC/Intel now) and PowerPC over in Japan (UX No 500), the company's also been trying to figure out how it'll be able to add value to what's already on offer from PowerPC shops and how a software story will play. There's no word yet whether the parallel SP2 units IBM Corp has been shipping to Japan for evaluation have made it to any customer sites. Meantime, the company's now got 35 mainframe users up and running with its Osiris OSF/1 Unix and middleware open systems suite, which includes a handful of Compex Informationsysteme GmbH sites.

**MOTOROLA MPC821 SETS PACE FOR CHIPS FOR HANDHELDS**

The Motorola Inc High Performance Embedded Systems Division duly announced the MPC821 PowerPC-derived microprocessor and it turns out to be a hot property, with communications ~~and other functions integrated with the PowerPC core. It is~~ designed for minimum power consumption in battery-powered portable electronic devices and Personal Digital Assistants. The MPC821 is designed to execute compute-intensive applications such as wireline and wireless modem data pumps, speech recognition, handwriting recognition and imaging, and combines an embedded PowerPC core with a Communication Processor Module that supports embedded signal processing, a colour or monochrome liquid crystal diode display controller, PCMCIA master controller, and flexible memory interface unit for both memory and system control. It also features "the highest level of programmable on-chip peripherals" to lower overall system cost and power consumption. It has integrated 4Kb instruction and 4Kb data caches and is claimed to deliver 33 MIPS at 25MHz and 53 MIPS at 40MHz off a 3.3V supply on the Dhrystone 2.1 benchmark. The Communication Module supports six serial communications channels; the embedded signal processor can sustain a rate of one 16 by 16 multiply and accumulate every clock cycle. The memory interface supports connection to traditional 68000 Big Endian systems, iAPX-86 Little Endian systems and PowerPC Little-Endian systems to facilitate file transfer. The MPC821 is in limited sampling with general sampling next month and volume expected by January; the 25MHz version will be available for a very competitive \$70 in 10,000-up quantities. Supporters for the new chip include Wind River Systems Inc with its VxWorks real-time operating system and WindPower Tools for embedded application development, and Microware Systems Inc, which jumped the gun and trumpeted its support 10 days before the chip was launched. The only major question raised by the new chip is how easily it sits alongside the 68328 DragonBall processor adopted by Samsung Electronics Co for a Personal Digital Assistant, which is pitched at exactly the same market.

**AMDAHL CMOS MAINFRAMES UNDER STARTERS ORDERS**

Look for Amdahl Corp to announce its first generation of CMOS mainframes anytime now. They are being built by Fujitsu Ltd as the Millennium Global Server series, with uniprocessor performance of around 45 MIPS - IBM Corp is expected to have an uniprocessor of about 40 MIPS when or soon after the Amdahl machines ship next summer - with an eight-way degrading so little that it does as much as 285 to 315 MIPS; price for the Millennia is likely to be between \$10,000 and \$12,500 per MIPS. The CPU is said to be a nine-chip set, and Fujitsu is expected to launch one-to-four-way machines built around it for the Japanese market with delivery before the year end.

**OPERATING SYSTEM TUNE BILLBOARD**

Following Microsoft Corp's use of the Rolling Stones' Start Me Up to introduce Windows 95 - Gates was reportedly turned down by REM - DEC-watcher Illuminata Inc's Terry Shannon has put together a Windows 95 Billboard of Operating System Tunes:

Rank	OS	Title and Artist
10	Plan 9	<i>Space Oddity</i> - David Bowie
9	Linux	<i>Give It Away</i> - Red Hot Chilli Peppers
8	OS/400	<i>Paint It Black</i> - Rolling Stones
7	OpenVMS	<i>Built To Last</i> - Tom Petty
6	HP-UX	<i>You're So Vain</i> - Carly Simon
5	MacOS	<i>Trouble Waiting to Happen</i> - Warren Zevon
4	MVS	<i>Living In The Past</i> - Jethro Tull
3	Solaris	<i>Eclipse</i> - Pink Floyd
2	WindowsNT	<i>Godzilla</i> - Blue Oyster Cult
1	OS/2	<i>Funeral For A Friend</i> - Elton John

Unplugged versions for nomadic platforms would of course be included as bonus tracks.

**THE BLACK ART OF SAP R/3 BENCHMARKING**

As the SAP AG R/3 bandwagon gathers momentum, more and vendors are putting specific SAP marketing groups together and touting benchmark results for R/3 application modules such as Sales and Distribution (SD) and Finance (FI) as proofs for their respective enterprise servers. ~~With over 2,000 SAP R/2 mainframe installations, client/server companies are fighting for the migration business, although even the largest~~ R/3 site currently has under 1,000 production users. Now Nashua, New Hampshire-based market researcher Illuminata Inc is throwing some long-overdue cold water on the R/3 benchmarking trend in a report called "SAP Benchmarking: Pay No Attention to the Man Behind the Curtain", that's destined to be the subject of more than few lines of trade copy this week. The report finds that based on individual modules, R/3 benchmarks are not broadly representative of many real-world installations and that the high-end configuration numbers vendors crave say little about more modest configurations that suit typical customers. Illuminata believes the benchmarks have been run, in certain cases, on unsupported configurations and estimates they are no less expensive or time-consuming to run than TPC-style tests. Most damning is the lack of an independent auditing process, or consistent disclosure of parameters, it finds. In conclusion, it finds that "the publication of R/3 benchmark results complement the sales agenda for both platform providers and SAP itself. But as it now stands, the benchmark is narrow, opaque, proprietary and given to extremism. Unless and until SAP mandates consistent testing and responsible disclosure, the results do little to simplify and inform customers' decisions."

**CHOICE MADE, BUT HP's MUM ON OPENVIEW-FOR-NT PORT**

Hewlett-Packard Co OpenView programs manager manager Scott Safe says the company has now decided upon an implementation of its 32-bit Tornado network management environment to offer on NT, but isn't telling till later this year. As reported (UX No 528) there are currently two inconsistent efforts underway to port the 'Tornado' release of OpenView to NT; HP's own port based upon OpenView for Windows, and the one AT&T GIS is doing from OpenView for Unix. HP may be at the point of resigning itself to getting serious about OpenView-on-NT, mostly because of Microsoft Corp's deal to acquire UK company Network Managers Ltd and stick its NMC 4000 technology into Hermes. NMC 4000 competes directly with the HP port of OpenView for Windows. Meantime, its Tornado-for-Unix code will be frozen next week, Safe says, in readiness for introduction of the distributed graphics/GUI module in September. Data collection, events and discovery components have already been pushed back to next March. Intelligent OpenView agents for managing NT systems are also due next year. The company's distributed, object-oriented implementation, dubbed Synergy, is further out. HP claims a 65% growth in OpenView revenues in 1994. Revised IDC numbers say a total of 21,196 SNMP enterprise management platform units were shipped in 1994. 30.7% were SunSoft Inc products, 27.8% HP, 13.2% Cabletron, 9.7% IBM, 4.5% Network Managers and 14.1% others.

**OLSEN's ADVANCED MODULAR SERVER FIRM MIXES, MATCHES POWERPC, VAX**

Advanced Modular Solutions Inc, the Acton, Massachusetts server company that was formed by former Digital Equipment Corp staffers, and has DEC founder Ken Olsen on board (last we heard it was called Advanced Modular Computing Technologies and based in Concord, Massachusetts), has now appointed Olsen its new chairman, and has decided to ally with IBM Corp rather than its founders' alma mater. It has developed what IBM is calling the 7596 Cross Platform Server, a server designed to enable customers to take advantage of the best of VAX/VMS, AIX, NetWare, Windows and OS/2. The company calls its own version of the machine the XPS System/2000, and it mixes and matches PowerPC, Pentium and VAX - rather than Alpha, apparently - processor boards with DAT and CD-ROM drives, RAID 0, 3 and 5 disks, N+1 power back-up and uninterruptible power supply. A single tower requires one 66MHz 80486 or 90MHz Pentium processor board, and can take only one; it can take up to eight OpenVMS Application Processors, each with a 90MHz VAX microprocessor, or up to eight AIX Application Processors: these are 80MHz PowerPC 601s; or a mix; one to four storage arrays are supported with space for up to 140 disk drives - which can be 1Gb, 2Gb, 4Gb or 5Gb units. No price was available for any configuration.

## FROM FACIAL RECOGNITION TO RADIO ATM; NEC IS RESEARCHING IT

By Anita Byrnes

NEC Corp celebrated the 20th anniversary of its Central Research Laboratories at Miyazakidai in the suburbs of Tokyo with an open house at which some of its major fields of research were on display. It also took the occasion to announce an expansion in its international research and development activities through the establishment of two new bases, in San Jose California and in Berlin, Germany. Both new centres will focus on multimedia-related development: San Jose on multimedia software and Berlin on multimedia communications technology. NEC already has research and development facilities overseas, the earliest being NEC Research Institute, established in Princeton, New Jersey in 1989. This was followed by the 1991 C&C Research Labs, part of NEC US, also in Princeton focusing on research into more application-oriented fields such as multimedia systems, Asynchronous Transfer Mode networks, chip computer-aided design and performance analysis.

### Parallel

The new base in San Jose will be part of this organisation, and will start life with about 10 staff. The new multimedia communications lab in Berlin will also be part of the existing C&C Research Labs division of NEC Europe, and together with the existing Bonn location for research into parallel processing, will have about 15 staff. Kojiro Watanabe, General manager of the C&C Labs NEC USA says that one of the attractions of setting up research laboratories overseas is the availability of highly skilled researchers (no doubt at more reasonable cost), and the project-based hiring flexibility that brings. In Japan, the obligation is to hire freshmen from college who then have to be trained. In the US particularly, the start of the NEC Labs coincided with cutbacks in basic research at surrounding research centres such as Bell Communications Research and Bell Laboratories, and as a result NEC was able to attract top people - 70% of the staff at Princeton have PhDs. Similar reasons draw NEC to the Silicon Valley area: in addition, because the focus is software, NEC plans to make use of the sophisticated user community for testing interfaces and pre-marketing of authoring tools built on top of core algorithms developed in Japan. In Germany the initial thrust of research has been parallel processing - joint projects are currently under way with GMD, the German Research Centre for Computer Science, in Bonn, while the new work in Berlin will involve joint projects with other as yet unspecified companies. The facilities in Germany are managed by Nobuhiko Koike, who is based at the London headquarters of NEC Europe. The main fields of research at the Central Research Lab include materials, devices, C&C systems and software, and the work consumes approximately 1% of NEC's annual revenues - last year consolidated revenue stood at \$35,000m of which overall 10% was spent on research and development - where IBM Corp now spends a bare 5.7%.

### Wireless ATM

The Central Laboratory works in conjunction with other laboratories such as the Sagamihara Labs (ultra large-scale integrated circuits), Tsukuba Labs (materials and fundamental chip technology), Kansai C&C Labs (human interface work) and Kansai Electric Labs which works on compounds semiconductor devices. One of the themes of the exhibition was multimedia information networks and applications. In the field of wireless communications, NEC USA is working on a new network architecture for "wireless Asynchronous Transfer Mode" broadband services. The WATMnet prototype provides a means for communicating with the Internet or downloading video data while the user is on the move and incorporates developments in the field of high-speed radio modems, multiservices Media Access Control and Data Link Control protocols. Commercialisation depends on how quickly broadband services penetrate to the home, said researcher Dr Raychaudhuri. On the physical delivery level, NEC is working on a high-speed optical fibre data link made of plastic, which provides higher speed transmission at a lower cost than copper cable - fast Ethernet could be realised at 70% cheaper cost. NEC is participating in standardisation activities in the ATM Forum, promoting its plastic optical fibre. Other research is focused on progress towards a single chip audio-video encoder-decoder based on MPEG-2. NEC has used this development in production of a video codec and video-on-demand server encoder - which are already shipping. NEC's work on parallel computing has been continuing for some years, and has been commercialised as the Cenju-3 distributed memory-type parallel computer, which is installed in a number of National Research Institutes and universities. Research is now focused

on use of the Mach microkernel for parallel processing and interactive design help for parallel applications. To promote the development of such applications, NEC sponsored the foundation of the Parallel Processing Centre, under which academic participants will register programs they have developed for sharing with other developers. It is currently restricted to Japan only, but open access to overseas users through the Internet is expected to be available by the end of 1995. Human interfaces are another focus of research. Research work that was demonstrated included a working Japanese-language speech interface that achieved speaker independent speech recognition of flexible vocabulary.

### Face recognition

This work is based on a demissyllable unit - which changes according to the language. Clear speech synthesis based on the extended CV-VC waveform concatenation method was also demonstrated, using a flight schedule information system as an application. This work is being extended to include a spontaneous spoken dialogue interface. Other work, which is being conducted at the US Labs, involved a superior method of face recognition based on statistical methods such as a sparse training mechanism. The system, which has potential uses in identification systems for buildings and automatic teller machines, achieved 95% accuracy in a database of 685 faces. Other technologies on display included a number of developments in high density magnetic disks, optical disks and 40" wide screen colour plasma display (840 by 840 pixels, 16.7m colours). Another major area of research is process technologies such as 0.07 micron CMOS (to be commercialised in 16Gb memory chips) and superconductive interconnections for Terabit per second data switching in parallel processors. The range of technologies on display showed that NEC is still one of the powerhouses of "C&C" basic and applied research, and underlined the commitment that Japanese high technology companies have to research and development.

## AT&T-SGI VENTURE, IKONIC INTERACTIVE, SEEK TO MAKE WORK OF CONTENT PROVIDER EASIER

Ikonc Interactive Inc and Interactive Digital Solutions Inc plan to simplify the construction of interactive content with a suite of hardware and software applications for content providers. Ikonc and Interactive Digital Solutions, the joint venture of AT&T Network Systems and Silicon Graphics Inc, will co-operate in marketing Ikonc's complete line of interactive television software, Ikonc MAUI, IkoncTV, Ikonc Remote, and US Ikonc Propagation Manager. The two have been working to convert IkoncTV and Ikonc Remote to run under the UnityOS television set-top operating system developed by Silicon Graphics and Interactive Digital Systems. Content providers do not have the time to develop interfaces and software to make their material interactive. Instead, they want to pour content into a ready-to-go standard software backed by a company that has the expertise to guide them in the interactive arena, says Robert May, Ikonc's chairman. The goal is to build a service offering hardware, software, user interface, content development, support and maintenance. In addition to standard software, Ikonc will customise its products to meet individual customer needs and help customers convert traditional, non-interactive content into interactive programming. Ikonc MAUI is an interactive on-screen navigator designed to organise and present choices available to the consumer. IkoncTV is an object-oriented application which delivers real-time MPEG-compressed data. Ikonc Remote enables content providers to update their content, such as news services, and replace or rearrange graphical screen elements on Ikonc TV.

## STRATUS BLOODBATH AS 500 PEOPLE, 18% OF WORKFORCE, LOSE THEIR JOBS

Facing up to a much more competitive world in an age of non-proprietary operating systems, Stratus Computer Inc is slashing its worldwide workforce by about 500 people, a daunting 18% of total employment at the Marlborough, Massachusetts company. The cuts will cost the company \$20m against third quarter profits, \$12m for redundancy pay and \$8m for consolidation of facilities. "The margin decline in the first half of 1995 was more rapid than we originally expected, and that requires that we reduce our costs more quickly than we had planned," the company says. It notes that it is at the beginning of a major new product cycle, having introduced its Precision Architecture RISC-based Continuum line in January, and promises new models early in 1996, as well as introducing "a totally new hardware product line based on distributed computing principles, which will build on the company's Isis distributed computing software and commodity hardware and software. Analysts have been murmuring for some time about how Stratus "didn't get it" with Continuum.

### CAMBRIDGE TECHNOLOGY SITES NEW DEVELOPMENT CENTRES IN DUBLIN

Systems integrator Cambridge Technology Partners Inc is setting up two major development centres in Dublin to support customers across Europe, creating an estimated 200 jobs over the next three years. ~~The company will build an object-based software re-use~~ centre which will develop a library of re-usable software objects for Cambridge projects worldwide, and a rapid implementation centre to design and produce systems, both funded by \$1m from the company and a substantial grant approved by the Industrial Development Authority. Dublin will also house its European Centre of Technical Excellence, and a virtual development centre. Staff recruitment has begun, for 25 initially, rising to 75 by the end of next year and 200 by the end of 1997.

### DEC SELLS THE FAMILY SILVER

Almost everything Digital Equipment Corp was famous for is gone - the Rdb database has gone to Oracle Corp, VMS is set to vanish, squeezed out by Microsoft Corp's Windows NT, thereby marking the demise of the VAX, the disk business is gone, even the old mill in Maynard has been sold, and now the company is selling the business that made its VT terminals famous. The text terminal business is to be bought by the SunRiver Data Systems Inc subsidiary of All Quotes Inc on undisclosed terms. SunRiver got much bigger by acquiring the terminals and Pick systems business that made up Applied Digital Data Systems Inc from AT&T Corp. The tentative contract includes a long-term supply agreement under which SunRiver will provide DEC with text terminals for its customers, and the Maynard will continue to service its customers' current text terminals; it will also retain its Multia multi-client desktop line of products that enable users to work across multiple computing environments. The companies plan to sign an agreement under which DEC will service the VT and Dorio text terminals that will be manufactured by SunRiver.

### APPLE FINALLY LAUNCHES POWERPC-BASED NOTEBOOKS

Apple Computer Inc finally launched its impatiently awaited PowerPC 603e-based PowerBook portable computers as the PowerBook 5000 and 2000 series, and reconfigured the PowerBook 500 to create a new 68040-based PowerBook 100 entry-level model starting at \$1,650. The PowerBook 5000 series is to be available on September 11, while the PowerBook 2000 and 100 models are expected in mid-October. Prices for the new 117MHz and 100MHz PowerBook 5300 models will start at around \$2,200: the 5300 family is designed to give desktop-level performance in a notebook; it weighs 6 lbs and disk capacity goes to 1.1Gb; it has a 10.4" display and the battery does up to five hours between charges. The 100MHz PowerBook Duo 2300c subnotebook model is designed to be the smallest PowerBook and is \$3,500 to \$4,700. It weighs about 5 lbs and also comes with up to 1.1Gb disk. The 190 and 190cs use a 66MHz 68040 and come with a 500Mb disk. All have infra-red communications system.

### IBM, SUN, NATSEMI TEAM WITH US BANKS ON ELECTRONIC CHEQUE SYSTEM

A consortium of US financial and technology companies has developed an Electronic Check for use over the Internet. The group said that the electronic cheques will be sufficiently secure to be sent directly from customers to their recipients without needing to pass through a central clearing system. The consortium, which includes Citibank, the Bank of America, IBM Corp, National Semiconductor Corp, Sun Microsystems Inc and the regional Bells' Bell Communications Research, will initially use a standard PC Card modem, costing between \$30 and \$40, to verify the identity of the cheque writer. In the future they plan to use a Smart Card for this purpose, it said. The electronic cheque system has also been designed for third party services such as travellers' cheque. The consortium intends to publish an open standard for electronic cheques that all banks could issue and receive, and it hopes to start trials of the system next year.

### OBJECT/FX TOUTS GIS-BASED DATA DISPLAY SYSTEM

St Paul, Minnesota-based geographic information systems house Object/FX is targeting Smalltalk developers who want to enhance existing client/server applications in the services, utilities and government sector with an embeddable solution for displaying enterprise information in map, picture, table and schematic format, called SpatialWorks. The idea is that users see pictures of their information rather than just reading text. A SpatialWorks-enhanced marketing application would let users see locations of retail outlets and view sales and market information in relation to competitive locations through of drill-down local, regional or worldwide maps, the company says. Object/FX believes its key advantage over traditional GIS providers such as Intergraph, plus the 'GIS Lite' brigade such as Lotus/Strategic Mapping, Microsoft/MapInfo and Oracle Multi-Dimension is its ability to provide shared views of data across an organisation via multi-platform object components. Traditional GIS are expensive, standalone systems that aren't integrated with corporate systems, the company says, whilst GIS Lite, or desktop mapping products are standalone desktop applications, again not integrated with corporate systems, and require significant training expenditure, it claims. "Too hard, too big and too isolated," is its view of solutions currently available.

#### Spatial database

An Object Mapper represents existing relational data, such as customer address and key ID, or facilities and operation information, in a spatial context - ie state, city, network, or schematic. The data is integrated into these views via maps, pictures and schematics either bundled with Object Mapper (currently US state, city and highway information), imported from other data sources, or bought as custom-built sets from Object/FX. The resulting objects are stored in an Object Design Inc database - or spatial database as the company insists on calling such technology. "We give the presentation and users give the behaviour," explains Object/FX. Support for Versant, Objectivity and Gemstone databases is underway. An API allows selections and queries to be reported to external applications using DDE, IPC or exchange of ASCII files (or OLE from next year). The Mapper works with data stored in Oracle, Sybase, Informix, DB2 and Artbase databases (where Smalltalk interfaces exist). Version 3.0 of a SpatialWorks executable (SpatialWorks is written in Smalltalk) called Visual Companion Integrator's Kit due in November comes with an integrated ODI database and pre-defined query set. The company claims it can be embedded in any existing application, regardless of operating system, language or database. It costs from \$1,000 for a single user licence, \$1,300 for a client/server development licence, \$2,500 per five client runtimes and \$4,000 per server licence. A class library source-code product, the Visual Companion Object Developer's Kit, allows developers to embed SpatialWorks components into ParcPlace/Digitalk Smalltalk applications and create their own query and selection sets. It ships from October priced at \$3,000 for a single-user development licence, \$4,500 for a client/server development licence, \$2,500 per five client runtimes and \$4,000 per server licence, minus the bundled object database.

#### Re-incarnation

Object/FX and its SpatialWorks environment are the open systems and Smalltalk re-incarnations of a proprietary product from now defunct GIS software company Ultimap, also of St Pauls. Ultimap executives created Object/FX in 1993 after the original company ran out of cash. Object/FX president Bruce Gilmore was president and CEO of Ultimap, whilst chairman and CEO Kermit Stofer is also CEO of Object/FX shareholder Software Consolidations Inc. The company, which has won an undisclosed amount of funding in two rounds of capitalisation, expects to do \$2m this year and \$6m next. It has 22 employees and currently sells direct and goes through integrators like Andersen, and Cap Gemini or specialist object shops such as Object Space and Object People. It's got no OEMs or VARs to speak of, but is lining up European distributors to carry the products from next year. It's currently working to integrate the Expersoft Corp PowerBroker ORB with SpatialWorks for a customer (PowerBroker has a Smalltalk interface), and plans an implementation using IBM Corp's VisualAge Smalltalk environment.

# unigram·x

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**Unisys UK Ltd** has been lining up a decision support software portfolio for its Opus Parallel Unisys Server, and has entered into partnerships with Business Objects SA, DM/Backup Software Ltd, Gupta Corp, Information Builders Inc, Legent Corp, Pioneer Systems Inc, Prism Software Inc, Powersoft Corp, TechGnosis Inc, TeamQuest Corp, Red Brick Systems Inc and Oracle Corp; future partnerships - including one with data mining specialist Information Discovery Inc of Torrance, California for the IDIS product - are expected to be signed shortly.

Unions at **Ing C Olivetti & Co SpA** say they are worried about the prospects of further job cuts at the loss-making company: Il Mondo said last week Olivetti is planning a further round of 3,000 lay-offs and that they will extend beyond the troubled personal computer business.

**Sequent Computer Systems Inc** is boosting its presence in Hong Kong and China by re-vamping its China joint venture and forming a new company, Sequent China/Hong Kong Ltd, covering both territories, and has also formalised a teaming agreement with Unisys Corp in Hong Kong to boost the scale of joint activities. Sequent has shipped 30 systems worth more than \$15m in 20 months, and is looking to expand particularly in the financial, transportation and telecommunications industries, the Beavertoner said.

**Computer Associates International Inc** has sold the Information Integrity Division of Legent Corp, which sells the Sunrise and Lifeguard disaster recovery automation products, on to Panorama Software Corp, Woodland Hills, California. No terms.

**Intel Corp** director of marketing, enterprise programmes, John McNulty, was at SunSoft Inc last week saying as how Intel's Unix operating system for the P6 was Solaris. The statement surprised folks like Compaq Computer Corp who thought Intel was ever so tight with Novell Inc. It's trying to track him down to find out how sincere he was being.

According to our sister paper *CleNT Server News*, within nanoseconds of the Intel-led 64-bit Unix API cotillion hitting the wires (UX No 552), Bill Gates was on the blower to Intel chief Andy Grove screaming bloody murder for daring to think that he could do 64-bits without Microsoft.

"X/Open is fast becoming the roach motel of high tech. Standards check in, but they don't check out," an anonymous **Sun Microsystems Inc** official told *Information Week*.

**Lotus Notes 3.3** is now up on SunSoft Inc Solaris x86 2.4 from \$275.

Having remained in place through the re-org, David Tory is resigning as president and CEO of the **Open Software Foundation** and will leave the organisation on September 15th. OSF's board meets on the 14th at IBM Corp offices in Raleigh, North Carolina, to decide whether Tory - whose services have come high for a non-profit organisation (reportedly \$1.6m a year) - should be replaced, and if so, who it should go after.

Did you know that 5% of **Hewlett-Packard Co's** workforce, or 4,910 employees, work from home?

DEC's DCE champion Robert Bismuth, who's been up to his ears in Object Management Group politics and apparently played a role in the recent DEC-Microsoft re-alliance, is now officially declared VP, Corporate Standards Group, reporting to Bill Strecker, VP, Advanced Technology Group and Maynard's chief technology officer. He's now responsible for consortia/standards activity and negotiating key strategic alliances. He's had the job for a while.

Looking back at its installed base, **Santa Cruz Operation** now estimates that 15% of its users are still using Xenix, while "half to two thirds" of its SCO Unix users are now working in graphical/networked environments - in other words they've moved up from character-based SCO Unix to the newer OpenServer line. The company still has a major upgrade drive going on though.

The Client Integration Products division of **Santa Cruz Operation** has a whole raft of products to launch next quarter that stem from its Vision project - previously known as Envision (UX No 541). The Windows 95-dependent product family will evolve Visionware's X Server and PC-Connect product lines in the areas of transparency and integration with IXI's X-Windows technology.

*The New York Times* Sunday edition reports that the **Max Planck Institute of Biochemistry** at Martinsried, near Munich in Germany, has developed a technology allowing leech neurons to exchange information with silicon chips. Institute engineers apparently created a signaling channel between the nerve cell, with a diameter of half the width of a human hair, and a single device on the chip, which is about six times narrower. It could some day be used to create artificial limbs that obey the orders of the brain - or how about, as the paper suggested, a mind-computer interface like that described in William Gibson's *Neuromancer*, allowing data cowboys to plug their brains into a computer, or "jack into the Net." They'll have to scale up the single interconnect between neurons and the chip into millions of connects between transistors and cells and make the links function like living tissue first, the paper observes.

**Hewlett-Packard Co's** supporting Visual Edge Technology Ltd's object map proposal for Corba-to-OLE interoperability (UX No 553), but says it hasn't yet decided whether to build its own implementation of the mechanism or license Visual Edge's ObjectBridge like IBM, Sun, Iona and others. It plans to have OpenView managing all of its object-oriented environments in future, and is currently examining how to integrate NeXT Computer Inc's Nextinfo network management database into OpenView and create a common name space.

**Hewlett-Packard Co's** apparently courting the retail industry again, even though its got no point-of-sale solution of its own.

**Hewlett-Packard Co** characterises its Fibre Channel switch and clustered/parallel system architecture due in September (UX No 544) as a virtual data center.

**Platinum Technology Inc** is shipping a version of the DB-Vision database performance monitor it acquired with Plymouth Meeting, Pennsylvania-based Aston Brooke Software for Sybase. Each DBVision component is \$2,800, consoles are from \$8,000. An agent for Informix databases is due by year-end.

Manuel Diaz, **Hewlett-Packard Co** VP and general manager worldwide sales and marketing claims the company's Unix server business is growing at rate of 60% a year. With 4,000 new corporate accounts closed over the last 12 months, the company's fastest growing markets are telecomms and financial, he says. Telecomms business will be worth more than \$1,000m to it by the close of its financial year. The company's also ramping its channel programme, aiming to put 50% of its computer business through third-parties, which currently account for 25% to 30% of sales. Diaz says HP will have pumped some \$2,500m into R&D by the end of this year.

Although it has no interest in creating an applications business, **Hewlett-Packard Co** claims it's the number six software supplier in the world, behind IBM, Microsoft, Computer Associates, Oracle and Novell.

Rich Sevcik, VP and general manager of **Hewlett-Packard Co's** systems technology group says he has PA-8000 systems up and running, claiming they outperform original 360 SPECint92 and 550 SPECfp92 guesstimates. HP will add 49-bit physical addressing to PA through 1996, Sevcik said, by adding leads into the backplane. DEC's Alpha does 48-bit addressing.

**Object Management Group** claims it got 7,500 attendees to Object World in San Francisco a few weeks back, with 1,240 bodies at the conference section (last year's figures were 5,600 and 750 respectively). Object World is in San Jose in 1996.

In its bid to become to the "trusted advisor" to companies seeking to re-engineer for competitive advantage, **Hewlett-Packard Co** says it'll "walk with anyone in the marketplace," including rivals, to win customers.

Technologies **HP** believes will lead it to new markets, such as digital studios, medical imaging, Internet and customer contact systems, are the HP/Intel CPU, objects, Fibre Channel and high-availability.

Siemens-Nixdorf Informationssysteme AG's Heinz Diehl has been installed as president and chairman of the recently-incorporated **MIPS ABI Group**. VPs are Tandem Computers Inc director of Unix marketing, Bill Saulnier, and John Mashey, director of systems technology at Silicon Graphics Inc. CFO and director of marketing is Kevin Payne, marketing group manager for NEC. The group says it's recently approved a method of generating MIPS ABI-compliant C++ applications; Applix Inc is the first to make use of it.

As well as its PowerBroker auditing software (UX No 553), **Freedman Sharp & Associates Inc**, Calgary, Alberta, offers NIS-compatible PowerLogin and PowerTelnet remote login packages in its PowerSuite of Unix security products.

SPEC 4170, 5170 anyone? **Hewlett-Packard Co** tells us the 64-bit Unix interface specs it and some 50 other vendors are drumming-up - but keeping close to their chests - will run to between 3,000 and 4,000 APIs (UX No 552). Vendors and developers will use subsets required for their particular architectures and programming models. "We've got to get it right," says HP senior VP and general manager Computer Systems Organisation, Wim Roelandts, "because it ends up in source."

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper



London, September 11-15 1995

Number 555

## HITACHI READIES MULTI-PLATFORM OPEN SERVER STRATEGY

Hitachi Data Systems Corp, Santa Clara, California, will lift the lid on its long-awaited plan to buy, build or borrow PowerPC technologies during the second week of October, according to US sources (UX No 554). In fact after such an extended gestation, the company's preparing to layout a complete multi-platform server strategy over the next six months that'll include Unix and Windows NT environments running on Intel as well as PowerPC and Power2 architectures, spanning data centre-to-desk-side configurations. HDS, still focused almost exclusively on its IBM Corp mainframe-compatible business, is looking to generate a third of its revenue from the new open systems lines within three years, forecasting its System/390 business will remain flat over the same period. The April 1994 agreement with IBM gave HDS parent Hitachi Ltd the option to do everything from designing its own PowerPC chips, to re-badging IBM kit and building its own systems. Mandarins in Tokyo have been thrashing out a game plan ever since, which may or may not accommodate the company's existing arrangement with Hewlett-Packard Co under which it has been selling PA-RISC based parallel systems in Japan as the SR2001, or HMPP 1 (UX No 493) as well as other HP servers. Hitachi, which has been evaluating IBM's SP2 parallel systems in-house for some time, is expected to begin selling them very soon as the SR series through its HDS units worldwide. Specific configurations apparently include a system tailored for video-on-demand and there'll be a heavy emphasis on Oracle databasing and middleware right across the new lines. Meantime, those with good eyes and ears - and brave hearts - may pick up details of what's in store at the quadrennial teleco extravaganza Telecom'95 in Geneva next month where the video-on-demand system, plus an office media server will be on show. Meanwhile, reports circulating in the US last week say HDS, which is already selling Sequent Computer Systems Inc kit to fill an SMP Unix server requirement in the US, may begin to market a line of one-to-eight-way Pentium servers developed in Japan called PC 3100 running SCO OpenServer and MPX software for database serving. HDS officials declined to comment, whilst Sequent said it had received assurances that the Pentium units, possible competition to its Symmetrys, aren't destined for the US market. It's not just new system lines in Hitachi's game-plan. To move itself into other markets HDS - in which Electronic Data Systems has a 20% stake - will also unveil a new Enterprise Storage Solutions programme in November. Meantime, the company's claim that it won't reveal details of which companies are manufacturing the pieces of the new server line-up is likely to prove a clarion call to the press corps.

## SPARC UP FOR THE MILLENNIA

Sun Microsystems Inc's Sparc Technology Business will announce the first member of its new family of embedded microSparc-e RISCs, the Iie, plus support logic, within six months (UX No 553). It's not saying who's building the part, but the Iie, slated to deliver up to perhaps 125 SPECint95 according to STB's chart, is derived from the current microSparc II+, currently fabricated only by Fujitsu Ltd, which reaches 78.6 SPECint92 at 110MHz. The Iie will differ from standard microSparcs by virtue of an additional ROM controller interface and hooks for buses supported by the company's forthcoming UPA, UltraSparc Port Architecture bus. STB's embedded roadmap calls for a microSparc IIIe by the end of 1997 running at 200 SPECint92. The IIIe will be derived from a first quarter 1997 microSparc III that'll move Sun's low-end RISC up to the 64-bit, V9 Sparc architecture. "V8 with an UltraSparc superset and pipe. Binary compatible with microSparc II," is how the IIIe's described. microSparc III should hit the 250 SPECint92 mark and be followed by a 300 SPECint92 III+ in the first quarter of 1998. A IIIe+, due by the end of 1998 will come in at between 250-300 SPECint92. The microSparc IV, touted as an 800 SPECint92, first quarter 1999 part, will be followed by the 500 SPECint92 IVe by the end of the millennium and the 650 SPECint92 IVe+ by the end of the fourth quarter, year 2000. Meantime, Sun's 64-bit UltraSparc architecture, which is due to break the 300 SPECint92 line with an UltraSparc 1+ revision at the beginning of next year, and reach 400 SPECint92 as UltraSparc II in the third quarter of 1996 (UX No 506), should get closer to 500 SPECint92 in a II+ revision early 1997. The UltraSparc III, due in the first quarter of 1998, will push 1,000 SPECint92, whilst the first quarter 1999 UltraSparc IV is slated to tip over the 1,500 SPECint92 mark. *Continued on page 4.*

## IBM's POWER PERSONAL SYSTEMS DIVISION FUTURE IN LIMBO

Just three months after launching its Power Series of PowerPC-driven PCs, the axe is poised to fall on IBM Corp's 700-to-800 strong Power Personal Systems Division. Whilst insiders say the original plan was to fold PPSD into the IBM PC Company some time next year, lower than expected sales appear to have accelerated the requirement to find the business unit a final resting place. Having separate sales teams pushing Intel and PowerPC solutions to the desktop market was always seen as unnecessary in the new cost-conscious IBM operation, however because PPSD engineering was also responsible for the almost identical PowerPC RS/6000s and that PC Co has no Unix credentials, there's a notion that the desktop hardware folk may end up in Irving Wladawsky-Berger's RS/600 division whilst sales, marketing and notebook teams could be turned over to PC Co. Another possibility still to be discounted is that PPSD may live-on as a free-standing unit reporting to server chief Nick Donofrio. PPSD was apparently still in a state of limbo as we went to press.

## NOVELL REVERTS TO PLAN B

Novell Watch - Day 32: The impenetrable security cordon that our friends in Orem have thrown around their comings and goings of late probably owes more to the fact that none of their palaver has distilled into anything concrete yet rather than to the fact that they've made everybody sign personal vouchers offering themselves up as legal sacrifices if they don't keep their lips buttoned up. These non-disclosures are directly attributable to AT&T GIS pulling out of that deal they had to co-develop SuperNOS back in January (UX No 522) - after their people found out what was going down - and the recriminations that followed over who spilled the beans to *Unigram*. Novell is currently trying to put together a deal with more than one other company on 64-bitish stuff and by all reports the trek continues to be slippery. Given the fact that it's promised to start divulging something - or another - as early as next week, it looks like some of our industry chums are in for some late nights what with their penchant for going down right to the wire with things like COSE for instance. Either that or Novell had better scrounge around for something really good to tell the press. Near as we can piece it together they've fallen back on Plan B, Plan A - turning Unix over to HP - having apparently fallen apart - at least as it was then constructed - after a Novell board meeting in mid August. We heard two sets of reasons for the impasse: either it was a case of what would people think or how much or how little HP was willing to pay for it. Take your pick. Meanwhile, it seems Novell was spurned by IBM in favour of Lotus. It was as surprised as Jim Manzi when it woke up one morning after a three-month courtship with IBM to find Lotus entwined in its arms. Is it really either/or, Lou?

## POWERPC CLOUDS GATHER AS SP2 GROUP PASSES ON 620

As well as further question marks over the availability of PowerPC 604 chips, there's a growing cloud over the 64-bit cut of the architecture, PowerPC 620. At IBM Corp, Irving Wladawsky-Berger's Power Parallel group had long eyed 620 as the first PowerPC node for its SP2s systems (UX No 501), but has retrenched to the current multi-chip Power architecture apparently because of the 620's sickly performance, unable to outpace it appears, even the latest 77MHz Power2's 307.9 SPECfp92 floating point performance. After using further Power2 iterations - Power2 Fast and Power2 Super (UX No 529) - the parallel group will pass on the 620 and head straight for PowerPC 630 (or Power3 as it used to be called). Who's funding development of that part is still up in the air because IBM's PowerPC partners Motorola and Apple may decide they simply don't require such a highly-spec'd processor.

### C-C-C GROUP ACQUIRES NYNEX MEDIA COMMUNICATIONS IN ULSTER

Desktop videoconferencing company C-C-C Group Ltd has acquired Nynex Media Communications Ltd for its Multimedia Communications software and will spend an initial £100,000 on further developing the software which will become part of the FreeComms videoconferencing system to be launched next year. C-C-C transmits analogue television signals and video, text and graphics files over existing shielded twisted pair networks, allowing for cheaper videoconferencing at around £1,500 to £2,500 per head. "Most videoconferencing firms use co-axial cable or asynchronous networks for videoconferencing. Companies need to lay new cabling and install a totally different network which really pushes costs up," said John McDermott, the company's technical director. FreeComms will be an amalgam of the company's existing products which comprise FreeNet, a category 5 cabling network; FreeView, financial information services; FreeBand, full-motion TV/Video system; FreeDesk, remote keyboards, screen and mouse drivers; and FreeWall, its large flat-screen displays. FreeComms is compatible with both MS-DOS and Windows personal computers and Unix workstations fitted with C-C-C's video board to receive television signals. Its main market is financial institutions where simultaneous access to business information channels, newswire services and videoconferencing is required. C-C-C said 90% of the dealing rooms in Manhattan use some or all of its products. Although privately-owned, the Farnborough, Hampshire-based firm with New York and Hong Kong offices, plans to go public within the next year.

### VIRTUALITY TO SEE REAL PROFITS IN SECOND QUARTER AND 1996

Virtuality Group Plc should be in the black by the year-end as interim losses fell despite increased development costs. The Leicester-based company still claims 80% of the worldwide immersive virtual reality out-of-home entertainment market. The rate of losses slowed during the first half to the point where the second quarter was profitable. Virtuality turned in interim net and pre-tax losses to June 30 of £583,000, down from £695,000 losses a year ago. Turnover was up 52% to £6.3m. The entertainment business has reached what managing director Jon Waldern believes to be a critical mass of more than 1,000 installations in 30 countries. It has got to the stage now where third-party developers are producing software for the systems. Waldern said the company would like to become known as a publisher in the future, as well as a developer. In June a subsidiary of Philips Electronics NV became the company's third major investor, after IBM Corp and Motorola Inc, when it subscribed for 1.3m shares, nearly all the placing, giving it 4.69% of the enlarged Virtuality equity. The placing raised £2.4m net of expenses. Waldern had said in March that the company would have enough cash to see it through the year without any rights issues. Cash at the half-way stage stood at £4.7m, down from £5.3m a year ago. The company has 14 completed titles and a further eight under development, according to chairman David Payne. Development costs increased to £1.3m from £880,000 last time. The level of expenditure is likely to be the same in the second half, according to Payne. Away from fun and games, Ford Motor Co invested in 10 Virtuality machines costing £200,000 for customers to test-drive cars without leaving the showroom. They will be unveiled at the Frankfurt motor show later this month. The technology business is the part involved in development of virtual reality software for the home, and negotiations are continuing with various potential partners to licence the component technologies from Virtuality in the areas of the Internet, set-top boxes and personal computer software, said Payne. Virtuality has agreements with IBM Corp and Atari Corp for the Elysium personal computer-based system and the Jaguar VR games system respectively. Further announcements are due before Christmas, said Waldern. The current deputy executive chairman, Dennis Ohryn will move from one day a month to become full time executive chairman at the year-end. The company hopes to retain an input from David Payne after that time. Analysts were forecasting profits between £150,000 and £200,000 at the year-end. Virtuality pays no dividend.

### MOTOROLA REVEALS POWERPC COUNTERPART

As well as its MPC821 embedded PowerPC for handhelds, Motorola Inc also has a new MPC860 PowerQUICC Quad Integrated Communications Controller, effectively a PowerPC counterpart to its 16-bit 68000-derived 68302, and destined to find itself at the heart of Ethernet bridges, routers, PABX switches, PC Cards and Groupe Speciale Mobile cellular base-stations and the like. There are actually five chips in the new family, all conforming to the same architecture. Like the MPC821, the 860s have a PowerPC core with a separate RISC-based communications processor module, plus loads of support circuitry. The PowerPC core looks similar to the MPC821's. It is said to deliver the same 52 Dhrystone MIPS at 40MHz or 33 MIPS at 25MHz. At the slower speed the chip draws less than 330mW. The separate communication processor module contains either two or four serial communication controllers depending on the model, each of which can run a separate communication protocol. It also has 16 serial Direct Memory Access controllers, two serial management controllers, serial peripheral interface and multiply-accumulate function for signal processing work. The chip, says Motorola, can implement high-speed modem communication, handling simultaneous voice and data and running local to wide area net interconnection. The PowerQUICC controllers are sampling in small quantities now, with general sampling from first quarter 1996, volume in the second quarter. An application development system, including a board for Windows or Sun-4 system sells for \$3,000.

### PARTS DEARTH: APPLE NIXES MAC OS DEALS

Apple Computer Inc could scarcely have been more ill-prepared to meet the deadly challenge from Windows95 if it had tried, and there must be a whole army of grown men that love the Mac reduced to tears by the company's inability to meet demand for its PowerPC RISC machines because of component shortages. In the latest severe setback for the company, *MacWeek* and *PC Week* are reporting that the company has said "no" to a possible Mac OS licensing deal with Gateway 2000 Inc and has put the pursuit of other licensing deals on hold because of the worldwide component shortages. The Gateway decision is clearly yet another dreadful marketing bloomer by Apple, because the announcement of Gateway as a licensee, even with the rider that the company would be unable to enter the market until sometime next year because of the shortages, would at least have encouraged a few more software developers to write for the Mac OS standard. The shortages are said to be primarily of Peripheral Component Interconnect chips, but also of PowerPC 604s, and even Mac-standard memory chips. *MacWeek* says that Ing C Olivetti & Co SpA and its UK affiliate Acorn Computer Group Plc, and Goldstar Technology Inc of Seoul, South Korea, have now all finalised their licensing agreements with Apple but won't announce their deals until Apple resolves its supply problems. There is of course anyway an awkward hiatus in the Macintosh market while the world awaits with growing impatience the arrival of PowerPC Common Hardware Reference Platform next year. This will ease parts shortages, because there are far fewer Mac-specific ASICs required with the Platform, although until the next major release of Mac OS comes along, cloners will still need to include the fabled Mac ROMs in their machines. *MacWeek* hears that both Dell Computer Corp and Compaq Computer Corp are seriously considering building personal computers to the Common Platform standard.

### QUARTERDECK OFFERS WEBPHONE FOR INTERNET AT \$50

Santa Monica, California-based Quarterdeck Corp is coming to market with the third product that is claimed to provide full-duplex telephony over the Internet, the Quarterdeck WebPhone. It will be available in retail stores in October, bundled with a free copy of the Mosaic Web browser - all for under \$50. WebPhone uses a standard telephone line and 14.4Kbps or higher speed modem. The product was developed with the help of Intelligence At Large Inc, Lernout & Hauspie Speech Products NV and Prospero Systems Research Inc. Belgian company Lernout & Hauspie provides the speech coder-decoder, Prospero developed server network software that enables seamless caller connections, and Intelligence At Large contributes teleconferencing technology; Quarterdeck says it has also made a "strategic" investment in Intelligence At Large.

## YORK OFF TO TRACINDA, THOMAN SUCCEEDS HIM AT IBM, AS STEPHENSON GETS THE PC COMPANY

Richard Thoman may not have done much to impress the industry or the personal computer aficionado with the changes he has wrought at the IBM Personal Computer Co, but he gets high marks from the bean-counters for cutting out the waste and ordering the company to stop making machines that could be sold only at a loss. And last week, he got his reward with a promotion to senior vice-president and chief financial officer at IBM Corp, in succession to Jerome York, who is off to be vice-chairman of Tracinda Corp, corporate adventurer Kirk Kerkorian's investment vehicle, which hit the headlines earlier this year with an utterly unconvincing buy-out bid for Chrysler Corp that it later withdrew. The market greeted Thoman's arrival in the IBM finance post coolly, marking the shares down \$2 to \$100.375 on the news. "York was seen as an important person in the finance office in helping to turn IBM around," said Philip Orlando, a senior vice-president at First Capital Advisers. Arnie Owen, a managing director at SoundView Financial, said "York was very well liked and (his planned departure) accounts for the weakness in the stock." "Jerry York has done an outstanding job, and I wish him all the best in his new endeavour," IBM chairman Louis Gerstner said. "I'm also very pleased that Rick Thoman, who has more than 20 years' experience in corporate finance, will be our new chief financial officer." York concedes that he leaves IBM Corp before his job as chief financial officer is complete. IBM is still \$1,500m short of the \$8,000m in annual cost reductions that York had promised. One of Thoman's first major actions may be overseeing the lay-offs of as many as 10,000 additional employees, one person familiar with the situation told the *Dow Jones & Co* newswire. Meantime, IBM named one of its faceless insiders, Robert Stephenson to be senior vice-president and group executive with primary responsibility for the Personal Computer Co and the consumer and printing systems units in succession to Thoman. Stephenson was formerly general manager of IBM North America. He joined IBM in 1961, and has a thankless task trying to turn the personal computer business around - a task that Thoman confesses is far from complete.

### CDE/MOTIF JDA SIGNED

DEC, Fujitsu, HP, Hitachi, IBM, Novell and SunSoft have finally inked Open Software Foundation's CDE/Motif PST Prestructured Technology Process in which OSF/Motif 2.0 and CDE/Motif 1.0 will be merged into a single source package. There'll also be a standalone Motif and conformance tests for both. Prime contractor, the X Consortium, will add an SGML browser, the ability to print and display SGML documents, full text search and retrieval and integration with the on-line help. There will be greater international language support, a print job interface, a single print and display API, support for Motif text and label widgets, help, calendar, mail, the text editor, multi-threading on 64-bit architectures. A CDE 1.0 maintenance release is due by year-end, CDE/Motif snapshot mid-1996 and general availability by the end of 1996.

### MICROSOFT'S IP COULD TURN C++ - AND EVERYTHING ELSE - INTO LEGACY CODE

Microsoft Corp's influential head of programming, Charles Simonyi, has begun outlining how he sees the shape of future software development - and it's called Intentional Programming, or IP. IP uses an abstract syntax source tree in order to separate a program's "intention" from specific language implementation and syntax details, with the eventual result that the languages themselves would die out as identifiable artifacts. New IP services could also be tied in to extend existing legacy code without limit. This is far from just theory: Microsoft has applied for patents and is already working in-house on IP, which achieved self-sufficiency at the beginning of March, since when all IP developments have been performed in IP itself. There are currently 1.7m nodes (intention instances) in the source tree. Future plans include the creation of component libraries, support of additional "legacy" languages such as C++, operational use of the system elsewhere within Microsoft, and its eventual productisation "before the year 2000". Simonyi demonstrated some prototype IP tools at the ICL-sponsored Future of Software conference held at the University of Newcastle upon Tyne in the UK last week, the first public forum where he has discussed these ideas.

## SUPERCONSORTIUM BID SAID TO LIE BEHIND TORY'S DEPARTURE

Reports indicate that David Tory's sudden resignation the week before last from his post as head of the Open Software Foundation was all tied up with those speculative ideas about forming a SUPERConsortium, a consortium of all industry consortia, that were being bandied about a few months ago (UX No 547). The way we hear it, Tory tried to appropriate the ideas that were being floated around as his own and run with them, but instead ran right into a brick wall. The OSF, which reportedly liked some of the notions after they were polished up a bit, told him they would have no truck with him running the thing, if someday it comes to pass, which looks rather dubious right now but you never can tell. Anyway, Tory reportedly threatened to resign - the board had heard this kind of thing before so didn't put much stock in it - and then in a fit of pique he did so. He reportedly has no other offers right now or didn't when he handed in his notice, so he's going to do some public service work for a while. Meanwhile, one never knows whether the fires under SUPERConsortium, designed ostensibly to save the industry some of the fees it keeps shelling out to keep all these standards organisations going, will rekindle especially considering that Hewlett-Packard was the one fanning them in the first place. Since HP is also involved in talks with Novell about the future of Unix and UnixWare, it leaves one wondering whether the two strands don't intersect off in the future someplace. Mostly it would seem SUPERConsortium has to do with OSF and X/Open and it doesn't sound like X/Open would get to be top dog either.

### TATUNG DOES HYPERSPARC

Following Sun Microsystems Inc pace for pace, Milpitas, California-based Sparc-compatible builder Tatung Science & Technology Inc has taken itself off to Fujitsu Ltd's Ross Technology unit and will begin delivering 100MHz and 125MHz HyperSparc-based workstations in the next couple of weeks. The SuperCompstation 20 Model HS14MP will accommodate up to four 100MHz parts. The Model HS22MP has two 125MHz HyperSparcs, whilst the HS21 a single 125MHz CPU. They'll be fitted with 32Mb RAM, 1Gb drive, 20" colour screen and TurboGX graphics as standard. The uniprocessor starts at \$16,615, the HS14MP at \$26,265. Up to 512Mb RAM, 8Gb disk, four Sbus slots and TurboGX+ graphics are available.

### REKHI QUILTS NOVELL BOARD

Kanwal Rekhi has left the Novell Inc board. Despite reports circulating inside of Novell, which has turned weird lately because of all this business about how to get out from under Unix, it wasn't for talking out-of-school to the press. The way he tells it, it was his own idea so he wouldn't continue to be restricted in exercising his options and selling his Novell stock. He said last week that he resigned six weeks before but Novell only got around to publicising it. Like the first time he quit, he said, back at the beginning of the year, Novell management tried to keep him on. This time it didn't work. Rekhi of course was the chief proponent of Novell's acquisition of Unix and while he was still working for the company, it's chief patron. Novell said it accepted his resignation at its August 17 board meeting.

### TALIGENT LOSES GUGLIELMI TO MOTOROLA

Taligent Inc has lost its chairman and CEO Joe Guglielmi who is taking up a new post as corporate VP and general manager of Motorola Computer Group in Tempe, Arizona, to get the company's PowerPC systems to fly. General manager of IBM Corp Power Personal Systems Division software development Dick Guarino, who was part of the team that put together the original Apple-IBM alliance and was on the Taligent board from March 1992 to December 1993 becomes acting CEO while a replacement is sought. Before moving to Taligent in 1992, Guglielmi was corporate VP and general manager of marketing and business development for IBM's PC unit where he created IBM's first PC marketing division.

### NOW HP JOINS THE OPENGL CLUB

Following Sun Microsystems Inc, Hewlett-Packard Co has bowed to the inevitable, licensing the Silicon Graphics Inc GL-based OpenGL 3D graphics API from an unnamed company, saying it's seeking membership of the OpenGL architectural board. Meantime HP's PEX implementation has a new output command context interface, whilst the Starbase API set includes new texture and environment mapping.

## NEW MICROSPARCS AIMED AT PRINTERS, COPIERS AND TELEPHONY

(Continued from page 1) STB is aiming its microSparc-e series squarely at the network printer/digital copier, computer telephony integration and intelligent hub/router market, not at the consumer business. Merchant semiconductor licencees include Axil Workstations parent Hyundai Electronics America (for use in MPEG-2 set-top boxes, (UX No 494)), Matra HS (communications controllers) and MPEG specialist C-Cube Microsystems Inc. STB will offer at least a couple of turnkey boards for each iteration of the microSparc-e and already has an implementation of the Ile in hand for its printing systems partner Xerox Corp. As well as a new shrink-wrapped version of its ClassiX real-time microkernel Chorus Systemes SA will introduce for the part, microSparc e will support Chorus' Cool object tools, JMI C Executive, Lynx OS, Microtec Research VRTX, Wind River Systems and an 'embedded-friendly,' small footprint Solaris with base and networking features, though STB admits this is unlikely to end up in production systems. Meantime the company has begun volume deliveries of the 110MHz microSparc-based motherboard which powers its low-end SparcStation 5 series. The SE5-110 is rated at 78.6 SPECint92 and 65.3 SPECfp92 and priced at \$1,900 for 100-up. The 85Mhz board is now \$1,700 for 100-up.

## SPIDER OFFERS SPIDERMANAGER FOR SUN

Edinburgh, Scotland-based Spider Systems Ltd, whose takeover by Shiva Corp has just been completed, has launched SpiderManager Sun, a Unix-based network management system. It will use Simple Network Management Protocol to provide centralised management of its Spider-Integrator and SpiderPort network access offerings and is available for use with Sun Microsystems Inc's SunNet Manager software, Spider says. Key management functions include configuration management, status reporting and statistics gathering. It is out now and the price for a single application is £2,000.

## DEC SETS NT-FOCUSED NETWORKING UNIT

Driving its Digital Unix strategy even further out onto the hard shoulder, DEC last week announced the formation of a new connectivity software business unit focused on Windows NT. Observers say they wouldn't be surprised if creation of the unit's been a requisite of the company's ever-expanding partnership with Microsoft Corp. The operation will develop software to tie together multiple networks operating across wide areas or entire enterprises. DEC recognises it'll have to operate in mixed environments for a few years, reckoning that 95% of major IS shops will be using Unix and NT by the end of the decade. However with Digital Unix being pushed into use only where NT can't reach, and NT being extended up and down the enterprise for use on all but the high-end TurboLasers, the cracks in its Unix plans are starting to appear. Enterprise client/server software in the new unit includes the forthcoming Polycenter Manager on NetView for Windows NT - which will be used to manage Unix systems, though the Unix version remains on the price list - multi-LAN management software, ObjectBroker/OLE and messaging and directory software, specifically enhanced Mailbus services being developed to integrate Microsoft Exchange, Lotus Notes and DEC All-In-1 systems. The unit's internetworking software, which it'll put through integrators and new LAN VARs, includes Internet firewall, collaboration, mail server and tunneling software, due to be announced as part of a raft of Internet products in October. Also included is the previously announced Mobiliser software for remote users, due by year-end. DEC, currently looking for a leader to run the unit, estimates that of the 10% of its \$14,000m revenue that goes into R&D around a third, some \$500m-odd is spent on software development. DEC also plans to align its other software operations further into existing product groups. The company is still seeking a "partner" for its semiconductor operations, but claims it'll announce a deal by year-end. Cirrus Logic Inc has been mooted as the possible partner; it is already sharing a wafer fab with IBM Corp.

## UK VIDEO CONFERENCING TAX BLOW

The UK Inland Revenue now says that use of videoconferencing could lead a UK company to pay double tax. The Revenue Statement of Practice 1/90 indicates that the location of a company's board meeting is a factor in determining domicile for tax liability, though it isn't the only factor and the tax gatherer said "these are new waters and ultimately would be tested in a court." Each case would have to be reviewed individually. Originally the Revenue Men said location of a board meeting did not affect taxation, which depended on where the firm is incorporated and where the deeds are held.

## WAREHOUSES NOT REQUIRED FOR DECISION SUPPORT, SAYS INTERSYSTEMS

Struggling with the question of how to cost-justify that pricey data warehousing strategy? Don't bother, it's a waste of money - according to database supplier InterSystems, of Cambridge, Massachusetts. The normally low-profile organisation has stuck its neck out by stating that there is no need to create a separate data warehouse specifically for decision support purposes. "Going for a warehousing strategy is not just jumping on the bandwagon," declares InterSystems' European business development director, John Blackwell, "it's like jumping onto the Titanic." He maintains that data warehousing is little more than a camouflage invented by database suppliers to conceal inefficient database design. He argues that those who adopt data warehousing as a central strategy will find themselves driven down too rigid a path, leaving them unable to respond properly to the demands of users. "Don't have a data warehousing policy," he advises, "have an IT-on-demand strategy instead." This, Blackwell explains, involves developing the ability to extend online production databases to support ad-hoc querying - something which he argues is only feasible with a database that is "frugal" with systems resources. He naturally puts his own company's Open M database firmly in this category. Frugal or otherwise, InterSystems was recently named as the fifth largest database company in terms of installed base by IDC. The company itself claims 1.5 million licences for Open M - a relational database derived from a combination of MUMPS technology and SQL - which is available on range of platforms including DOS, Windows, NT and Unix platforms. The privately owned company bought DEC's Mumps-compliant DMS database business earlier this year, and predicts revenues of \$40m for the 1995 financial year - about 25% of which stems from DMS.

## ESKER REVS TUN PLUS PC UNIX EMULATION

French PC-to-Unix house Esker SA has upgraded its Tun Plus TCP/IP and emulation package for accessing network Unix applications from PCs. New features include Tun SQL, enabling Windows users to run ODBC applications with connections to remote databases - currently Oracle, Informix and Sybase - a Netscape Navigator web browser, fax messaging, new IBM 3270 emulation and compatibility with MS-TCP. The Lyon-based company admits its products tend to be used by organisations undecided on their client/server strategies, attracted to fronting old applications with PCs. Exports accounted for 62% of its £4m-odd sales last year. It's added offices in Milan, Italy, to those it already has in the US, Canada, Germany and UK. Prices for version 8.0 of Tun Plus, which betas from October 1, are from £240 - or \$400 - per seat.

## HEWLETT GOES TO EAST GERMANY FOR NET-DATA MANAGEMENT SOFTWARE

Hewlett-Packard GmbH and Jenoptik Systemshaus GmbH in eastern Germany have begun co-operation on a software product that manages networks and the large amount of data that they carry. Jenoptik, a company of 45 employees, specialises in software development for plant and hospital management. Because customers must often manage data of up to 2Tb, Hewlett-Packard said a product was needed to handle this task and guarantee high security. The offering the two companies are working on will complement HP OpenView. To date, Hewlett-Packard said there are 35,000 OpenView installations worldwide. The product release date is set for the middle of next year at the latest.

## IRI DOES MITSUI DISTRIBUTION PLANNING

This week Information Resources Inc, Chicago, Illinois, will reveal details of a venture with Mitsui & Co Ltd under which it'll supply the IRI Logistics Partners resource planning software for the Japanese corporation's distribution operation. The two have been working on the project for a year or more. Logistics Partners is being beta'd on HP-UX at Heinz Canada, and on AIX at Nabisco. "Anything we do in Japan will certainly run on those two platforms at first," said Steve Cole senior VP of professional services. Logistics Partners provides supply chain management, distribution planning, forecast management, continuous replenishment and product deployment planning within a manufacturing or retailing operation. IRI's currently working on Solaris and AT&T Unix ports. Early next year, it'll begin work on a Windows NT version.

## **"PROPRIETARY" GIF SHOVED ASIDE AS NEW PNG GRAPHICS FORMAT GAINS SUPPORT**

Remember all the fuss at the end of last year when Unisys Corp got all proprietary about the GIF graphics interchange format and its underlying LZ&W compression routine (UX No 520)? Unisys ~~revived an elderly patent and said it would require royalties for any new software supporting the GIF format. The move was widely interpreted at the time as a dubious use of patent law, and software developers vowed to establish a genuinely free standard to avoid paying royalties.~~ In January a consortium of Internet graphics developers led by Seattle-based programmer and author Thomas Boutell, and including Jean-loup Gailly and Mark Adler, the developers of Deflate and Inflate, got together to draft what it called the Portable Network Graphics specification - to be known as PNG (pronounced 'ping'). The move was supported by CompuServe, the company most directly affected by the Unisys decision. CompuServe abandoned its own GIF24 effort in favour of PNG, and contributed technical resources to its completion. By May, the specification was complete. PNG improves on GIF by supporting a true 24-bit lossless format giving users a 16 million colour palette, along with faster compression and other improvements. CompuServe has a free toolkit for creating graphics that meet the PNG spec, which it is freely distributing. Because of the patent issues, PNG is not backward-compatible with GIF, but CompuServe has a conversion utility for use in conjunction with the CompuServe Information Services. Since then support for the new format has grown steadily, including NCSA (the Mosaic people) Spyglass, NetScape and the WWW Consortium. In July, PNG made it onto the cover of *Dr Dobb's Journal*. To date, nearly 80 applications support the format, including browsers, image viewers and editors, image conversion applications and various utilities. The whole thing illustrates how quickly new open systems standards can be established nowadays, at least away from the more formal standards bodies. And it looks like Unisys won't be getting the benefit of a royalty stream that many feel it did not deserve in the first place.

## **NOW DATA MINER ANGOSS WINS AT&T GIS DEAL**

Angoss Software, the Toronto, Canada-based data mining software house that's already struck gold with Cognos and Tandem deals (UX No 551), has now signed a further strategic marketing deal with AT&T GIS. AT&T says it will include Angoss' Knowledge-Seeker artificial intelligence data analysis and prediction tool in with its own decision support software, aiming the tool at marketing, sales, human resources, research and process control applications. It will run on AT&T's 3000 Series boxes, primarily the 3400, 3500 and Teradata-based 3600 Series. Angoss, billed in *Profit* magazine as one of Canada's 100 fastest growing companies, has a UK subsidiary in Guildford, Surrey, as well as European and Pacific Rim operations.

## **MAINFRAME APPS DEVELOPER SSA BENEFITS FROM TRANSITION TO UNIX**

Chicago-based corporate applications developer System Software Associates Inc attributes its highest ever quarterly earnings for the fiscal third quarter ending on July 31st to "the rapid acceptance of our new BPCS Unix client/server product line" saying that within six months it has become one of the largest suppliers of Unix Enterprise Resource Planning solutions on the marketplace. Last year, long-retired SSA founder Roger Covey rejoined the company as CEO in an effort to sort out the long delay in the release of Unix versions of the BPCS manufacturing and financial suite over from its traditional AS/400 base. SSA has recently begun touting its Corba-based Distributed Object Computing Architecture - DOCA - as the basis for BPCS Financials, and says that BPCS Supply Chain Management will be utilising the new architecture by year-end. DOCA-based applications will also appear on IBM's Advanced Series AS/400. The shift will be done on a demand-driven basis, says SSA, which insists that many users are still happy with their dumb terminals. SSA's Net income for the third quarter was \$11.2m, up 107% from the same period in 1994, and revenues went up from \$86.2m to \$105m. Revenues for fiscal 1994 as a whole were \$334m.

## **FIRST AUSTRALIAN SPARC TRANSPORTABLE IS LAUNCHED**

The first transportable Unix computer to be designed in Australia has been launched by Graphics Computer Systems Pty Ltd, of Burwood, near Melbourne in Victoria. The MXtransportable is a cut-down Sun SparcStation 10 with a ten inch active matrix screen, ~~up to 128Mb memory, 2.1Gb disk, Syquest removable disk drive, and optional projector with video mixing.~~ The motherboard, similar in size to the Sun Sparc IPX motherboard, includes an additional MBus slot and fast SCSI-2 ASIC controller. Single or dual processor module formats are available. Entry-level systems use the 90MHz HyperSparc, and cost from AUS\$17,900. GCS says it's the largest Australasian supplier of Sparc-compatibles and clones. It exports systems to South East Asia, Europe, the Middle East and North America.

## **C CODE WILL CAUSE CONSUMER CHAOS IF BUGS ARE NOT ELIMINATED**

The next generation of consumer electronics products is likely to fall foul of major programming errors as the amount of software code in such products continues to double every two years. According to UK software quality specialists Programming Research Ltd, of Hersham, Surrey, the electronics and other consumer industries "are set to be marred by the same error rates and performance issues affecting the computer industry". Such levels of performance won't be tolerated by the mass market, says the company, and product recalls or customer complaints in the commercial sector are inevitable. Paul Blundell, managing director of Programming Research, estimates that the next generation of electric razors will have 7,000 lines of code in them, while large screen televisions will have more than 200,000 lines. Programming Research has been finding an error rate of one fault in every 55 lines of executable C software code. "While it's acceptable today for a person's word processor to crash once or twice a month, that same person will not accept their television malfunctioning even once a month", says Blundell. The company says that static inspection, common in every other engineering discipline, will highlight the obvious faults and inconsistencies before software is even compiled. It claims that 40% of all software errors are preventable and statistically detectable. Programming Research has its own static testing products, QA C and QA C++, but also acts as a clearing house for software reliability issues. Founder Les Hatton is the author of *Safer C*, on writing C code for high-availability and safety critical systems. The tools run on most Unixes, including IBM, Sun, HP and DEC Alpha, with a PC version due by year-end. Prices start from £4,500. US distributors include Asta Inc in Massachusetts and Software Solutions Inc in Texas.

## **IBM AND SAP READY R/3 FOR AS/400 RISCS**

At the Common AS/400 event in Chicago this week, IBM is set to announce the porting of SAP's R/3 corporate application suite over to the Advanced Series AS/400 - the ones that use 64-bit PowerPC RISC variants as the CPU. R/3 is expected to be installed in five IBM pilot sites from November, and should become generally available by the second half of next year. It will run only on OS/400 version 3 release 6 and later, because that is the operating system that supports the new CPUs. Version 3.6 is functionally similar to the current CISC version of OS/400 - Version 3.1 - except that it includes some 25 more of the Spec 1170 application programming interfaces, all of which are required by R/3. Only around 5% of the 2 million lines of code in SAP's Basis software layer, upon which the rest of R/3 sits, had to be altered, says IBM, which boasts that because of the Technology Independent Machine Interface (TIMI) layer included on the new AS/400s (UX No 529), the AS/400 SAP implementation will be the first to fully exploit 64-bit hardware, database, operating system and applications. Although benchmarking has not yet been completed, SAP thinks that the 64-bits will give them higher compute and throughput characteristics, maybe allowing the support of twice as many users, five times the transaction load and the ability to address databases far greater in size. Of course AS/400 users won't have the option of using third party databases, only the version of DB/2 that's bundled in with AS/400 systems. But that integration could result in lower overall costs, claims IBM. The two companies will jointly market the product.

### UNCLE SAM GIVES INTEL \$45m TO DO SUPERCOMPUTER

Nice when Uncle Sam pays for your research and development in a possibly crucial market for the future: the US Department of Energy has awarded Intel Corp a \$45m contract to help develop a supercomputer that may eliminate the need for physically testing nuclear weapons. Intel will work with its Sandia National Laboratories, which designs nuclear weapons, to develop within two years a computer ten times more powerful than today's fastest supercomputers. The parallel processor will presumably use an array of Intel's P6 microprocessors. The Energy Department said the computer will be used by its three nuclear weapons laboratories as part of a programme to use high-performance computation to assure safety and reliability of the nation's nuclear stockpile without tests, adding that Intel was selected via a competitive process. The contract is the first in a series of such deals, it said.

### INTEL PROMOTES UNIVERSAL SERIAL BUS

Intel Corp also announced that it will make its Universal Serial Bus host controller interface available to the industry so as to help other component suppliers bring Universal Bus host controllers to market quickly. Universal Serial Bus is an openly licensed specification designed to simplify and improve performance of all aspects of personal computer-to-peripheral and telephony applications. It is being jointly developed by Compaq Computer Corp, Digital Equipment Corp, IBM Corp, Intel, Microsoft Corp, NEC Corp and Northern Telecom Ltd, founding members of the USB Implementers Forum. Products are expected to appear in the first quarter of next year, Intel said.

### OLIVETTI TO SPLIT INTO FIVE COMPANIES

Launching its new Envision line of multimedia personal computers, Ing C Olivetti & Co SpA announced that as well setting up a separate PC company - to be created by January 1 - it would turn the monolithic Olivetti into four other companies. These would focus on office computers, telecommunications, including its cellular venture, Omnitel Pronto-Italia, and telemedia for electronic newspaper operations. The fifth company will be Olivetti itself, which will retain control of computer services. The company re-affirmed its widely-doubted commitment to PCs, currently 20% of total turnover, and said the division was the only one that had not yet reached financial equilibrium, asserting that it would do so next year. Olivetti is making about 800,000 PCs annually and aims to pass the 1m mark in 1996. In order to be competitive, it said it was necessary to improve both the time-to-market and price-to-market, and indicated that the task had been accomplished with Envision, a multimedia PC running Windows95, designed to connect to a television set. Olivetti also announced 25 new products in a complete renewal of its PC line. At the start of the month, it cut prices an average 26%. The Envision costs about \$1,875, and comes in a matt black case. It is said to look something like a video recorder. Olivetti says it needs to raise revenue in the personal computer division to at least \$700,000 per employee, "although we're aiming for \$1.0m: today's levels are only half or even one third that," it said. The company looks to the Envision family to take its share of the European home computer market up to 10% from the present 7.5%.

### QUARTERDECK SPENDS \$20m ON ACQUISITIONS

The US computer industry has clearly come back to work ravenous from Labor Day and predators are prowling everywhere, red in tooth and claw. Scarcely giving itself time to burp, Santa Monica-based Quarterdeck Corp is swallowing two companies, paying \$3m for the intellectual property assets of Prospero Systems Research Inc - and getting a commercial Internet chat server and phone connection software to be incorporated into Quarterdeck's WebPhone two-way on-line phone system. And it is gobbling down Inset Systems Inc, Brookfield, Connecticut, for 933,000 shares worth \$17m. Inset develops a graphics utility HiJaak, and forecasts \$6.5m turnover for the year to the month-end.

### COMPILERS FOR JAVA ON THE WAY

SuSoft Inc wouldn't let us listen in on a Java analysts briefing last Thursday despite inviting us to earlier in the week. But we did hear that there was little new, other than the company's admission that Java compilers for native operation on client systems are now under development - something that appears somewhat at variance with Java's original philosophy of transparent interpretation on multiple clients. NetScape's Java beta for Windows95 is thought to be due out in beta around the middle of this month, according to word on the street.

### ORACLE TO HELP SAMSUNG, NEC, PHILIPS

Oracle Corp is helping Samsung Electronics Co Ltd, NEC Corp and Philips Electronics NV to develop Internet access units costing a few hundred dollars, Raymond Lane, president, worldwide operations, told APDJ World Equities Report. "All you need is a power source, a communications link and data management facility that would enable any terminal - such as a personal computer, a television, or even a screen phone device - to access any server and use any form of data," he said. On the acquisition front, Oracle is currently looking at a couple of opportunities, but "We're not an acquisitive company like Sybase: I think it has hurt them." It has two priorities for external growth: to expand market share and to expand know-how in areas where it currently doesn't have expertise, so that a move into the editing and publishing area would build on Oracle's information management technology to get it into the on-line services arena. "We think the time is right to look for opportunities to get into content," Lane said. He acknowledged that Oracle had considered a bid for Lotus Development Corp, and might have made an offer for Apple Computer Inc last year if it had been able to find partners ready to take over the hardware. Mac OS "is the best operating system in the world," he said.

### AS/400 MAJOR JBA FINDS MARGINS ON UNIX AGREEABLE AND PROFITS JUMP

To some, the thought of dealing with four IBM Corp divisions simultaneously would be a nightmare. Not so JBA Holdings Plc's chairman Alan Vickery: he positively relishes it. JBA's manufacturing and distribution software now runs under OS/2 and Unix, as well as OS/400 and mainframe operating systems. IBM is both a supplier and a customer for the company, because in addition to joint development work at IBM's Rochester, Minnesota facility, JBA also sells and installs AS/400s in over 40 countries. During the half, the Birmingham-based company completed work on its OpenRoute migration tool which enables its customers to convert from its traditional AS/400 base to the new System 21 product, which runs under Unix on RS/6000 boxes as well as the AS/400. Vickery said the shift away from dependency on the AS/400 to the RS/6000, and eventually to Hewlett-Packard Co's HP-UX and Digital Equipment Corp's Alpha-based systems will reduce the second half bias in the company's results. Unix margins are also greater for the company than those on the AS/400, which Vickery admitted was the reverse of what the company had expected. JBA posted interim pre-tax profits up to £754,000 from £264,000 a year ago, on turnover that rose 29% to £49.5m. The other force for change in the seasonal nature of the figures is the introduction of Oracle Corp as the company's second major trading partner. System21 uses Oracle databases on all its systems bar the AS/400. The US unit is now the biggest for JBA, having leapfrogged over the UK, contributing to a 64% jump in sales in the Americas to £24.7m. Hardware sales were well over target, and while obviously a good thing, caused a drop-off in margins.

#### Cosy relationship

This had a significant impact in the UK, with the company's largest installed AS/400 base. Turnover in the UK was down a shade at £15.0m. Vickery said revenues should recover in the second half as the new systems are installed. The work with Hewlett and DEC is well under way. Vickery was unperturbed by the latter's increasingly cosy relationship with Microsoft Corp. "I almost don't care if Alpha dies," he said, indicating that JBA could just concentrate on other systems. It is still holding back on Windows NT, citing performance and scalability problems, but will start work next year to have a product in 1997, Vickery said. The acquisition of RatioPlan Unternehmensberatung Datenverarbeitung GmbH was completed last week, and revenues are expected in the final four months. RatioPlan, based in Villigen, south of Stuttgart, does much the same as JBA but in additional areas, such as machine tool makers. Vickery said SAP AG would see the "mud on their doorstep is more evident" now the acquisition, costing up to £10m in shares, has gone through. Cash balances were significantly down from £10.4m to £2.6m at this year's half-way stage. Finance director David Williams said this was due to cash investment in a new product development, presentation and technology facility down the road from the existing manufacturing centre in Warwickshire. It will open by the year-end at the latest, and will ultimately cost £2.5m. The drop in cash accounted for the fall in net assets. Research and development was up to £6.3m but down to 13% of turnover. Williams said research costs for the year were likely to be around £14m, up from £13.4m last year. JBA expects to do £110m for the year, from £90.7m in 1994. In line with policy, the interim of a penny will represent about a quarter of the total, and is up from 0.8p a year ago.

## DEC's PALMER EXUDES CONFIDENCE AS HE FACES QUESTIONING FROM ANALYSTS

Digital Equipment Corp chief executive Robert Palmer duly held his get-together with analysts in New York last week saying that he expects Digital to boost profit margins and revenue growth rates to around industry standards over the next several years: the company has been stuck at \$14,000m annual sales or a little below for about five years now and companies such as Hewlett-Packard Co and Motorola Inc have stormed past it - Hewlett is now over twice the size of DEC, while Motorola is close to it. Palmer expects profit margins to grow to around 7% from the ~~current 5%, attendees told Reuters, adding that it also sees revenue growth of about 9%. Referring to DEC's plans to improve revenue growth.~~ Soundview Financial Corp analyst Gary Helmig, who attended the meeting, noted that a 9% annual growth rate would put the company in line with the overall industry pace although far behind the likes of Hewlett or Compaq Computer Corp, and well ahead of the low or negative rates it has seen in recent years. For the year ended June 30, the company had annual growth of about 2.7%, Helmig said, adding that he is projecting a 6.7% rate for the year ending June 1996. The company declines to break down revenues by business units, but according to Helmig's estimates, the \$13,800m in revenues for the year to June 30 included just under \$8,000m from hardware and software products, with the other \$6,000m or so derived from consulting services and systems integration. When asked for guidance on earnings estimates for the first quarter ending in September, Palmer said DEC had recently changed to indirect distribution methods from a direct sales approach, making comparisons difficult. As a result, the chief executive said he wouldn't really have a sense of how the company was performing until a few weeks after the period was over.

### They will not lose money

However, Helmig told the news wire "The net results of the meeting (were) that (company officials) are comfortable that the guidance they gave at the start of the quarter should play out, which would suggest they will not lose money this quarter." Current analysts' estimates for the first quarter vary widely, from break-even to 58 cents per share, with the consensus at around the 22 cents per share mark, although there is persistent gossip that the company could report a loss for the first quarter, which is traditionally a slow period for the company and the industry in general, because much of continental Europe still harks back to a more leisured age and shuts down for the summer - hardly a way to remain competitive with lean and hungry economies like those of South Korea, Malaysia and Taiwan. A spokesman for the company confirmed plans to form the new business unit, which will develop software to tie together multiple networks across wide areas, and also confirmed that DEC plans to align its other software operations better into existing product groups. DEC is seeking a business leader to run the new business, but according to Helmig, the people running DEC "have all the technologists they need." Helmig said officials left much unclear about the new unit, stressing it is a work-in-progress. "They don't know how much revenue its going to generate," he said. Regarding its semiconductor operations, Helmig said that DEC officials declined to name any possible partner.

## LEGATO PARTNERS WITH IMAGERY FOR HSM

Legato Systems Inc, Palo Alto, California, last week inked several new partnerships to bolster its network storage management offerings. A technology licensing and marketing agreement with Eastman Kodak subsidiary Imagery Software will result in an hierarchical storage management application for NetWorker for NetWare, and Legato will resell Imagery's Netware Directory Services-aware GroupStore HSM technology beginning in the fourth quarter. Imagery will deliver a version of GroupStore NetWorker for NetWare in the first quarter of 1996. Legato will deliver an HSM option for its NetWorker for Unix line in the first quarter of next year. Legato is negotiating licensing agreements for NetWorker HSM with its OEMs. Tivoli Systems Inc and Legato are jointly developing a Tivoli/Plus module for NetWorker that will integrate Legato's network storage management for multi-platform enterprises with Tivoli's systems management environment. It is slated for delivery in the fourth quarter. Legato and SAP AG have agreed to provide backup and recovery services for SAP R/3 on Solaris and AIX. Legato has also licensed its Archive Source Code to NetWorker OEMs.

## DG CEO OFFICE LOOK-ALIKE IS LAUNCHED

Datatek Inc has developed a look-alike version of Data General Corp's CEO (Comprehensive Electronic Office) system for DG MV Eclipse users who want to move over to Unix-based AViiONS. Intuitive Office is said to be virtually keystroke-compatible with CEO. It's available from Eagle Software Inc, Salina, Kansas.

## NOW RDI CUTS SPARC PORTABLE TAGS

As Cambridge, UK company Tadpole Technology Plc has been finding out, the movable workstation market is a tough nut crack. The company recently announced swingeing price cuts - up to 35% on the price of its SparcBook 3 laptops - and other measures in an attempt to get back on to an even keel (UX No 550). Now, in what can only be good news for users, Tadpole's aggressive re-pricing appears to have forced the competition on to the back foot and Carlsbad, California-based RDI Computer Corp has, as anticipated (UX No 551) taken a pen to its price list, slashing tags on its microSparc-based PowerLite line of portables. Of course it helps that Sun Microsystems Inc's latest Fujitsu Ltd-built 110MHz microSparc II is now in volume production and that it's cut prices on its 50MHz and 85MHz boards (*see page 4*). Originally a \$10,000 unit with 340Mb disk - \$16,000 with a colour 1,024 x 768 active matrix screen (UX No 477) - RDI's PowerLite 50 is reduced to \$6,000 with 16Mb RAM, 810Mb disk, 1024 x 768 high resolution screen, floppy and fax/modem. The 85MHz model now starts at \$9,700, down from \$12,000, with a 640 x 480 colour active matrix screen - a new 800 x 600 screen option is an additional \$1,000. The recently-introduced PowerLite 110 stays pegged at \$13,000. The ruggedised product is unchanged. RDI claims the new prices are between 15% and 30% lower than competitive products such as Tadpole's SparcBook at the high-end and low-end respectively. As well as the 800 x 600 screen on the SparcStation 5-compatible 85 and 110 models, other options include support for up to three 1.2Gb drives, a PCMCIA port and version 1.2 of the Virtual Workgroup Architecture software with new suspend/resume functionality. It's also put the laptops on a diet, managing to shave a pound off the weight of base configurations, which now tip the scales at 7.5lbs. The company claims it's now shifting between 200 and 300 units a month against its business plan (UX No 540). RDI gives its current microSparc II strategy another year before considering a low-power UltraSparc option.

### Comparison with Tadpole

By comparison, Tadpole Technology's 6.5 lbs 50MHz microSparc I-based SparcBook 3LC now starts at \$6,500 with 16Mb RAM, 340Mb disk and a mono display. The 50MHz microSparc I-based SparcBook 3 with 16Mb RAM, 340Mb disk and 640 x 480 active colour display is from \$7,950. The unit is \$13,350 with 64Mb RAM and 1.2Gb disk. The SparcBook 3XP with an 85MHz microSparc II, 640 x 480 active colour display, 16Mb RAM and 340Mb disk is from \$10,950. With 64Mb RAM and 1.2Gb disk it's from \$16,350. The SparcBook 3GX, with a 110MHz microSparc II, colour 800 x 600 active display, 16Mb RAM and 540Mb disk is from \$13,450. With 64Mb RAM and 1.2Gb disk it's \$18,650. All configurations include bundled Solaris 1.1.2 or 2.4, NCE software, built in modem, two PCMCIA slots, spare battery pack and carry case. Tadpole says its SparcBooks are more functional and more upgradable than the RDI products, with a smaller form factor and lower weight in typical configurations, and are more rugged due to their magnesium cases. It says for these reasons it would expect its tags to be higher than RDI systems. It says RDI is only now starting to offer features that it's been offering for several years (PCMCIA and Save/Resume). By the way, Tadpole reminds us, the Weitek graphics chip set has been benchmarked faster than the Sun graphics chips; it says the part also gives it better control of the external display, which is completely software programmable from VGA to 1280x1024 resolutions. Tadpole believes RDI's now caught between a rock and a hard place as far as its market positioning is concerned, with the SparcBook notebook on one side and Sun's moveable Voyager workstation with the high resolution display on the other. Tadpole says its plans for an Alpha notebook are still on track, but there are no details.

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World Wide Web software firm **Spyglass Inc** has signed an agreement with **Siemens Nixdorf Informationssysteme AG** under which Siemens will distribute Spyglass's Enhanced Mosaic browser: the agreement gives Spyglass, which has distribution pact with dozens of US companies including **Microsoft Corp**, **AT&T Corp** and **Oracle Corp**, its first distribution channel into the European market; Spyglass also has several distribution agreements with companies in the Far East, including **NTT**.

The old **Inmos International Ltd** wafer fab in Colorado Springs, Colorado, which liquidating **Cray Computer Corp** took over to fabricate the Gallium Arsenide chips from which it planned to build its supercomputers, has been taken over by the **M/A-Com Inc** unit of Harrisburg, Pennsylvania-based **AMP Inc**. Terms were not disclosed. M/A-Com makes microwave communications equipment including chips, components and subsystems.

**Tandem Computers Inc** teased the world with a cryptic statement that it had signed an alliance with a "major computer company" on development of Windows NT servers and that major company of course turns out to be **NEC Corp**.

The company is not immune from the desperate shortage of key Macintosh components, but Austin, Texas-based **Power Computing Corp** has added the Power 120, a 120MHz PowerPC 601+ version of its Mac OS machine, and also launched a mini-tower enclosure for its entire the Power line. The Power 120 has 8Mb memory, 365Mb disk, three NuBus slots, one Processor Direct slot, and is \$2,000.

**Network General Corp**, Menlo Park, California is to pay \$7.1m for **AIM Technology Inc**, Santa Clara provider of the SharpShooter Unix systems management software product.

Gordon Bell, the ex-DEC guru now working at **Microsoft Corp** (UX No 552) is apparently working in a lab down in San Jose with parallel database expert and fellow DEC refugee Jim Gray on something called Cyberbricks. It's a project aimed at getting basic PC building blocks all connected and working together so that they can run very large databases with heavy transaction loads. From our sources, it doesn't sound as if Microsoft intends the technology to run with current third party databases such as Oracle.

Meanwhile, **Microsoft Corp** chairman Bill Gates had a bit of a run-in with **Oracle Corp** chairman Larry Ellison at **IDC's** European IT Forum in Paris last week, according to the *Financial Times*. Ellison predicted that the PC market was set to decline in favour of \$500 network terminals communicating with the Internet and running software such as Netscape - and with that decline, of course, Microsoft's core business would disappear. Gates poured scorn on the idea that people would be prepared to use "dumb terminals", and pointed out that security over the Internet would be a major problem.

**Sun Microsystems** in the UK has hired John Pattenden as product marketing manager for the Sun SparcServer and Netra product lines: Pattenden is a 12 year **DEC** veteran, most recently Windows NT marketing manager.

Tony Denison, previously CEO and one of the founders of **VisionWare Ltd**, now swallowed up by **The Santa Cruz Operation**, has turned up at **Ashmount Research Ltd**, a London, UK-based developer of off-line conferencing and navigation software for on-line services such as CompuServe, Delphi and CIX, where he will be Chairman. Denison is also providing second round funding for a new Internet conferencing product from Ashmount due this quarter.

UK systems and data integrator **Knowledge Insight Ltd** can't wait for **IBM's** integration work on Lotus Notes and is already offering a dedicated Lotus Notes implementation and support service based on IBM's MQSeries, which is used as a messaging and information backbone to integrate Notes with corporate business systems across multiple hardware and software environments. The service covers AIX, AT&T GIS Unix, DEC VMS VAX, HP-UX, MVS/ESA, OS/2, OS/400, SCO Unix, SunOS, Solaris and VSE/ESA. Knowledge Insight, based in Putney, South West London, also sells Trinzic's InfoPump.

**Stratus Computer Inc's** Marlborough, Massachusetts-based **Isis Distributed Computing Systems Inc** is integrating its ISIS Reliable fault-tolerant software into the **Chorus Systemes SA** microkernel for high-availability real-time developers.

**LM Ericsson Telefon AB** is standardising on XVT Inc's C++ tools for GUI development.

**Oracle Corp** has joined OpenDoc development shop **Component Integration Labs Inc** whilst CI Lab has exchanged membership with Japan's **IntelligentPad Consortium**.

**DEC's** been left out in the cold by **HP**, **IBM**, **Iona**, **SNI**, **Taligent**; **Expersoft**, **Genesis**, **Sybase**; and **Fujitsu** - with support from **ICL** and **Novell** - who are revising their three submissions to Part A of **OMG's** COM-Corba RFP into a single submission.

**IBM Corp** and **Motorola Inc** are said to have filled their Solaris-on-PowerPC slots, each having 30 customers in beta, though they're running an early cut of **SunSoft Inc's** 2.5 release that still lacks stuff like Common Desktop Environment and Wabi. The three companies are preparing a road show to attract ISVs in October.

**Tadpole Technology Ltd** is now supporting **NeXTStep** on its P1000 notebooks. Tadpole's partnering with **Advanced Information Systems Inc**, Boston, Massachusetts; **Deanox NS Systems Group**, Logan, Utah; **GS Corp**, Corte Madera, California; and **Omegabyte Computer Corp**, Austin, Texas, to develop integrated packages and solutions for remote NeXTStep users.

Chris Stone, God bless him, the esteemed head of the **Object Management Group**, has turned into a wordsmith right up there in Scott McNealy's class. The other day before our eyes he coined the word "pressware," denoting a close kin of vapourware and the kind of mealy-mouthed posturing we in the fourth estate have to put up with every day.

**Data General Corp** will announce the anticipated **Intel Corp** iAPX-86 implementation of its 64-bit DG-UX at Unix Expo along with a new release for its 88000-based AViiONS.

**DEC's** brought UK Unix marketing manager Pat Geary over to its Maynard, Massachusetts headquarters to run worldwide marketing for the AlphaServer 8000 (TurboLaser) enterprise server line, launched with much fanfare back in April (UX No 534). DEC says it's now sold over 400 TurboLasers, including a handful of high-end 12-way models, with a further 20 dozen-up customers waiting on benchmark results. It's still promising 9,000-plus tpmC for around Unix Expo time, when it'll also start talking about the 100Mbps Memory Channel interconnect due later in the year.

**Convex Computer** and **Hewlett-Packard Co** have launched a joint Co-operative Technology Centre, located at HP's European headquarters in Boeblingen, Germany: HP said the centre will provide consulting and technical services for customers of Convex's PA-RISC-based Exemplar scalable parallel processor.

Bedford, Massachusetts-based **Progress Software Corp** says Version 8 of its Application and Development Environment (UX No 544) will be released "probably late October or early November."

Ben Smith, regional vice president for **Novell Europe**, died in Los Angeles last weekend after a long battle with cancer. Smith, 39, had been with Novell since 1987. Ian Fraser takes over his responsibilities on an interim basis.

**GemStone Systems Inc** and **Ascent Logic Corp** have inked a three-year, \$3.8m reseller agreement; Ascent will sell GemStone's Smalltalk application server technology (it doesn't consider itself an object database company any longer) as the repository for a new generation of its business process re-engineering tools.

Bug-catcher **ParaSoft Corp** will announce a new version of its Pure++ environment at Unix Expo, along with its first Windows NT offerings.

**Ascent Solution Inc**, Dayton, Ohio, will offer text file conversion to DOS and Mac from Unix in a new version of **PKWARE's** PKZIP Unix package due at Unix Expo.

**Concentra Corp**, Burlington, Massachusetts, has launched version 5.0 of its ICAD design process that works with CAD/CAM. It's enhanced for application development, geometric modeling, deployment and tools integration. It runs on HP, IBM, SGI and Sun workstations. Concentra is targeting a ICAD 6.0 for Spring 1996.

**DEC** chief Bob Palmer's Unix Expo keynote will address the Unix industry's failure to deliver application portability - or vendor independence - at the 32-bit level which let Microsoft Corp Windows NT into the frame. The NT wake-up call has lead the Unix crowd to its 64-bit API initiative Palmer believes, an effort it can't afford to get wrong this time around.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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The weekly information newsletter for the UNIX™ community worldwide

London, September 18-22 1995

Number 556

## UNIX PLAN UNDER LOCK AND KEY

By all accounts, Novell Inc is supposed to outline its retreat from Unix this week if the schedule holds up and it can negotiate one more little point - a place to have its say. It wanted the auditorium at the Javits Center in New York on Tuesday September 19 but DEC had dibs on it so CEO Bob Palmer could practice his Unix Expo keynote. It thought about a conference call with the press on Monday afternoon September 18 but when last we heard it was more likely to be a press conference on Wednesday September 20, though at press time even that date didn't appear to be locked in. It's unclear if it's because the deal's still unsigned or it's taken on added dimensions. The industry is expecting Novell to say what's been rumoured for weeks, that it's cut a deal with Hewlett-Packard (UX No 551) which at press time maintained a "no comment" stance. Hovering in the background of course is HP's chip pal Intel Corp but there are some suggestions another principal in the deal is Unix pioneer and Intel loyalist, the oft-discounted Santa Cruz Operation Inc. At least SCO wanted in somehow. The name AT&T Co also came up again at the last minute. The one thing Novell has managed to do well lately is keep the particulars of the deal - which have doubtless changed a lot during the course of the negotiations since various combinations were apparently tried - under wraps for fear of its being ruined. Details have been very closely held by a small coterie of people ringed in by non-disclosures that made them personally liable should their tongues wag. Few outsiders have been let in on the secret and their attempts to penetrate Novell's iron curtain have been rebuffed. So it looks like key players have been given little inkling into how the Unix map will be re-drawn or for that matter little space to object. However, the first cracks in the new Berlin Wall are expected to appear after we go to press on Friday September 15 when Novell, at least, is reportedly supposed to start briefing its staff and some key outsiders under NDA of course. The structure of the deal will of course determine what the fallout will be, such as its impact on RISC vendors and what Microsoft Corp's reaction will be. There's talk of an arm's length unit being set up for developing the software and optimising it for the 64-bit Intel-HP chip but it's still just talk until the fat lady sings. Novell looks to be a continuing participant maybe because it has to, maybe because NetWare on its own just can't cut it as an application server.

## BATTLE LINES FORM AROUND UNIX PRINT MANAGEMENT

The Unix industry has drawn itself up yet another set of battle lines, this time around network printer control and management. Last week Digital Equipment Corp, SunSoft Inc and Xerox Corp announced a strategic alliance they say will result in seamless enterprise-wide printing, and printer management. Facing them down is IBM Corp, which this week unwraps a Printing Systems Manager (PSM) which does precisely the same job, technology it's also understood to have licenced to printer giant Hewlett-Packard Co. PSM is a long-overdue implementation of the Palladium print management interface model prototyped many moons ago as part of the MIT Athena project (on which IBM, DEC and others worked) which lead to the creation of X Windows and Distributed Computing Environment (DCE) amongst other things. Palladium of course was originally supposed to have surfaced in OSF's ill-fated Distributed Management Environment. IBM, which characterises PSM as the "the killer application" DCE has been looking for, says PSM will fill the print management requirement in its desktop-to-mainframe SystemView network and system management environment. PSM also supports the Palladium-derived ISO Document Printing Application standard developed by IBM, Xerox and DEC, as well as X/Open's Printing Systems Interoperability Specification and the IEEE Posix P1387.4 draft printing standard developed by HP, DEC, Sun and IBM. The DEC-SunSoft-Xerox crowd will also base what they're calling Printxchange on the ISO/Distributed Print Application standard, but it will not require DCE. They'll embed Printxchange into their respective Unixes (and Xerox will make its printers Printxchange-compliant), whilst PSM will be a separate software tool running first on AIX 3.2 over DCE 1.0.x - AIX 4.1 and DCE 1.1 by year-end. As well as delivering "any print job to any printer on the network" - and reaching printers on NetWare and TCP/IP LANs through gateways (with some loss of functionality) - Kerry Bensman, director of software solutions at the IBM Printing Systems says the currently DCE-only PSM could also be implemented upon other distributed computing mechanisms, although there don't appear to be any plans for that right now. IBM will licence PSM to all-comers on "economical terms;" claiming an offer to licence it to the Printxchange companies was turned down. Meantime the Printxchange companies are also seeking to bring their technology to other operating systems, saying they will make all the necessary APIs available. They've extracted rather halfhearted support from Novell Inc, which says it'll work with Xerox to provide a gateway between NetWare Distributed Print Services (also based on ISO/DPA), and Printxchange for users running with Unix/NetWare networks. Novell hasn't committed to implementing Printxchange within UnixWare though the Printxchange group says it's more interested in NetWare anyway since this is where the bulk of users are, and because Novell is supposed to eventually merge UnixWare and NetWare into SuperNOS. Whilst PSM is said to work with all printers supported by AIX (including Postscript, PCL, and PPDS formats), Printxchange-enabled printers are required for that technology: Eastman Kodak Co has joined Xerox in committing to integrating the technology, but so far that is the extent of the support from the printer community. Solaris and Digital Unix users will get Printxchange for free, although it will not ship until the middle of next year, while PSM for AIX is shipping now at a base price (including a single server licence and an unlimited number of desktop clients) of \$2,500, with the graphical user interface priced at \$4,500.

## TANDEM'S FIRST

### HOME-GROWN UNIX SMP BOXES

Tandem Computers Inc this week unveils the first cut of its 300Mbps ServerNet router interconnect in home-grown Integrity SMP Unix boxes called the S4000-CM line, with from one-to-four 200MHz Mips R4400s. They are Tandem's first home-grown Unix SMP units. S4100s are general purpose systems; the S4200 FT achieves fault-tolerance by replicating hardware (three- and four-way FT units require two cabinets). Both ship in December. They accommodate 256Mb RAM per processor and two ServerNet I/O systems, starting at \$59,000. ServerNet allows copper connections over distances of 20ft, with FDDI for LAN clustering to come. By the end of 1996 Tandem promises to have super-clustering for connecting remote systems over ServerNet, creating System Area Networks. Currently up on Unix SVR4.2MP, it claims it'll have a single system image and microkernel technologies to support SANs. Meantime, its also working on what looks like an OEM product: a CPU-independent ServerNet-in-a-box to which a variety of CPUs could be attached. It'll bring PCI to the Integrity line by mid-1996. Tandem's new naming scheme will see Unix SMP boxes carry S4000, S5000 and S6000 tags, delineated by fault-tolerance (FT), commercial (CM) or other annotations. Its R10000 NT boxes will be S1000, S2000 and S3000s with ServerNet Himalayas going through S7000, S8000 and S9000.

## HAL RAISES THE CURTAIN

If it had managed to get the stuff out two years ago as originally planned, the prospects for Hal Computer Systems Ltd's new 64-bit Fujitsu HalStation 300 workstations would probably be much brighter than they are now, given that Sun's 64-bit UltraSparc boxes are on the launchpad. Actually named for its parent, the Fujitsu HalStation 330 uses a 100MHz version of Hal's seven-chip Sparc64 CPU and is rated at 181 SPECint92 and 230 SPECfp92. The 118Mhz model 350 comes in at 212 SPECint92 and 271 SPECfp92. Faster cuts are due. Sparc64 has some high-reliability features that are well-regarded by folk such as *Microprocessor Report* (UX No 530): a Max service processor monitors the CPU's behaviour and system condition. A Sparc64+ and third generation part will follow. The part uses a 1Gbps memory bus and 400Mbps I/O bus. Hal's aiming the boxes at technical and financial markets. Servers are waiting on NUMA, coherency, high-speed interconnect and a serverised operating system. Hal abandoned development of its own operating system some time ago and has put Solaris 2.4 with its own 64-bit extensions up on the boxes as Sparc64/OS 2.4 which will run Solaris applications. Hal's putting the workstations through Ingram Micro D in the US. Fujitsu's ICL Plc is carrying the boxes in Europe. The 330 is from \$23,000 with 64Mb RAM, 2Gb disk, 4 Sbus slots and 17" colour screen. The \$33,000 350 has a 20" screen.

### AMDAHL WINS BIG HOLDERS WITH \$88m BID FOR CANADA'S DMR SERVICES FIRM

Amdahl Corp is offering some \$88.2m in cash for DMR Group Inc, the big Canadian systems integrator and consultancy, and has won acceptance from the principal shareholders, who agreed not to solicit a rival bid. The Montreal company has annual revenues of almost \$220m and employs 2,800 in North America, Europe and Asia-Pacific. Amdahl says the DMR name, strongly identified with quality business services across the world, will be retained, and Amdahl's Business Solutions Group will be integrated into that organisation. DMR founder, chairman and president Pierre Ducros will be chief executive of the new entity. Amdahl's 1994 services revenue was about \$500m, but the deal doubles Amdahl's base of consultants.

### IBM, TAO AMONG HOST OF BACKERS OF ARM RISC, THUMB

NEC Corp joining the growing band of licensees for the Advanced RISC Machines Ltd ARM RISC was just the tip of a very big iceberg of news from the Cambridge company and its licensees this week. The company launched Version 2.0 of its Software Development Toolkit, which runs under Windows including Windows95, and under Unix, and costs \$1,400 for ARM, \$2,000 for ARM and Thumb, under Windows, \$2,250 and \$3,000 under Unix. IBM Corp and Goldstar Co are putting the IBM Microkernel up on the ARM family for Personal Digital Assistant, television set-top box and multimedia applications. Tao Systems Ltd, which has moved out of London to Crowthorne, Berkshire, has a new optimised version of its binary portable Taos Operating System for the ARM6 and ARM7 families, aiming it at multimedia and telecommunications markets. Perihelion Distributed Software Ltd is implementing its Helios real-time operating system for ARM Thumb-aware processors: these can execute both 32-bit ARM code and 16-bit Thumb code, and object code averages a decrease of between 25% and 35% against comparable ARM code, making the Thumb the answer for high volume applications where code density is crucial. Helios-ARM is a modular microkernel-based real-time multi-tasking operating system that supports a Posix-compliant interface. Helios for the Thumb-aware processor is from \$3,950 and will be ready in November. Accelerated Technology Inc is putting its Nucleus Plus real-time kernel on the Thumb-aware RISCs, as is Enoteam Software Technologies Inc with its multi-tasking real-time EOS kernel, with funding from the European Commission's Esprit Open Microprocessor Systems Initiative. Belgian company Eonic Systems SA, with offices in Silver Spring, Maryland has put its Virtuoso Micro real-time operating system up on the ARM6 & ARM7 at from \$3,150, now. Cogent Computer Systems Inc says a variant of the Cogent Modular Architecture is being developed for the ARM710 processor: with the system, interchangeable input-output modules support rapid development of software for complete systems without redesigning the entire system from scratch for each new application: it is based on a backplane development system using daughterboards to host the processor and input-output modules. The development system costs \$3,000, next month. Orion Instruments Inc is to offer Yokogawa Digital Computer Corp's Advice proprietary version of the in-circuit emulator design tool protocol. Lauterbach Datentechnik GmbH is supporting the ARM7 family on its Trace32 Development System with a JTAG interface debugger for ARM, based on the TRACE32-BDM and a highly integrated in-circuit emulator from second quarter next year. And VLSI Technology Inc has added two new members to its ARM line, the VYF86C007 microprocessor and VYF86C007T Fast Thumb ASIC core, which can be clocked at up to 66MHz. It has also begun beta testing a new cache memory simulation tool supporting its embedded ARM ASIC products. The CacheSim development tool plugs into the VLSI JumpStart software development system, at \$1,000 as an upgrade.

### HP TO INTRODUCE OPENVIEW FOR TELCOs

Hewlett-Packard Co's going to introduce a bunch of new telco-oriented OpenView technologies at Telecom'95 in Geneva next month, including a managed object toolkit for Telecom Managed Network applications and version 4.1 of its Distributed Management (a superset of the SNMP-based OpenView network node manager tailored for CMIP and OSI). Also on show will be early versions of event correlation, network simulation and workflow as it pertains to telecoms, plus a prototype of the Corba technologies that are expected to find their way into the company's next-generation, object-oriented Synergy incarnation of OpenView. All the telco work applies only to Unix versions of OpenView; HP has its OpenView-on-NT roll-out set for later this Autumn and its not clear what, if any, telco-based OpenView work will make it there.

### MOTOROLA "INVESTS \$3,000m" TO DO POWERPCs IN DIXIE

Motorola Inc finally has an option to buy 230 acres of land about 15 miles from downtown Richmond in Virginia, and will invest "several billion dollars" to build a wafer fabrication plant to make PowerPC microprocessors. All the US press reports have the scale of investment tagged at \$3,000m. The new plant will be the company's semiconductor sector's highest priority, construction will begin next year, with production of semiconductors starting in 1998. The plant center will initially employ about 700 people, and could eventually employ about 5,000 people in several million square feet of buildings once the site is fully developed in five to 10 years. The investment comes way to late to save Apple Computer Inc from the pain caused by shortages of particular PowerPC variants. The site will be a vertically integrated manufacturing plant at which chips will be fabricated from raw silicon wafers, assembled, tested and shipped to customers. The company says it still has an option on an additional 140 acres lying adjacent to the Goochland site.

### WORKSTATION SALES AID RECOVERY IN SPAIN BUT LOWER THAN REST OF EUROPE

Turnover generated by the sale of workstations in Spain during 1994 totalled the equivalent of \$55.6m and future growth is estimated at around 21% a year, reports SEDISI, the Spanish Association of Information Technology Companies. This growth rate is considered as somewhat lower than that of Spain's European neighbours, due to the fact that there are few large engineering companies to provide greater impetus in this market area. But figures for the first quarter of 1995 are encouraging, showing turnover of \$19.9m, up 37.7% on the same period in 1994. The dividing line between personal computers, workstations and, more recently, servers would appear to be increasingly hard to define, but sources consulted by the association concurred in distinguishing workstations by the Unix operating system, RISC architecture and a considerable capacity for managing information and running two-and three-dimensional graphics applications. Hewlett-Packard Espana SA's workstation marketing director, Jose Estadella, was alone in choosing to swim against the tide of the overall findings, predicting that the European market would grow by 5% to 10% during the current year, while business in Spain would increase by 10% to 15%. Several of the companies consulted agreed that one of the main challenges facing the workstation lies in extending its powerful presence in the technical sector to the commercial world. Sun Microsystems Iberica's product manager, Carlos Ocon, said Sun had already confronted this challenge, and its machines are already present in both technical and financial and commercial markets. Estadella argued that technical fields are the natural market for workstations, in particular, manufacturing industry and telecommunications, and he concluded that the role of workstations in the financial and commercial world would always be of relatively lesser importance.

### SHL SYSTEMHOUSE PAYS \$21m FOR PLANNING CONSULTANCY LTD

Ottawa, Ontario-based SHL Systemhouse Inc hopes to redefine the facilities management and systems integration market, with its purchase of London-based Planning Consultancy Ltd. SHL paid \$21m - £13.5m - in cash and shares for Planning Consultancy, which provides corporate personal computing, network technology and facilities management for desktop computing in the UK. "We recognised the need to achieve a critical mass" said John Oltman, SHL chairman and chief executive officer "in order to be able to compete for the big global customers." Planning Consultancy chairman and co-founder Graham Summers said his company had been looking to expand for some time, and felt that the acquisition by SHL would benefit customers of both companies. Summers becomes managing director of the combined UK operation. The move gives the combined companies a turnover of more than £120m turnover and 1,000 employees in the UK alone. SHL will close its Manchester distribution centre, and merge it with Planning Consultancy's Heathrow operation, and the companies estimate a total of 5% or 6% job losses overall. SHL has been on the acquisition trail since 1989, and said it will continue to grow by both acquisition and through strategic alliances in Europe, particularly in France and Germany. Summers said once the two had been fully integrated, he intended to expand the business aggressively. He said the combined resources would enable SHL to bid for very large, global service-based contracts, from customers with turnover in excess of \$1,000m.

### **SNI/PYRAMID DO DATA WAREHOUSING; READY PCI, WORK ON INTEGRATING UNIX LINES**

Data warehousing programmes are all the rage at the moment. Pyramid Technology Corp and its Siemens-Nixdorf Informationssysteme AG parent certainly don't want to look out of place and have fashioned themselves a SmartWarehouse solutions initiative, establishing data warehouse test drive centres in San Jose and Frankfurt, with facilities in Brussels, Munich, Johannesburg and Hong Kong due over the next 12 months. A SmartStart option promises to deliver an operational and benchmarked pilot system within 90 days. They've partnered with a crop of the usual suspects for databases, middleware and other services. The two claim 100 data warehouse customers under their belt. They also say they've now got 20 customers for their Reliant RM1000 parallel system which uses Pyramid's Meshine interconnect, the largest with six nodes (for a total of 36 CPUs). Informix's scalable database offering will go into beta on Reliant within the next 90 days - there's no timeframe for Sybase MPP. The two companies are still in the process of integrating and rationalising their respective pre-nuptial Unix lines into a single product family. By mid-1996 they promised a single, Spec 1170-compliant Unix - they are currently integrating commands, libraries and other functions - a single (Unix-based) hardware line, plus Mips R10000-based boxes, though not all at the same time and not necessarily in that order. By that time peripherals and other devices will be common across these and SNI's Intel and BS2000 mainframe lines (the mainframes are also destined to go R10000). Meantime the companies plan to introduce PCI bus offerings into their existing lines later this year. As far as their future Unix requirements are concerned the two say they'd like to see two or three unspecified vendor-based workgroups doing development for Unix technologies in particular areas, including commercial MPP/FT.

### **TRANSARC REVS ENCINA OLTP MONITOR**

IBM's Transarc Corp brings version 2.0 of its Distributed Computing Environment-based Encina 2.0 OLTP monitor to Unix Expo this week. The new cut allows users to utilise C++ class libraries for building transaction processing application via an Encina++ development framework. Transarc says Encina++ automatically establishes DCE security mechanisms and object location services without additional code generation and includes interfaces to the Object Management Group's Object Transaction Service. Also new is an Encina Console, a GUI-based tool for configuring and monitoring distributed application components, with APIs to reach SNMP managers. Transarc says the console can be used to automate and administer routine functions, and manage Encina and non-Encina resources, including recoverable queuing service, structured file service, peer-to-peer communications gateway, Encina servers and DCE application servers, plus database and operating system processes. The company claims performance improvements of up to 30% can be achieved using Encina 2.0, but that's in no small measure due to the fact that it runs on DCE version 1.1, which Transarc is just beginning to ship. Indeed the server implementation of Encina 2.0 will only run on DCE 1.1. Encina 2.0 source goes to OEMs including IBM and HP this month and should find its way into products such as Encina for AIX and Encina/9000, within six months. Transarc will offer Encina 2.0 on Solaris from October at \$5,500 on the server and \$150 per client. A DEC Unix version will follow later this year. Encina for NT is due in November, DCE Distributed Files System for NT (client-only support initially) by year-end. A lightweight DCE/Encina environment for clients with limited resources is due in the first quarter of next year. Transarc expects to do \$32m revenue this year, up from \$20m in 1994, two-thirds direct, the rest through partners. Transarc claims 500 Encina customers.

### **LANDMARK ADDS UNIX/NT NETWORK MANAGEMENT**

Landmark Systems Corp, Vienna, Virginia is launching PerformanceWorks, a performance management software system for large-scale client/server applications on Unix and NT. The system gathers performance data from client/server points, including the CPU, memory, I/O, disk, workload, space, operating system, NFS and the network. Its data access module provides access via SQL and ODBC interfaces, allowing the use of reporting tools such as Excel, Access and Impromptu. Its SNMP interface module allows data to be viewed from any SNMP management platform. Prices start at \$7,500.

### **COM-TO-CORBA PART A SUBMISSIONS: RUNNERS AND RIDERS**

We're told there should be little trouble merging those three submissions to OMG's Part A COM-to-Corba RFP (UX No 555). Although they each cover a different scope or area of mapping object models, they are fairly similar. As Visual Edge Technology Ltd's objectmap is more complete, it's likely to take centre stage - with gradual modifications as the merged submission is formed. The way we hear it, Fujitsu's mapping focuses on describing the different possible implementation choices for performing an OLE Automation to Corba mapping, but doesn't provide significant details about the mapping itself. The Sybase-Genesis-Expersoft mapping also covers only the OLE to Corba mapping, mostly the type mapping issues. It doesn't address many of the issues relating to creating or activating objects across system boundaries. It also does not cover important issues such as object lifecycle. Visual Edge's Objectmap covers the mapping of both COM and OLE to Corba. It doesn't attempt to describe the different implementation choices, though it does deal with the issues of implementation incompatibilities between COM on Win16 and COM on Win32. DEC's submission - left out of this single-submission get-together - maps MIDL (the description language used for COM on Win32) to Corba IDL. It also provides a mapping for OLE. It provides little detail about lifecycle, creation, activation, and inheritance mappings and tends to have a bias towards an implementation based on DCE. One player admits the "technical issues in merging with the DEC submission are not the real problem. The problems are political - revolving around the same issues that surfaced during the UNO vs DCE fight. Each of the submissions has parties who are strongly religious about one or the other. However, to produce a mapping from COM to Corba, the wire protocol (if any) is, in reality, irrelevant since it is never surfaced to the user of an interoperability solution. User requirements will drive which (if any) wire protocol is chosen in any given situation. One of our tasks in forging a joint submission between all proposals will be to get everyone to lay down their guns and accept this reality."

### **ISIS OFFERS HA/REPLICATION FOR DATABASE USERS**

With an object request broker under its belt (UX No 552), Isis Distributed Systems Inc, Marlborough, Massachusetts, this week leverages its high-availability replication software into the database world as Isis for Database, in Oracle and Sybase versions. Instead of using the add-on Oracle and Sybase replication modules, which copy data to a primary and subsequently to secondary databases - a process in which it says there's a possibility of failure and therefore loss of integrity - Isis says users who want continuous availability should buy its code that can update, balance queries and restore application and data across multiple databases simultaneously. Less than 1% of an application's code would have to be written to ISI APIs, the company claims, aiming one day to make its mechanism completely transparent. The Isis software replicates application processes and data to two or more database locations and partitions application logic and the user interface between other servers and clients. Isis' key technology is 100,000 or so lines of code that grew out of a Cornell University project. It builds Isis' own protocol upon TCP/IP's UDP layer, acting as a kind of flow meter, regulating sends and responses to guaranteeing delivery. The implementation isn't database-specific - it has SQL Server and object database versions in the wings. Developer seats are \$9,000, a runtime licence is \$10,000, on SunOS, Solaris, AIX and HP-UX.

### **CA TOSSES LEGENT DISTRIBUTED MANAGEMENT INTO CA-UNICENTER**

Computer Associates International Inc will integrate Legent Corp's Paradigm, Agentworks, Paramount, Extended Processing Environment (XPE) distributed systems management products and other storage management systems into its CA-Unicenter system management suite, according to Yogesh Gupta, SVP of product strategy. XPE's distributed systems management technology - however faint in comparison to its associated marketing campaign - will also be integrated into unspecified CA environments, Gupta said. He declined to say where it will be found. Additionally, some of Legent's data extraction technologies will be integrated CA-OpenIngres. Plans for the technologies are to be made public in six week's time.

## MAGSTAR, RAMAC-2, NOW CMOS MAINFRAMES ARE DELAYED

By Tim Palmer

Personal computers may sing and dance, the parallel SP2s may enthrall until people realise that they are simply clustered ~~RS/6000s, AS/400s may be cuddly, but IBM Corp still makes the~~ overwhelming proportion of its profits on its mainframes. On that basis, one might have expected that the company would put the highest priority on getting new mainframe processors and peripherals out on time. Yet the embarrassing delay to the Magstar tape system earlier in the summer, which was followed by a stupefying delay to the Ramac-2 disk array subsystem, has now incredibly been followed by delayed deliveries of second generation CMOS mainframes to about 300 customers. Throw in the fact that the parallel version of DB2 is still not available and all the key elements in IBM's mainframe line are now suffering from the kind of delays the company simply cannot afford. The problem is, allegedly, that an outside supplier of power supplies for the machines can't meet demand but that sounds a little unconvincing because the point of using CMOS was that the things would be able to run off standard power supplies and would not need motor-generators. Eighteen months months or so ago, IBM appointed a man whose brief was to ensure that as much as possible would be common between mainframes, SP2s, AS/400s and RS/6000s, which means that by now the same power supplies should at least be being used for the CMOS mainframes, for high end AS/400s and for SP2s. Moreover, the move to standard parts should mean that the machines can be shipped immediately with a comparable power supply perhaps tested to less rigorous standards, which would be replaced with the right one as soon as it became available. The news that 300 users expecting machines in the current quarter would not now get them until next quarter, sliced \$6.375 off the IBM share price late on Wednesday. It finally recovered to close \$2.875 down at \$94.625. The shipment delay is expected to reduce revenue by \$250m and cut earnings by as much as 20 cents a share, or about 8%, in the current quarter. Analysts expect IBM to make back the shortfall in the fourth quarter but it is seldom that these kinds of problems are resolved in line with the first revision of the schedule. IBM insists that users are simply switching to the CMOS mainframes faster than it forecast and that its supplier can't keep up. It promises that demand will be met in the fourth quarter, although *Reuters* was told only that "We expect to have the shortage alleviated by end of this year," and alleviated means only eased, not eliminated.

## CHECKPOINT ADDS CLIENT AUTHENTICATION, ENCRYPTION AND ADDRESS TRANSLATION IN FIREWALL-1 2.0

Israeli company Checkpoint Software Ltd has revved its popular CheckPoint Internet FireWall software, introducing the client authentication, encryption and address translation features promised back in April (UX No 532). FireWall-1 2.0 now supports secure access at the clients level, rather than requiring each application on the client to login independently. RSA and Diffie Hellman encryption is now available in the US, targeted at protecting information now being carried over internal networks. Its own SWZ1 encryption is available outside the US. FireWall-1 2.0 allows selective encryption rather than all-or-nothing. Address translation is said to overcome the problem of IP addressing limitations (and hides internal addresses from the Internet) by dynamically allocating users with whatever IP addresses are available at a given time. Other work still underway includes enhanced auditing for accounting, plus packaged products that address specific configuration requirements. Closer integration with SNMP manager is promised, to the point where FireWall can be managed from SNMP management consoles. The 30-strong company says internal (within an organisation) and external Internet security requirements will drive its growth. With Solaris, SunOS and HP-UX under its belt there are other plus NT implementations scheduled for 1996. FireWall 2.0 costs from \$5,000 for up to 50 nodes in a lightweight configuration. The midrange product is from \$10,000 for up to 250 nodes; whilst a unlimited licence is \$19,000. The encryption module is from \$3,000; a network security centre, with enterprise and routers security management is from \$40,000. An internal FireWall-1 module is \$6,000; authentication is \$8,000.

## GRAU PREPARES TO LAUNCH ITSELF INTO WORLDWIDE UNIX STORAGE MARKET

Since everyone realised that the mainframe market was in major decline, many companies that once made a healthy living from these massive systems have attempted to shift the focus of their ~~core business to open systems. And storage companies are no~~ exception; many have rebuilt their tape libraries or disk arrays to be used with either Unix systems or personal computer networks. For Bohmenkirch, Germany-based Grau Storage Systems GmbH & Co, maker of robotic devices for tape libraries, the challenge isn't just in getting its open system technology right but in getting itself known after years of letting big partners use its robotics as part of systems they built and sold, but never selling its technology for itself. Its reliance on partners such as Hitachi Ltd, IBM Corp and Siemens Nixdorf Informationssysteme AG has been so heavy that until last year it didn't even have a marketing department. But now all that is changing. It established a marketing unit last year, opened offices in Bracknell, Berkshire and in Paris earlier this year to carry out direct marketing. But after all these years of working with big partners, old habits die hard and it still hasn't quite shaken off its dependence on them and in southern Europe, Scandinavia and even in the UK, its products will still be sold by partners and distributors. The catalyst for all this change was the sale in October 1994 of 80% of the company to Denver, Colorado-based Emass Inc, the storage subsidiary of E-Systems Inc, itself now part of Raytheon Co.

### Five-fingered prosthetic

The remaining 20% is held by Herbert Grau, the son of the company's founder, Herman Grau, who established the company in 1954. The company's robotic system, derived from a five-fingered prosthetic hand it developed in 1982, is unusual in the world of storage in that it can handle virtually any type of archival storage medium: 3480, 3490 and 3490E cartridges, the new Magstar cartridges, DLT, VHS, 8mm, 19mm (the helical sort) tape cartridges, 5.25" optical disks and by the end of the year the new Travan tapes. But although it has been pushing this capability for some years, the company said it wasn't until this March at CeBIT that people started becoming interested in it. Of course, this was the first CeBIT in a long while that Grau had been there marketing in its own right, which may have had something to do with all the interest. But a few months before the Hannover Fair, recognising that it had an interesting technology, Grau began looking for a company that would help take it into the Unix field. At the same time Emass, with a solid history in the high end Unix world of US government installations, was looking to move into the low end and saw Grau's technology as a perfect fit. At the same time it bought Grau it also bought Denver, Colorado-based Advanced Archival Products for the hierarchical storage management software it was developing for the low-end Unixes, as well as rights to optical tape technology from Canadian company Creo. Although Grau's being bought has precipitated numerous changes, the company still has retained some of its key relationships - it and its parent Emass will be one of the first OEM customers for IBM's Magstar, which it believes will rekindle interest in cartridge tape when it eventually ships - and it is actively pursuing others. It has hinted that within the next few weeks it should be announcing a worldwide deal with Hewlett-Packard Co, probably giving Grau its first big Unix deal. In the US the products are known as AML, Automated Media Library, come in a variety of configurations, and are sold by Emass. In Europe, where they are marketed by Grau, the libraries are known as ABBA. And while robotics is still the bedrock of the company's work, a software development group has been established in Munich, working on networking and some unspecified work with Siemens Nixdorf and IBM. First products will be available some time next year but the company said it will not be selling single, bolt-on products, but entire storage packages for companies. Its biggest market is still in Germany, where it has recently installed a storage system for SAP AG where 9,000 software engineers create 2Tb of data a day, but, as the company admitted, this is not representative of the market. In 1994, in Europe only, Grau had a turnover equivalent to \$28.6m. For the first half of 1995, turnover has been \$34.1m. "So we've already made a big jump," said Dieter Wiedmann, general manager, adding that he was looking for 20% growth rates for the next couple of years at the least.

### OEC BEEFS-UP THREE-TIER DEVELOPMENT SYSTEM; CORBA, OLE/COM, VMS, MVS VERSIONS DUE

Three-tier application development company Open Environment Corp, Boston, Massachusetts, will unveil version 3.0 of its Entera development environment on the 27th of this month (UX No 554). 3.0 includes a major revision of its NetMinder systems management module, which has been overhauled to handle application services. The newly-dubbed AppMinder is positioned a componentware management system. The company says AppMinder is a logical step-up from the kind of limited application management provided in OLTP monitors and will allow individual application objects to be managed and manipulated. Demons monitor client activity; a demon manager runs under a graphical interface. 3.0's development kit has been enhanced to provide additional security at the data level, including the use of pre-compiled SQL and other audit trails. 3.0 will also provide automatic replication and start-up in the event of failure, a task it says customers with other three-tier environments such as Forte Software Inc, must code by hand. Entera currently runs across Distributed Computing Environment or OEC's proprietary RPC mechanism (which it'll phase out in the long term). Of a claimed 250 customers, the company says only 30 currently run over DCE. However, OEC expects support for DCE to become more prevalent - but less visible - as vendors begin to embed more DCE functionality at the operating system level. Entera will work across Corba architectures using the services of as-yet unspecified, object request broker providers by the end of next year. A version which generates OLE/COM-compatible applications will happen sooner, in the first quarter of 1996. It'll be some long while before a Corba 2 implementation sees the light of day, although OEC fully expects Corba to become the dominant transport mechanism within three or four years. Meantime, with synchronous and blocking/non-blocking connectivity already in hand, OEC's now seeking an asynchronous messaging environment - it might do a cut-down version of store-and-forward queuing itself - and is also talking with folk such a Peer Logic Inc about use of its PIPES naming service. Entera will go up on VMS in a couple of months and an MVS implementation with native DCE support and links to DB2 will follow at the beginning of 1996. Entera's MVS connections are currently provided by the NetWise Inc TransAccess technology. Meantime, the company this week introduces Entera Workbench for Windows, allowing users to create three-tier applications from what are now Windows-based development tools. Prices go from \$8,000. It can interface to popular Windows tools such as Visual Basic via wizards. 32-bit OCX OLE extensions can invoke RPCs through Cambridge, Massachusetts-based ObjectPower technology. OEC's also offering the ability to create Cobol application via AppDesigner for Entera, the anticipated implementation of New York-based Magna Software Corp's Magna X environment, plus wizards for Visual Basic or PowerBuilder. Prices go from \$50,000 for five developers.

### IBM AND STARWARE DEVELOPING UNIX-TO-AS/400 CONDUCTIVITY SOLUTIONS

Connectivity and data access software outfit, Starware Inc, Berkeley, California and IBM Corp are co-developing Unix-to-AS/400 connectivity software. The resulting IBM/Starware product - or products - will ship in the second quarter of 1996. As part of the deal IBM, and StarWare will cross-license existing Unix-to-AS/400 connectivity products providing PC and OS/2 access to AS/400 for file transfer, print spooling, data access and folder sharing transactions and provide a migration strategy for existing users. StarWare has also licensed technology from IBM providing access to IBM Licensed Programming Interfaces on the AS/400 for print service and 5250 terminal emulation, as well as access to Distributed Relational Database Architecture (DRDA) interfaces on IBM midrange and mainframe systems. StarWare's flagship product is StarSQL, an ODBC-DRDA driver and considers itself an SNA expert. It has 40 employees and is privately held.

### TIVOLI SEES LIGHT AT END OF DATABASE TUNNEL

Tivoli Systems Inc is shepherding the effort to get Oracle, Sybase and Informix enterprise server management environments interoperating (UX No 547) and is confident those products will be talking to each other by the end of 1996. Tivoli expects to see a common set of functions for managing repositories and doing administration. Its own near-term goal is to get Windows, NT and Unix TME implementations working together, and push the technology down from the desktop to into mobile environments. It expects to have new partners and products by the end of the year. The company expects to make an acquisition within the next year, but insists it won't follow the same "model of failure" as OpenVision Inc.

### UNISON BEEFS-UP BACKUP FOR UNIX

Unison Software Inc, the distributed systems management company that started life as an HP 3000 shop and is now doing half of its business on Unix (with some Windows NT), has a new version of its RoadRunner backup software ready for market. RoadRunner 2.0 comes with a new GUI, ~~claimed improvements in network performance, integration with~~ Hewlett-Packard Co's OpenView OperationsCenter, expanded support peripheral support and backup to disk files. 2.0 can backup or restore 32 parallel tape drives, comes with templates and tools for OpenView administrators to monitor RoadRunner messages and take action, backup to disks - which can subsequently copy to slower tape drives - and new algorithms said to accelerate network data transfer by 100% over the previous version. 2.0 is claimed to backup 60Gb per hour in optimised configurations. HP-UX, AIX and Solaris are the company's first-tier Unix ports. Intel and Mips ABI sets and NT are its second wave. Unison's now got all of its workload management (Maestro, LoadBalancer, Express), some output management (Unix spooling is possible from MPE Spoolmate) and a couple of storage management products (including RoadRunner) on Unix. The company expects to begin providing products for the management of application-specific environments - such as PeopleSoft, SAP and Oracle Financials - as well as integrating its utilities with systems management frameworks and tools. The newly-quoted company counts HP, SAP and Sequent Computer Systems Inc as its key OEMs and claims to have others in the bag. Unison's also put out an initial cut of its Maestro job-scheduling software for NT, in which a Unix master can now recognise NT machines on the network, though the agents can only execute one command at a time before reporting back. A second go at the NT work will have a fault-tolerant agent on the network for NT, whilst a third and final cut of the full Maestro service for NT is due in the third quarter of 1996. Versions of company's RoadRunner and LoadBalancer packages for NT will follow, though it's not sure yet what kind of load-balancing NT will require. Unison claims 7,000 licences, up from 4,000 six months ago.

### ZENITH POWERPC SERVERS MAKE IT TO MARKET

Zenith Data Systems has finally launched both its own PowerPC 604-based Z Power boxes and Zenith-branded PowerPC-based Escalas from its Compagnie des Machines Bull SA parent, bundling Windows NT Server on PCI-based single-processor models of both but settling for AIX on the SMP MCA Escala servers where NT won't run. In an unexpected move, Bull is going to drop its own domestic US marketing of Escalas, all of which has been direct. It's turning the direct sales accounts over to Zenith, along with most of its marketing team. The former Bull team has been given the task of shepherding the Zenith-branded Escalas into the VAR market, undoubtedly welcome help for Zenith which has never ventured into such a high-end server market before. Zenith's been holding off shipping its own Z-Power desktop and minitower servers, which were ready for market in July, while waiting to build up a large enough inventory of the troublesome 604 chips. It's continuing to hold off on already-designed 603e boxes for the same reason. The PCI-based Z-Power boxes will come in both desktop and minitower models, starting at \$4,200 for a configuration with 16MB of RAM, 1GB drive, CD-ROM and the choice of either AIX or NT. Meanwhile, ZDS will start moving the MCA-based AIX Escalas through channels under a deal it struck in April with Bull and Motorola. It's taken that long for Zenith to cement the channel partner deals it needs to move the one-to-eight-way boxes. Agreeing to take on the line have been Tech Data and Intelligent Electronics, both banking on market demand emerging for alternate sources of PowerPC servers. Of course, what Zenith and the distributors are positioning themselves for is a PCI-based version of the SMP Escala, which Motorola is helping Bull design. It's supposed to come in the first quarter of next year.

### CALDERA READIES APP BUNDLE FOR LINUX

Caldera Inc, the San Jose, California-based company backed by former Novell boss Ray Noorda, will ship a bundle of applications for Linux by year-end called Network Desktop Bundle priced at under \$500 including WordPerfect, Z-Mail, a spreadsheet, Motif libraries and Caldera Network Desktop (UX No 541). Meantime the company is shipping the second of its phased releases of its Network Desktop including an enhanced text editor, backup and NetWare client. Preview II goes from \$29, plus \$10 for shipping and handling, and \$29 plus \$20 for shipping and handling, outside the US. Final release is scheduled for the third quarter.

## OLIVETTI SHARES PLUNGE ON JOB LOSSES, VAST RIGHTS ISSUE

Making its proposed rights issue even harder to get away, Ing C Olivetti & Co SpA saw its shares plunge 10% as soon as trading started last week, and the plunge triggered an automatic suspension. When trading resumed, it went on falling, and in late morning was off 13%. Olivetti is firing yet another 5,000 employees, will seek to sell \$250m in assets, and wants to raise \$1,400m - far more than even pessimists feared - in a three-for-two rights issue in November. The issue is being underwritten by Mediobanca SpA, and the bank is certain to end up as Olivetti's second largest shareholder after Carlo de Benedetti's interests. Italian Prime Minister Lamberto Dini said he was worried by what was happening at Olivetti but said "the crisis will be overcome, De Benedetti remains firmly committed to the recovery of the company." The company, having promised break-even this year, also stunned with a first-half loss of \$680m, after extraordinary charge for restructurings of \$562.5m. In an effort to quell talk of crisis, Olivetti said it would raise its stake in the Omnitel-Pronto Italia SpA cellular telephone venture to 41.3% by buying the 8% holding of Lehman Brothers Holdings Inc for \$175m - and said it would increase its stake still further if the opportunity arose. In return, Lehman Brothers will buy 120m new Olivetti shares in the rights issue. Olivetti wants the rights cash to cut its \$1,240m debt to near zero by next year, meet restructuring charges and invest in new businesses. Of the 5,000 job cuts, 1,800, 41% of its current staff, go in the personal computer arm. "We will make more PCs with half the people by the end of next year," said managing director Corrado Passera. Staff at the computer division fall to 2,700 from 4,500 now; at the office products division, the cut is 1,000, to 6,100; systems and services will fall to 15,500 from 17,700. Carlo De Benedetti said he could not rule out seeking a separate stock market listing for the computer division, but not for over a year. The firm did not identify the \$250m of property and non-core businesses to be sold.

## EC FUNDS STUDY INTO UNIFICATION OF WORLD'S ELECTRONIC COPYRIGHT LAWS

The European Commission is funding Imprimatur, a project to establish a common approach to copyright between Europe and North America. It hopes to get around the problem of conflicting laws in an increasingly international electronic world. The project will run for three years from December. It aims to achieve agreements on identification data numbers for electronic intellectual property rights, similar to the ISBN identification number applied to all books, which details who published them and when. This will be more complicated than for books because more information needs to be included to reflect the greater number of people that are involved in developing software. Legal issues to be addressed include the differences between the continental *droite d'auteur* system, which deals with the moral rights an author has to his work, and the Anglo-American legal system. A server will be established in Italy by the University of Florence and partners will communicate via it using electronic mail. To test out the real complexity of electronic copyright issues, all messages will be treated as copyrighted and may not be bounced on the next person without prior permission. "The idea is to invent a trading system to see how we get round [copyright] and how pissed off we get with it," said Chris Barlas, chairman of the Author's Licensing & Collecting Society. The server will integrate some of the electronic copyright software on the market and promote some kind of interoperability between Imprimatur consists of a spectrum of 16 partners from rights holders to users, technology providers and legal and standards experts from both continents. Participants include the Bertelsman Group representing publishing interests; EUSIDIC, the association of the information industry in Europe representing information suppliers and users; and the British Library representing libraries. Technology suppliers include Compagnie des Machines Bull SA; Teles GmbH, a Berlin software house with expertise in electronic copyright management; Telia AB, the Swedish telephone company; Thomson Broadcast Systems Ltd; Digicash BV, the Dutch electronic money specialist; the University of Florence; and Imperial College, London. The US Interactive Multimedia Association and the Japanese Institute of Intellectual Property are also taking part to ensure that international interests are taken on board.

## CAMBEX MOVES INTO EUROPEAN MARKETS, PROMISES MIXED MAINFRAME/OPEN SYSTEM STORAGE DEVICE SOON

Waltham, Massachusetts-based Cambex Corp has finally opened for business in the UK, even though it still doesn't have a physical UK office. Peter Waller, formerly managing director with Hitachi Data Systems UK Ltd, became European president at the beginning of the month and is currently looking for premises in the M25 orbit. Cambex will next open offices in Frankfurt, Germany and Paris, France where it will sell direct to the customer. In Spain and Italy it sell through partners. Joseph Kruey, chairman, president and chief executive, as well as founder of the company, was in London to launch the UK operation; he said Cambex had planned to be in the UK before now but the collapse of the mainframe market in 1992 meant it was in no financial position to make this move. At that time, even though it had started its diversification into Unix storage systems, this part of the business was too young and unable to make up the losses the company experienced. And so plans for an expansion into Europe had to be delayed until the company was on a firmer financial footing. But now Cambex said financial bad times are behind it: it is back in profit, albeit tiny, and Kruey reckons new products and the geographical expansion will lead to significant growth for the company, which would like very much to emulate the success of its close neighbour, EMC Corp. Cambex said its Unix disk arrays have been well received and it is ploughing ahead with their development and work on the Cascade Model H, which will be launched next quarter and offer disk storage for mixed mainframe and client-server environments. Kruey said users would be able to configure the Cascade Model H (probably not the name it will ship under) so that part of it was used by the mainframe, and the remainder by open systems. The actual split could be varied over time, to reflect a company's gradual move to client-server systems. Although it bears the name of the company's mainframe product, at its heart is the Centurion RAID array for Unix, the focus of much of the company's current research. There is already a Centurion for Solaris and AIX, and within the next couple of months it will have a version for HP-UX; the company said it has not had one before because it has been waiting for HP-UX 10. There will also be a version for Windows NT. The company will continue to develop and sell its mainframe memory systems, however.

## TAIWANESE AND EUROPEAN MAC OS CLONES IN THE PIPELINE

Two European manufactures will announce Mac OS licensing deals soon, according to a normally reliable source at Motorola Inc. One of the deals is signed, sealed and only awaiting the end of the industry's summer doldrums to be announced - expect it in two or three weeks. The other is a little further away, said the Motorolaite. He's not giving anything else away, but the smart money has got to be on at least one German company: Vobis AG for one has been sniffing around the idea of building Common Hardware Reference Platform machines for a while. Peacock AG is another possible. And don't forget Ing C Olivetti & Co SpA; could it finally be doing something serious with its stake in Power Computing Corp? Meanwhile *Electrical Engineering Times* reports that the Taiwan New PC Consortium's members have taken the bit between their teeth and are building Macintosh clones, which they hope to show at Comdex/Fall in Las Vegas this November. The only trouble is, the paper said, that Mac OS licensing has yet to be finalised. The Taiwanese government's Computer & Communication Research Laboratories, which co-ordinates the consortium, is lobbying hard for two or three firms to be allowed to ship the machines.

## UNISYS ADDS IRIS IMAGE STORE

Unisys Corp has released a new client/server integrated archiving platform, Image Retrieval and Information System (IRIS), for storage and manipulation of image-based payment data for banks. IRIS uses both PC and Unisys U 6000/500 series SMP Unix servers. A base module supporting image import from multiple capture systems costs \$101,000, the image archive and retrieval and image media applications package starts at \$80,000, and the image statement application starts at \$75,000.

### **"OLAP FOR THE MASSES": BUSINESS OBJECTS TO BRING Q&R AND ANALYSIS TOGETHER AS MERCURY EIS**

French company Business Objects SA has an ambitious strategy to marry its leading query and report environment with dice and slice and drill down analysis in a next generation decision support/EIS product currently known as the Mercury project. And, in a move that's certain to raise the hackles of the on-line analytical processing crowd because it bypasses Ted Codd's 12 commandments for multi-dimensional database analysis - or OLAP as it's commonly known - the company is offering-up Mercury as "OLAP for the masses," (or at least for mainstream business users). In laying its case, Business Objects says that as far as it's concerned OLAP is a set of functionality - including a slice and dice, and drill down - and not a specific implementation of that functionality. Mercury uses a version of the existing BusinessObjects relational metadata repository that's been extended to incorporate new data dimension information alongside an organisation's conventional business rules and intelligence. The company says it'll allow users to ask for multidimensional information, such as sales revenue by product and geography over time. MIS staff input the data dimension information and Mercury will come with a set of rule governors to define the parameters of data accessible to users, plus it'll work with whatever rules the existing database schema employs. The metadata ensures users work with representations of the data, rather than the underlying database schema itself. Moreover, because the repository already includes the dimension information, users will be able to launch many different and complex queries without requiring continual assistance from MIS staff to build new models - hypercubes in OLAP parlance - that store the multidimensional data needed to fulfill the request.

#### **Microcubes**

A second innovation is what Business Objects touts as a dynamic microcube engine that automatically builds micro-hypercubes (microcubes) on the desktop. Traditional OLAP systems use static hypercubes to hold large amounts of pre-defined data and must be periodically rebuilt to accommodate users' changing requirements. Mercury does this on the fly, building microcubes on the desktop, using the dimension information stored in the repository. Mercury doesn't require deployment of a specific multidimensional database or specialised 'star' or 'snowflake' relational configurations, it runs against whatever's there already - standard relational implementations as well as multidimensional stores where they exist. Mercury will come with tools, BusinessObjects says, allowing users to build graphical reports with tables and charts and then drill-down into the data from within the report. There'll be a bunch of pre-defined 'wizard' modules for performing more complex operations. On the developer side, Mercury will come with repository-based tools to configure, deploy and administer all aspects of the system. Business Objects says it's responding to the requirements of today's flatter organisational structures by making analysis with query and reporting functions available further down inside companies. Mercury goes to beta next quarter, with products on Unix, NT, Windows and Mac expected in the first quarter of 1996. The company says it'll supply pre-packaged application modules for use with Mercury but says it hasn't decided whether to continue to offer a separate version of its existing product line minus Mercury's OLAP functionality. Around 40% of Business Objects' \$13.6m second quarter revenue to the end of June was done in data warehousing environments, for which it claims customers such as AT&T and Siemens Nixdorf. It says typical warehousing orders are in the order of \$1m now, up from \$500,000 a year or so ago. Meta Group gave Business Objects a 34% share of the managed query market in 1994; 30% of its revenues are indirect.

#### **VERITAS ADDS NFS EDITION**

Veritas Corp, Mountain View, California, is poised to introduce an NFS edition of its VxServerSuite, claiming it will enhance the availability, performance and reliability of Solaris-based NFS servers. It is available in a single-system configuration and as a two-way high availability configuration, VxServerSuite/HA NFS edition. The latter allows system administrators to configure pairs of systems as failover clusters. Pricing for the single system starts at \$2,500, and for the two-system from \$11,000.

### **VISIX ADDS MULTIPLE DATABASE LINK TO GALAXY DEVELOPMENT SYSTEM**

Visix Software Inc, Reston, Virginia, the one-time interface management development company that successfully re-fashioned itself as a cross-platform application development house has been quietly wooing the high-end of the market with its second-generation Galaxy environment. The package is already used extensively by ISVs and organisations at the high-end of the market, most often in conjunction with third party tools such as Atria Software Inc's ClearCase configuration management software. Now Visix is going after the more the mainstream MIS user, adding a new piece of middleware called dbSpectrum it says allows Galaxy developers to create applications that can address multiple, heterogeneous databases from one set of code. Previously links to each database had to be hand-coded. Integrated with the Galaxy Datatag Manager and distributed application services, the module provides a set of libraries that allow Galaxy applications to make database independent calls. dbSpectrum/Reports allows users to generate reports from their database queries. Visix is providing support for Oracle and Sybase initially, saying other links, such as Ingres and DB2 will follow as and when customers demand them. It'll create Informix links when the database company gets around to publishing its client-side APIs. Prices go from \$2,500 on Unix and NT. C versions of Galaxy 2.5 are from \$9,600 per seat - \$12,100 for the C++ flavour, with no runtimes. Galaxy can be front-ended with a variety of popular Windows and Mac graphical development tools, plus its own Unix-based user interface.

#### **Future plans**

Visix's future plans call for the database elements of the development system to be embedded in the client and operate over native network topologies. Although it claims a leadership position, at least in the high-end of the market, in our experience Galaxy doesn't always get a name-check when the second-generation application crowd are holding forth on competitive solutions. Visix says it's not trying to provide a complete out-of-the-box environment a la Forte Software - which it claims is a lightweight solution. Its entry price, \$50,000 for five development users, comes in below Forte's \$75,000 mark. Visix claims Galaxy's graphics and performance is far ahead of the field and allows developers to create applications - database or non-database - for tens or hundreds of users without the additional consulting and support costs it says is required by the likes of Forte. Visix, which aims to do \$30m this year, over \$20m-odd last year, is looking for new distribution channels and system integration partners.

#### **BOX HILL ADDS TO RAID OFFERINGS**

Box Hill Systems Corp is launching a bunch of new products at Unix Expo in its hometown of New York this week. The company claims its new RAID Box 5300 Turbo achieves up to 4,500 I/Os per second for a total sustained output of 60 Mb per second. It can accommodate of 4Gb to 432 Gb data. The RAID box sells for \$1 per Mb. Box Hill has teamed with Coopers & Lybrand Consulting to develop Mod Box Cluster HA, a high availability system for Sun/RAID systems running Informix, Oracle and Sybase databases. Coopers & Lybrand will provide technical services for the Mod Box Cluster HA, while Box Hill will sell the gizmo. Additionally, Box Hill is introducing two new digital linear tape drives, which support up to 40Gb, and three new DLT media changers. The drives cost 25 cents per Mb.

#### **SYNTAX SNARES IBM FOR NETWORK/SERVER COMBINE**

We understand Syntax Inc, Federal Way, Washington, has snared IBM Corp for software that supposedly turns standard Unix systems into advanced servers, processing and distributing enterprise-wide information to desktop users. IBM will OEM TAMS, the TotalNET Administration Management Server, for its RS/6000s, which combines Syntax's existing TotalNET Administration Services software with Fujitsu Ltd's NetWalker SNMP network management system. TAMS will be unveiled on October 15 for AIX, Solaris with SCO, HP-UX and Irix version to follow. Prices go from \$1,000.

# unigram·x

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Sunnyvale-based **General Magic Inc** has reorganised and created three new divisions: Magic Cap and Telescript software divisions, and a worldwide field operations unit.

Sun's **Sparc Technology Business** unit says it has a 200MHz UltraSparc chip functioning in the lab. If we're not mistaken, samples are available. Otherwise for prototyping there's a low-end 143MHz and the 167MHz.

The **Object Management Group** has voted extra time so that OpenDoc supporters can get a implementation-independent version of the document interchange system fit for use as a Corba service.

**Unisys Corp** has incorporated Veritas Corp's VxReliant clustering software into a product it's calling UClusters for stringing together up to four mid-range U6000-500 or 5400 Unix servers. It's also offering Single Point Operation Center for Unix and Single Point Administration Center for PC LANs and desktops. The U 6000-500 is now available as a 10-way.

**Mortice Kern Systems Inc** will debut its anticipated Code Integrity code analysis tool at Unix Expo this week (UX No 548) and announce a port of the software to IBM Corp's OpenEdition MVS.

**Pacific Internet**, Culver City, California, is adding the Linux-based Caldera Network Desktop to its Web-in-a-Box Internet server software.

Somerset, New Jersey-based disk-doubler company **Programmed Logic Corp** has a new TeraFile Unix file system module it says breaks Unix's 2Gb file size barrier by providing 64-bit file access for 32-bit Unixes. The company claims most existing 32-bit system calls will work without modification. Prices go from \$3,000 on the server, \$600 for clients.

**Sun Microsystems Inc's** SunService division has opened an Asian Escalation centre in Singapore.

**Powersoft Corp's** PowerBuilder for Unix is up on Solaris from \$3,300.

**Sun** claims four unidentified telcos have signed for its \$25,000-and-up SunScreen Internet security suite. SunScreen, said to be in use at 100 beta sites is due next month.

**Orchid Systems Inc**, Wellesley, Massachusetts, is offering 2.0 of its Unix ScreenShaper software for integrating portable handheld wireless terminals and printers into applications. The server software requires no modification at the portable end, the company says. ScreenShaper 2.0 is claimed to work with any application on any node in the network, including IBM 3090, AS/400, DEC VAX, and HP 3000. A 15-user license costs \$6,000.

**Trident Systems Inc**, Fairfax, Virginia, is offering SDDGen for automatically generating multiple documents during software design, therefore enforcing consistency across engineering notes, code specifications and reports, the company claims. Up on Solaris, SunOS, HP-UX and Irix beginning from October - Linux from the first quarter of 1996 - it costs \$1,200 for a single-node, multi-user license.

The **Software Group Ltd**, in Barrie, Ontario, has made its NetcomHighway software bundle available for SCO OpenServer Release 5, at from \$1,900.

**Borland International** in Scotts Valley, California, will put version 4.0 of its InterBase 4.0 server database up on HP-UX and Solar from October. It's already up on other Unixes and NT.

**Siemens Nixdorf Informationssysteme AG** has tapped Moscow IT company SAM AG sell its Unix servers in Russia. SAM will assemble RM200 and RM400 systems in Moscow. SAM plans to establish a sales network covering the former USSR.

Client/server tool and database developer **Software AG** is providing its Natural application development products, Entire middleware, Adabas C and Adabas D products on Digital Unix.

The **Allen Systems Group** will release ASG-SuperScheduler, an event-based network job scheduler for Unix at Unix Expo in New York this week.

**DataFocus Inc** of Fairfax, Virginia will unfurl the latest version 1.5 of its NuTracker Unix-to-Windows NT porting environment.

**Hewlett-Packard Co's** middleware engineering group is now offering version 1.4 of its DCE/9000 system, with DCE 1.1 underneath. CICS/9000 and Encina/9000 are now available for the latest K-class systems. This week it'll demo Web access to databases using Encina.

**Hewlett-Packard Co's** Cupertino labs are doing H1 processor, compiler and HP-UX kernel development. Its Fort Collins, Colorado facility is working on PA-RISC whilst the Roseville, California unit does workstation and server development. HP and Intel have decided against creating a dedicated unit for their development a la Somerset. Larry Inman, manager of worldwide advanced technical marketing says it could be a year before the two are ready to talk in any detail about the H1/P7 technologies and their plans.

Meantime, **HP's** first PA iteration with on-board cache, the 7300LC, will be described in October, at the Microprocessor Forum meet in San Jose, California. Systems will follow in a year or more. It's got PA-8000 systems up and running internally.

**Oracle Corp** will be showing its object-oriented Sedona C++ development environment and modeling toolkit designed for scalable enterprise level objects at its International Oracle Users Conference in Philadelphia this week. The company will also announce distributed debugging for Developer/2000.

Sunnyvale, California-based **Mainsoft Corp** has announced Mainwin Studio, a cross platform development bundle which includes its Mainwin Window-on-Unix technology, Mainwin Test 3.0 a developer tool for automated Windows application testing and Visual Sourcesafe 4.0, a project oriented control system.

Dublin-based object house, **Iona Technologies Ltd** is shipping Orbix for QNX Software system's QNX real-time embedded Unixalike.

**Hewlett-Packard Co** has put back the AIX, Solaris and NetWare ports of OpenView AdminCenter, its change management and configuration module yet again, this time till December (UX No 547). Beta sites were experiencing performance and operation problems over distances of more than a thousand feet between nodes.

**Tivoli Systems Inc** CEO Frank Moss says the company is giving Unix Expo a miss this year because it's a techie jamboree rather than an opportunity to meet customers. Instead the company will be touting its wares at NetWorld+Interop.

**ICL Plc** says its long promised UnixWare 2.0-on-Sparc implementation is due imminently. It's still evaluating future Sparc options for its SuperServer. It's on course for a major Sparc overhaul in the fourth quarter.

Network fault and solutions provider **Network General Corp**, Menlo Park, California, is shipping Foundation Manager for Unix, and multi-port Foundation Agent and Probe for network monitoring and management. Up on Sun and HP, with AIX and Solaris due in the fourth quarter, Foundation Manager goes from \$6,000, Foundation Agent from \$1,800 and Probe from \$3,000.

**Motorola Inc's** Computer Systems Group will resell Data General Corp Clariion RAID disk arrays for use with its PowerPC servers.

**Informix Inc** says its Online Extended Parallel Server 8.0 is currently in beta, and claims TPC-D decision support numbers on IBM's SP2 are twice as fast as DB2 and Oracle Parallel Server.

The European Union's Europa Esprit working group is specifying a definition for a parallel object-oriented language derived from C++ (UX No 495) and will announce a draft standard on the 8th November, in Brussels, Belgium.

Cambridge, UK company **Tadpole Technology Plc** has added Windows 95, Solaris x86 and Linux operating systems to its Pentium-based P1000 Series family of notebook workstations.

**Qualsoft Corp**, Palo Alto, California, is distributing French company Non Standard Logics SA's XFace-Maker Motif GUI builder in the US. NSL claims a 65% share of the French market for X development tools, 35% in Germany and 50% in Italy. NSL products go from \$2,000 for an interface development tool - database interface builders are from \$1,000.

**Sun Microsystems Inc** chief technology officer Eric Schmidt jokes that the Internet should at least give a new lease of life to sociology and anthropology lecturers because no-one knows where all this stuff's going or what kind of long-term impact it's going to have on individuals, work processes or society in general for that matter.

And, pointing to the expected widespread use of Web browser technologies as front-ends to internal networks - where Sun hopes to make money selling services and applications - Schmidt said he was surprised to find that of 149 Web servers being used inside Sun, only a quarter of those are deployed in engineering - half are used throughout the field sales force. Schmidt runs Java on NT himself.



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25 SEP. 1995  
KRSJ

The weekly information newsletter for the UNIX™ community worldwide

London, September 25-29 1995

Number 557

## SCO GETS UNIX; NOVELL GETS A PIECE OF SCO; HP, SCO & NOVELL TO DEVELOP HIGH-VOLUME 64-BIT INTEL OS

Novell Inc is unloading its Unix business on the Santa Cruz Operation Inc, taking close to 17% of SCO in exchange and keeping the lion's share of the SVRx royalties for itself - at least temporarily - under an agreement that's not fully thrashed out yet. Meanwhile, Hewlett-Packard Co, the other firm rumoured to be cooking something up with Novell (UX No 551), will develop a NetWare-informed 64-bit operating system for the chip it's developing with Intel, by 1997/98 (though it'll have a 64-bit HP-UX up on its PA-8000 sooner). It will collaborate with SCO which will license HP technology, to see that SCO's 32-bit stuff flows in some neat evolutionary path into the HP work, eventually becoming a single high-volume/low-royalty operating system spanning everything from the desktop to the data center which SCO will help commercialise. The pair swear they are past masters at migrating the user base from system to system without encountering the hazards Sun Microsystems Inc did going from Solaris 1 to 2. They'd better be. They have a lot of divergent streams to bring together. They reportedly haven't figured out yet how they're going to manage all this collaboration but, typical of it, HP is heading up an architecture committee. HP's participation in the deal and the way it's going about it - it's been talking to Novell for three or four months - has unloosed speculation that it may be preparing to acquire a leaner, meaner Novell at some point down the road to get into the small and medium-sized business market against IBM. Then again, maybe IBM, which had been talking to Novell for months before the Lotus merger, might step back into the picture.

### The deal

A definitive understanding of the business terms underlying the Novell-SCO deal wasn't signed until 8:00 Tuesday night September 19 in New York, just hours before the threesome went public with their news the following morning under heavy security at Unix Expo. Despite the precautions *Unigram.X* was singularly able to ferret out the outlines of the deal in advance and circulated a special edition at the show. Apparently our story then found its way to the Internet. SCO CEO Alok Mohan told us after the press conference Wednesday that at 12:30 the previous Saturday afternoon - roughly a month after SCO was brought into Novell's negotiations - he didn't think he had a deal because of the business terms. Although he wasn't specific, he said they didn't change substantially from what was announced. However we originally heard from multiple sources that Novell was going to get a fraction over 17% of SCO, where ironically Microsoft holds another 13%-14%. According to the arrangement, SCO gets all of the intellectual property connected with UnixWare, aka Unix SVR4.2, and the source code. X/Open continues to own the brand. SCO is expected to continue to supply UnixWare as both a shrinkwrapped and an OEM product as well as to continue supplying SVR3 and SVR4 to OEMs. For the time being - but subject to change once they finally figure out how to divvy up the spoils, so to speak - SCO will collect the royalties on old business, subtract a commission of around 10% and pass the rest of the money through to Novell. Meanwhile, going forward it will pay Novell a revenue stream not to exceed \$84m net present value based on the performance of business it's acquired. This revenue stream will end in 2002. Therefore, since this condition is based on performance and since UnixWare hasn't been selling very well, Novell may not see much of this money. The 6.1m SCO shares it's getting have been in the \$5 doghouse for months and only jumped to \$11-\$12 on rumours that SCO was making this deal - or as some wrongly had it the day before that HP was going to take them over. SCO's price dropped back a couple of points on announcement reportedly on fears the transaction would be dilutive. The threesome have had the investment bankers in to value the deal but won't say what number they've come up with.

## DEC SETS MEMORY CHANNEL CLUSTERING FOR DECEMBER

DEC is working itself up to announce eight-way AlphaServer 8400 clusters the first week of December at Supercomputing '95 in San Diego, California, the first implementation of the 100Mbps PCI Memory Channel interconnect from its Alpha partner Encore Computer Corp. Memory Channel can be used initially to link mixed environments of up to four or eight high-end AlphaServer 8400s (aka Turbo Laser) or mid-range 2100s (the Sables). It'll have an eight-way Turbo Laser cluster with 96 nodes at the event. Memory Channel - expected to scale beyond eight-way thereafter - will be the vehicle for DEC's promised assault on Tandem's 20,000 tpm-C number: it claims it'll treble that mark. First cuts of Memory Channel/PCII boards are 12-chip affairs at around \$3,000. Single-chip and three-digit price configurations will push down through the DEC range in future. With a slew of clustering and big bus technologies muscling for the limelight this quarter, DEC says it'll differentiate Memory Channel from the competition by emphasising latency - 4 microseconds - single clock-cycle messaging and built-in error-checking, in addition to its 100Mbps bandwidth and price/performance. It touts its ability to configure clustered systems in multiple topologies, including functionally decomposed and fully-interconnected schemas which find their way in and out of favour depending on prevailing marketing winds.

## HP SWALLOWS PA PARTNER CONVEX IN \$150M DEAL...

Hewlett-Packard Co has done what has been looking increasingly likely; swallowing its ailing PA-RISC partner Convex Computer Corp in a stock swap which values Convex at \$150m. HP took 5% of the company in 1992 when Convex decided to try and build a business out of selling MPP, global shared memory systems based on PA-RISC called Exemplar after the bottom dropped out of the market for its C series of GaAs-based vector supercomputers. Exemplar uses compiler technology allowing HP-UX applications and C series source to run on a Mach microkernel. It's thought the technique is playing some role in development of the VLIW-style compiler work HP will support the merged PA/Intel CPU with. HP already markets Exemplar as very high-end technical servers. Convex has been trailing red ink for sometime, losing \$61m on \$144m turnover last year and \$64m on \$193m the year before. It has 850 employees and will be run as the Convex Technology Center of HP. Less than 10% of its of its installed base of 1,450 systems are Exemplars.

### ...NEW T520s USE PA-7150

Hewlett-Packard Co raised its high-end HP 9000 T-Class SMP servers up to PA-7150, offering T520s with from one-to-12 120MHz parts. T500s use 90MHz PA-7100s. HP's touting T520 uniprocessor performance at 161.7 SPECint92 and 222.6 SPECfp92, estimating it'll reach 37,491 SPECrate\_int92, 50,717 SPECrate\_fp92, and 6,000 tpm-C-plus when fully-stacked and configured with a new HP-UX 10.1 release due by year-end supporting large file systems. (HP's still promising a SPEC 1170-compliant release of HP-UX 10.x also supporting user-level threads by year-end). The T520s support from 256Mb to 3.75Gb RAM, 112 slots and up to 20Tb storage. Model 890 or T500 servers are board upgradable to the T520, though 7100 and 7150 parts cannot be mixed in a system. The servers are also board upgradable to the 64-bit PA-8000 expected to find its way into T-Class systems by the end of next year, around the same time a 64-bit HP-UX is due. HP's beefed-up its K-Class mid-range servers, offering models with 120MHz PA-7200s as the K410 (quad) and K210 (dual). K100, K200 and K400s use 100MHz CPUs. HP claims the four-way 120MHz system, with up to 2Gb RAM and 8.3Tb disk, will deliver over 3,700 tpm-C. Uniprocessor K210/K410s are rated at 167 SPECint92, 267 SPECfp92 and 1,180 tpm-C. Two-ways are rated at 7,892 SPECrate\_int92 and 12,231 SPECrate\_fp92 and 1,870 tpm-C; quads achieve 15,275 SPECrate\_int92 and 21,845 SPECrate\_int92. T520s start at \$145,000 as uniprocessors and \$520,000 as 12-ways. The K210 and K410 go from \$40,000 and \$65,000 respectively as uniprocessors.

### UNISYS SETS P6 U6000/500s FOR Q1 1996

Unisys Corp, Blue Bell, Pennsylvania, will have 166MHz P6 versions of its U6000/500 SMP servers ready in the first quarter of 1996, according to Andy Dymoke, product marketing manager for server systems. The Model 50 currently supports up to five 100MHz or 133MHz Pentiums, the Model 80 eight 150MHz processors or as expected (UX No 551) up to 10 120MHz Pentiums. With ten 120MHz CPUs the Model 80 goes from \$35,000 to \$65,000 depending on system configuration. It will support 4Gb to 8Gb RAM by the beginning of next year, up from 2Gb now. Unisys now supports version 2.0 of Tivoli System Inc's Tivoli management environment on its SVR4/MP and is bundling the Unisys Ready Reserve disk mirroring facility, formerly an add-on option. Furthermore, the company has slashed prices of its 90MHz and 100MHz U6000/500 Model 50 boxes by up to 27% which now start at from \$25,000 to \$30,000 or \$75,000 to \$80,000 fully-configured. Model 80s will cost from \$50,000 to \$65,000 depending on configuration. Unisys also revealed that its new four-node UClusters for SMP 5400 and the U6000/500 high-performance servers running SVR4/MP will be available late in the fourth quarter for \$4,000 to \$25,000, depending on server and configuration. UClusters can detect failures in application software, storage controllers or subsystems, and LAN adapters. UClusters is based on VxReliant clusters software from Veritas Software Corp, which includes scripting language for user configuration of fault detection and failover procedures.

### CA SHIPS UNICENTER FOR DEC ALPHA

Computer Associates International Inc, Islandia, New York, is shipping CA-Unicenter for DEC Alpha systems and has linked the systems management tools to work with DEC's Polycenter Manager on NetView network management system. CA will offer Roslyn Heights, New York-based Cheyenne Software Inc's high-performance, image-based backup and RAID 5 fault tolerance on Unicenter. CA will integrate Legent's various technologies into its Unicenter capabilities (UX 556) along with Cheyenne's backup software, and will explore offering Legent's systems on all of these Unix platforms, said Yogesh Gupta, SVP of product strategy.

### DG CUTS 88K, INTEL VERSIONS OF DG/UX FROM SINGLE SOURCE

As expected (UX No 555), Data General Corp has unveiled a version of its well-regarded DG/UX Unix implementation for its forthcoming Intel Corp-based AViiONs. DG/UX 4.1 incorporates Non-Uniform Memory Access techniques to extend SMP scaling up to 32 CPUs in one box and will be available in versions for both its Intel and existing 88000-based servers cut from a single source tree. Legato NetWorker and Archiving and B2 security is included. DG/UX 4.1 will support clusters of up to eight nodes, and includes high-availability, shared file and print services and scheduling. DG/UX Cluster Software 1.0 ships in November at \$2,000-up. A distributed lock manager will cost from \$5,000 to \$20,000 per node. Clusters are managed from within the DG Enterprise Management Platform (DG EMP) 3.0 which runs on a Windows NT PC and includes HP OpenView Windows Workgroup Node Manager and Hummingbird Communication Ltd's Exceed X Server. DG/UX Cluster Manager 1.0, DG/UX Manager 2.1, DG/UX Clariion Manager 1.3 and DG/UX Graphical FileSystem Manager 1.0 run under DG EMP, providing administration of Clariion disk arrays and allowing users to configure virtual and physical disks and file systems. Because Posix 1003.2 requirements break the programming model - as they will for other Unix95 wannabes - DG says it'll likely offer Spec 1170 compatibility as a bolt-on option.

### VISIGENIC PORTS ODBC DRIVER TO MICROSOFT

Visigenic Software Inc, San Mateo, California will port its ODBC Driver into all of Microsoft's Visual Basic 4.0 Enterprise Editions and Professional Editions. Visigenic's ODBC Driver enables developers to access database management system Oracle 7, which supports Windows 95 and Windows NT. Visigenic's Driver allows users to write and deploy C and C++ applications across any platform, and supports AIX, HP-UX, Macintosh and Power Macintosh, OS/2, SCO, Solaris and Sun OS, and additional platforms will be available later.

### INSIGNIA OFFERS 486 WINDOWS-ON-UNIX EMULATION

Insignia Solutions Ltd officially unveiled the anticipated 2.0 release of its SoftWindows technology last week (UX No 549). The High Wycombe, Buckinghamshire-based company's **Windows-on-Unix technology now emulates the Intel Corp 80486** instruction set on a range of RISC-based Unices, allowing users to run Windows and DOS applications, including enhanced mode Windows applications. Insignia, one of the small handful of Redmond's source code licensees has priced SoftWindows 2.0 at from \$550 on HP, IBM, DEC, Sun, Motorola and SGI RISC platforms; it's also available for NextStep-on-Intel and Macintosh. SoftWindows reads the 80486 instructions and translates them into host RISC instructions. It also identifies frequently-executed Intel code and compiles it to native RISC code segments which are cached and run whenever the Intel segments are executed. According to Insignia president and CEO Robert Lee there are no additional instructions required to emulate Pentium or P6 environments and the company therefore won't develop specific implementations of SoftWindows to support them. Lee agrees that intellectually, emulation isn't a very elegant solution but as native RISC versions of Windows aren't available (not yet anyway) then it is the best solution on offer. In future Insignia will utilise whatever CPU real estate or other techniques the RISC companies make available in their chip technologies to support Intel instructions and reduce SoftWindows' emulation requirement. Lee claims every RISC vendor that has come to it has plans to add such support in one way or another. Other incremental performance enhancements will be achieved by tweaking algorithms. Meantime Insignia's introduced the NTrigue Windows-on-X technology co-developed with Network Computing Devices Inc that uses an NT server (with the multi-user NT extensions provided by Citrix Systems Inc) and native X Windows to deliver Windows and NT applications on any X-based clients, Unix, Mac or otherwise. The Tektronix WinDD rival will ship by year-end.

### SANAR UNVEILS WORKSTATIONS, SOFTWARE FOR UNIX

Sanar Systems Inc of Santa Clara, California has introduced 110MHz microSparc II-based Sanar Micro SA5 workstations, compatible with Sun's SparcStation 5, from \$4,000. The system can handle up to 256Mb RAM and has three SBus expansion slots. Sanar also has a multiprocessing network file server for small to medium workgroups, the Sanar Sparc Server SA2000TMP. It includes two Sanar SA20 system boards, with up to two disk array subsystems, ten storage slots, 19 Sbus expansion slots, and three Mbus slots on each board. It's priced from \$24,500. Sanar is also now shipping its Sanar Sparc SA20 SparcStation 20-compatible workstations, which are priced from \$10,000 depending on configuration with 75MHz SuperSparc or 100MHz HyperSparc CPUs. WatchDog high availability access and failure management software costs \$9,500. It runs on Sparc and HP-UX platforms, and supports Sun's On-line DiskSuite. Sanar has also released a desktop video conferencing system for Unix workstation applications, the SanVideo 2000, which costs from \$5,500.

### SOFTWARE RESEARCH LAUNCHES TEST SOFTWARE FOR UNIX

Software Research Inc, San Francisco, California, has launched STW/Coverage 3.0 for Unix as part of its TestWorks product line. The company says developers and testers working on host-based, client server and embedded product environments can use the software's textual and tabular reports to determine how well products have been tested. STW/Coverage 3.0's compiler-based technology permits the coverage analyser to support all standard versions of C and C++ languages. Software Research is offering STW/Coverage as a bundle including an analysis package and dynamic viewer. A single license of the branch and call-pair analyser costs \$4,125, while a license for the complete package for Unix costs \$7,250. STW/Coverage 3.0 will ship in the last quarter of 1995.

## UNIX: WHO DOES WHAT, WHERE AND WHEN

Santa Cruz Operation Inc, whose reputation as a development house is not exactly high-toned and caused problems in the Ace initiative even though DEC was going to do most of the work, is supposed to take the UnixWare 2.1 (Eiger) code and tinker with it, merging it with the Unix V3-based SCO OpenServer Release 5 (Comet) and create a high-volume system integrated with portable NetWare networking services - in other words revive the famous SuperNOS. SCO and HP will swap HP-UXisms and merged OpenServer/UnixWare extensions. It is expected to release this merged 32-bit Intel product in 1997, precipitously close to the time when power-mad users will be thinking about the prospective 64-bit Intel-HP chip and 64-bit software. Volume sales and new applications created specifically for the merged offering aren't seen in the transition plan until April 1998. A beta version of the merged OpenServer-UnixWare stuff, along with a software migration toolkit, is due next summer. Prior to that, SCO will enhance existing product lines to include Unix 95 compliance, NetWare file, print and the like. Novell will license its NetWare Directory Services and other NetWare 4 technologies to SCO in support of the efforts.

### Sticking DCE and NDS together

Meanwhile, Novell and HP are supposed to collaborate - with Novell licensing technologies to HP - to produce a high-performance implementation of its NetWare Directory Services (NDS) and File/Print Services for HP-UX. They're also supposed to integrate the overlapping NDS and DCE technologies, picking what's popular in each - like the RPC, Andrew File System and Kerberos security in DCE and the file/print in NDS - and stick them together. HP will retain a vanilla DCE for existing users, but privately admits DCE's CDS directory service is all-but washed-up. The productisation plans for the DCE-NDS merge are uncertain. They're talking to IBM about joining it and may expand the talks to include other DCE merchants. HP notes 70% of its customers are running NetWare LANs.

### Royalty stream

HP's contributions to the ultimate effort are such that it claimed last week that it would eventually fall heir to what remains of the Unix royalty stream. This is the way we heard the deal was constructed but getting three-way confirmation proved illusive. It is thought these royalties could currently be worth around \$65m-\$75m with HP and SCO still paying the shares. SCO's portion now ceases. Meanwhile, SCO and HP are apparently also going to take over some of the roughly 400 Unix people, now headquartered in Florham Park, New Jersey, that Novell inherited from AT&T. The Novell-SCO deal is supposed to close by December 1. The ramifications of these arrangements, which the industry was still trying to digest as we went to press, are still unclear. SCO of course is already a direct competitor of SunSoft Inc the only remaining entity with a Unix-on-Intel operating system and Solaris x86, already SVRV4, now also includes SCO compatibility, making it more dangerous to SCO. Most of the applications that run on SCO Unix as it is today also reportedly run on UnixWare - and there should be few migration headaches in that regard - but it seems that the kernel of the merged system they're planning is neither purely SVR3 or SVR4.2.

### Irresistible

It is unclear whether the Intel OEM contingent, companies like AT&T GIS and Unisys and even UnixWare supporters like ICL, will fall in meekly like sheep behind the arrangement or whether - as some of them have suggested - they would look at it long and hard no matter what face they put on it publicly. HP recently indicated that it feels its axis with Intel will prove irresistible to second- and third-tier Unix-on-Intel players and will draw them within its thrall in the next six months while at the same time claiming such an outcome is not strategic to it (UX No 554). It remains to be seen whether these players will accept an operating system or even components from such a die-hard competitor. It also remains to be seen what impact this arrangement has on RISC companies who appear to be left to their own devices. Sun figures it might get to make a run at some of the stragglers. At least it figures it can now develop tighter alliances with Novell on NetWare. The Novell gang never bothered to brief DEC, the only company with an existing 64-bit Unix operating system, but DEC suspects the new coalition could bring new fissures to the fragmented industry. It also suspects - and it's hard to argue with it - that its buddy Microsoft will become a long-term beneficiary of what's happening here. Doubtless the industry will find the notion of shrinkwrapped Unix falling to company where Microsoft has a position ironic to say the least, although the deal mirrors some aspects of Microsoft's dumping of Xenix onto SCO in return for a similar stake almost a decade ago. It is equally ironic that Novell's weeks of negotiating to dump the Unix patrimony it foolishly acquired 27 months ago (UX No 440) and then misspent is passing to an archetypal industry odd couple, staid up-market IBM wannabe HP and the proletariat SCO, a company HP has little taste for.

### NOVELL KEEPS THE LID ON

The one exemplary thing that Novell managed to do during its tortured experience with Unix is keep a lid on how it would dispose of it thanks to a string of tough-talking non-disclosures that reportedly made those few in the know personally and legally liable should they squeal. Although HP's participation in the negotiations leaked over a month ago (UX No 551), it was never clear what role it would play and SCO's presence didn't surface until the week before last (UX No 556) although it's been clear for a little longer than that Novell was dealing with more than one firm (UX No 555). It's determination to keep things secret extended to its highly guarded by-invitation-only press conference where the new coalition didn't even see fit to include any mention of its business arrangements, only of the technology partnership.

### HP DRUMS-UP INTERNET GROUP

Following in the footsteps of Sun, DEC, IBM and others, Hewlett-Packard Co has mustered a new Internet solutions programme which collects all of its own work and partner solutions into a dedicated group, though it's not being operated as a separate profit and loss unit. Internet Solutions director Jan Silverman reports to server systems general manager Carol Mills. Silverman claims HP's Internet campaign is different to what's on offer from other vendors, it's "not Internet-in-a-box" (a la Sun Microsystems) or "all-blue" IBM-style. HP says its going after internal networks at Fortune 1000 companies with a range of HP and third-party products - though it's not going as far as to offer the most widely-used Internet kit, the Sun Netra server. HP currently offers the NetScape servers and Raptor Systems Eagle security firewall directly on its Unix systems. It'll carry Navisoft/AOL NaviServer, OpenMarket Web server and the Checkpoint Firewall-1 soon, it says. HP's Internet infrastructure encompasses its OpenMail messaging system with multimedia MIME support, OpenView integration and use across the high-availability MC Service Guard, plus adapters, routers, LAN switches and hubs. The Internet group will offer initial consulting packages starting at \$15,000. There are no numbers on any aspect of the Internet group.

### ORACLE TO LEVER DEC OVER 10,000 TPC

DEC executives are currently debating the merits of going public with audited tpm-C numbers for a fully-stacked TurboLaser running Oracle on Digital Unix, expected back anytime (they're already late) from the Transaction Processing Council. The alternative is to wait the extra few weeks it'll take for Oracle Corp to exercise some of its black art on the rig-up which it thinks could wrestle the numbers over the 10,000 mark. Current thinking is that DEC will wait and go for glory rather than come in below 10,000. And the 20,000 tpm-C Tandem Computers Inc Himalaya number DEC said it'd have bang to rights back at the Turbo Laser roll-out? (UX No 534). DEC says its plans call for Turbo Laser Memory Channel clusters to get it above 60,000 tpm-C.

### DYNASTY 2.0 MAKES IT TO MARKET

Dynasty Technologies Inc, now in Lisle, Illinois, is announcing general availability of Dynasty Development Environment version 2.0, originally promised six months ago (UX No 521). 2.0 includes a new Partitioning Assistant which provides four new partitioning schemas; Action Manager development tools; Tuxedo-compatible code-generation and a Transaction Manager class which provides two-phase commit; integration with the Tivoli Systems Inc Courier software distribution system; support for asynchronous messaging, event notification and message mapping; support for Oracle 7, Sybase System 10 and DB2/2; the ability to off-load code generation to a shared server; a new split-screen GUI; dynamic substantiation and sub-object inheritance; and new debugging support. 2.0 costs from \$8,000 per developer plus an unspecified target platform fee - no runtimes.

### AT&T TO SPIN OFF NCR, NETWORKING KIT, DROP MICROS

AT&T Corp leaped in to trump all the other major deals in the technology sector last week by revealing that it planned to split into three companies, spinning the computer business and the communications **equipment business off to shareholders, effectively recreating two of its acquisitions** - a rather smaller NCR Corp and a very much enlarged Paradyne Corp, and retreating to become a global telecommunications services giant. The fact that it is cutting NCR loose suggests that it has been unable to find a buyer for it, although if the market puts a low enough valuation on it, a buyer may well appear. Even the leasing company, AT&T Capital Corp, is going, but that will be sold outright. In preparation for the spin-off, AT&T is pulling NCR out of the personal computer business although it will take a third party line OEM for the benefit of its customers, and it expects to fire 8,500 of the 43,000 employees, taking a \$1,500m hit to cover the cost. It will cease personal computer manufacture and distribution through value-added resellers. The split into three separate companies is expected to be completed by the end of 1996. Following the announcement, AT&T shares leaped \$4.875 to \$62.50. The services company, operating under the AT&T name, will embrace long-distance telephone, AT&T Card Services, AT&T Wireless Services and part of Bell Laboratories. Its 1994 pro-forma turnover was \$49,000m in 1994. The equipment business, with pro-forma 1994 turnover of \$20,000m will include network systems, global business communications systems, consumer products, AT&T Paradyne, most of the activities of Bell Laboratories, and AT&T's microelectronics units. It has not yet been named, but AT&T is considering a public offering of 15% of the equipment business in the first half of 1996 ahead of the spin-off. The 80% of AT&T Capital Corp owned by AT&T will either be sold to another company or sold via a public offering, and AT&T will use the proceeds from the sale of AT&T Capital and the 15% of the equipment company to reduce current debt, giving each of the three new firms a balance sheet appropriate to its industry.

### SEAGATE OFFERS \$1,119m IN SHARES FOR CONNER PERIPHERALS

In a week of stunning acquisition moves, Seagate Technology Inc moved to leap back ahead of Quantum Corp to the number one spot in the disk drive business by winning an agreement in principle to acquire Conner Peripherals Inc in a share exchange. Conner shareholders would receive 0.442 of a Seagate share for each of their Conner shares, valuing the company at an indicated \$21 a share, \$1,119m all told, against a price in the market ahead of the announcement of \$17.25, a price to which it had risen on ill-founded gossip that Samsung Electronics Co was the suitor. Seagate reported turnover of \$4,540m in its 1994 fiscal year and Conner had turnover of \$2,400m in fiscal 1994; the number two and number three disk manufacturers in the US coming together may well be a cause for concern for anti-trust authorities.

### MCI TO PAY \$1,000m FOR SHL TO ENTER COMPUTER SYSTEMS INTEGRATION

MCI Communications Corp is to become a major in the computer systems integration business with the acquisition for some \$1,000m cash, of Ottawa, Ontario-based SHL Systemhouse Inc. The price is surprisingly low, considering that the fast-growing and hungry SHL has after a string of acquisitions of its own, built its annual turnover up to some \$840m. SHL, which employs 5,000 people, will operate as a stand-alone company that will also take in MCI's professional services business. Coming on the day that AT&T finally decided that computers and telecommunications didn't mix, MCI loaded on the irony by saying that the acquisition will enable it to design, build and manage systems that integrate computing with communications.

### HUMMINGBIRD INTRODUCES EXCEED FOR WINDOWS 95

X Window software specialist Hummingbird Communications Ltd has launched Exceed 5, the latest version of its PC-X server software for Windows 95. The native 32-bit X server includes support for CDE via TriTeal's Enterprise Desktop (TED) and remote access. Shipping in October, prices go from \$550.

### IBM GETS SIEMENS NIXDORF INTO ITS SERIAL STORAGE ARCHITECTURE CAMP

Siemens Nixdorf Informationssysteme AG has on and off been an OEM customer for IBM Corp's mainframe disk drives for several years now, and this time around, it is to join forces with IBM to **develop and market storage subsystems for multi-vendor Unix and mainframe environments**. The two have signed a "document of understanding" to develop Serial Storage Architecture products for launch in 1996 under each company's own name. Siemens Nixdorf said the products would represent the first commercial industry standard for serial connections with reasonably priced high data transfer rates between mass storage and the CPU.

### ORACLE'S ELLISON PREVIEWES \$500 NETWORK COMPUTER

Oracle Corp founder Larry Ellison says he will next year demonstrate a cheap network computer that will push personal computers out of the networking limelight. The computer is being developed with unspecified manufacturers and would sell for about \$500, and will be a "powerful" device offering fast access to the World Wide Web of the Internet along with electronic mail and multimedia capabilities, Ellison told analysts in Philadelphia earlier this week, speaking by two-way satellite link from Oracle headquarters in Redwood Shores. "They will be able to do a lot of the common functions that are done with the personal computer a lot more cost effectively, and a lot more reliably, and they'll do some things you can't do with a PC at all," he said. The network computer will only be usable on-line to the Internet or similar network, and will not have local storage device such as a hard disk, floppy disk or CD-ROM drive, he said. "The network computers have two cords, one you plug into the wall for electrons the other you plug into the wall for bits," he said. Presumably, a remote server operated by Oracle will store your files and all the software. The machine sounds exactly like a version of the Pippin games version of the Macintosh that Apple Computer Inc has just promised, which will attach to a television and be used for Internet access - except that according to Ellison, his operating system will be developed by Oracle. "If we could make \$10, or \$20 bucks... or even \$50 per appliance, we'd be thrilled," he said. Ellison jeered that a personal computer costs a business about \$4,000 to \$5,000 a year in maintenance and depreciation. "These things are enormously expensive and they are enormously complicated," he said. Target markets for the "network computer" would include schools and homes.

### ORACLE, OFF 12% ON SALES UP 39%, FAILS TO IMPRESS THE MARKETS

Oracle Corp reported first quarter net profits down 12.1% at \$53.8m after a \$50.9m charge to write off purchased research and development at Information Resources Inc, on turnover that rose 38.7% at \$771.8m. Commenting on the figures, Oracle says strong sales around the world contributed to the 39% jump in revenues for the period. Oracle Asia Pacific was the star performer, albeit from a low base, reporting revenue growth of 69%. Revenues in Oracle Americas grew 44% but Oracle Europe Middle East Africa grew only 23%. Oracle said first quarter licence sales grew 25% while services revenues increased 55%; first quarter product revenue growth was led by a 109% increase in Oracle's applications licence sales. The market was unimpressed and the shares fell \$6.25 to \$39.75, and analysts cut their forecasts. Oracle Corp reported first quarter net profits down 12.1% at \$53.8m after a \$50.9m charge to write off purchased research and development at Information Resources Inc, on turnover that rose 38.7% at \$771.8m; net earnings per share fell 14% to \$0.12.

### PORTABLE GRAPHICS CUTS OPENGL TAGS

In the wake of SunSoft Inc's licensing agreement with Silicon Graphics Inc to provide OpenGL on Solaris, Sparc, Intel and PowerPC, Evans & Sutherland's Austin, Texas-based Portable Graphics Inc has cut prices on OpenGL licenses for Sun workstations to \$300. Customers who buy Open Inventor for Sun will get OpenGL free.

### SUNSOFT'S FIVE-YEAR OBJECT EFFORT DELIVERS NEO

Perhaps it's because analysts displayed only lukewarm interest in the company's now five-year-old technology quest that SunSoft Inc canned a worldwide satellite conference and instead wheeled out Neo, the **object environment formerly known as Project DOE, at a hastily-convened breakfast in New York last week.** The event was squashed in before the main event of the day - another quickly arranged affair - Novell Inc's unloading of its Unix burden. The initial release of Neo - no, not Networked Enterprise Objects, not anything at all, specifically, the company says - including the OMG services, object management and the object request broker formerly known as Prelude (UX No 540) is out next month. The OpenStep runtime environment, development tools and NeXtStep graphical user interface - now called NeoDesktop - will beta next quarter and ship by mid-1996, the company promises. Solaris Neo is the standard Solaris operating system extended to support Neo applications and will include OpenStep and NeoDesktop with its cluster of applets. SunSoft's own NeoNet ORB - previously unnamed - is available now and includes interoperability with the Iona Technologies Ltd Orbix ORB which can generate Corba objects from OLE/Windows environments, and OMG CorbaServices. NeoShare is a networking system that finds, manages and shares object services. There are additional tools for managing Corba objects themselves which SunSoft object chief Bud Tribble believes are a unique capability. Corba management will plug into Sun's Solstice enterprise network management just as SNMP and GDMO modules do already. Embedded into Solaris Neo, the Object Design Inc database provides persistence. WorkShop Neo for development includes the Object C-based OpenStep developer for creating three-tier applications from re-built, re-usable objects. It'll debut by mid-1996. NeoWorks is a suite of tools to create Corba object applications, including an IDL compiler and ODF object development facility rapid application development tools. SunSoft calls them Network Object Constructor, Debugger and NeoShare network development framework. SparcWorks include the browser, configuration and management tools. SunSoft says it's added Object C parsing to its C++ compiler meaning users don't have to switch C++ compilers, though it doesn't support full mix-and-match Objective C and C++ on a statement-by-statement basis. Relational database-to-C++ (object) links that works with Project DOE are available from Persistence Software Inc, San Mateo, California, however the company's now working with SunSoft on a relational-to-IDL mapping link for use with non-C++ languages including Smalltalk and Java (UX No 533). SunSoft will sell the link with Neo from the first quarter of next year. Solaris Neo 1.0, with NeoNet, NeoShare and Solstice administration tools costs from \$1,000. WorkShop Neo 1.0 - NeoWorks, SparcWorks and Sparc compilers (minus OpenStep developer) is priced at from \$12,000 (\$6,000 for a limited promotional period).

### XEROX TWO-TIMES SUN, TO BUY MOTOROLA POWERPC BOARDS

Xerox Corp has looks to have delivered something of a blow to what has been its preferred Unix systems supplier, Sun Microsystems Inc, signing with Motorola Inc for PowerPC-based single-board computers for use in a series of future Xerox digital products. Motorola Semiconductor Products Sector will expand its current relationship with Xerox to explore future applications that include PowerPCs. The relationship is described as strategic, and Motorola is regarded as a key supplier in Xerox's future gameplan. It doesn't mean the Sun relationship is all washed-up, Xerox says; it's readying a slew of new office systems for introduction next month built around Sun microSparc I engines.

### CHEN DEBUTS PENTIUM SMP SERVER

New kid on the Unix block Eau Claire, Wisconsin-based Chen Systems Inc launched its anticipated 133MHz eight-way Pentium-based CS-1000 Series SMP servers at Unix Expo last week (UX No 544). The CS-1000's system bus provides peak throughput of 400MBps and supports two PCI buses, up to 1Gb of RAM, and 1.7Tb disk. The CS-1000/10 server, which includes Somerset, New Jersey-based Programmed Logic Corp's High Throughput File System won the best price/performance on the AIM Shared System Mix performance tests. Prices start at \$75,000 for a two-way system.

### PLATINUM REVS SOFTWARE DISTRIBUTION TOOL

Oakbrook Terrace, Illinois, Platinum Technology Inc is now shipping Version 2.4 of Xfer, its software distribution tool. Developed by its recent acquisition, Minneapolis-based ViaTech Corp, Version 2.4 **includes native command packages for invoking native applications on the target machine,** collection packages for retrieving data packages and remote initial program loading. Up on most Unices, VMS, AS/400 and OS/2, prices start at \$7,500 on the servers, \$20 on each target. Meantime the company is porting three of its graphical user interface tools to Motif. Desktop DBA, for database administration and migration, SQL Spy for database monitoring and SQL Coder, a code and object management system for database application developers. Desktop DBA ships in November at \$1,000, SQL Spy and SQL Coder goes in the first quarter of 1996 for \$1,000 and from \$800 respectively.

### CA INITIATES HI-TECH BLOODBATH, SACKS HALF OF LEGENT WORKERS

In absorbing Legent Corp, Computer Associates International Inc laid about it with a will, creating a bloodbath among Legent's 2,000 employees, with about 50% of them being declared redundant, although some ended up filling open positions at Computer Associates. The reductions and other cost-cutting measures helped Computer Associates cut selling, general and administrative expenses at Legent to about \$100m a year, only about one-quarter of what it had been; Computer Associates will discontinue two Legent mainframe software products, a tape management product and a system restart product; only about 225 customers will be affected, and there are competing Computer Associates products available.

### IBM MAY CAN 2,000 TO 10,000 MORE

IBM Corp is again looking at cutting its workforce as it moves to finish its ongoing cost-cutting and a range of 2,000 to 10,000 more job cuts are being considered, sources told *Reuters*. The cuts are being considered in IBM's Personal Computer Co, more headquarters staff, sales and marketing support, and finance, but nothing has been determined or finalised yet. Analysts emphasised that they did not believe that any new restructuring charge would be necessary.

### PARASOFT HAS INSURE++ 3 CODE-CHECKER

Monrovia, California-based bug catcher Parasoft Corp released its automatic, run-time error detection environment Insure++ Version 3 at Unix Expo last week. Insure++ includes the company's patented Source Code Instrumentation, which reads, analyses and instruments the program's source code, and Runtime Pointer Tracking, for building a database of the programs pointers and memory blocks during execution. At runtime, each pointer is tracked and correlated with the database to check for memory leak. Version 3, enhancements include dynamic and static linking, support for pre-compiled headers, thread support and new platform support for Sequent, Tandem, VMS, Lynx, Linux, NT and Windows 95. Shipping on Sun now, prices start at \$2,000. HP, IBM, DEC, SGI will follow.

### SUNSOFT ADDS WABISERVER

SunSoft Inc's still persevering with its Wabi desktop metaphor-on-Unix environment, which now provides full support for 24 Windows applications on Solaris. Support for Windows 95 applications is planned in a 3.0 cut of the translation software due this time next year. Meantime the company last week debuted a server implementation as WabiServer which allows low-end Sparc systems and X terminals previously unsupported by Wabi to act as clients. It also provides central management of Windows applications running within Solaris environments. WabiServer costs \$1,000 for the user licence and \$1,000 for a ten-user client pack. At \$100 per client, SunSoft compares this up against Tektronix WinDD (\$352 per user) and HP500 Windows Application Server, which uses Locus Merge, (\$267 per user). In addition to Wabi it offers Insignia Solutions Inc's SoftPC as SunPC, Insignia's SoftWindows, Locus Merge and the Macintosh Application Environment which runs Mac applications on Sparc.

### NEW PARADIGM BUYS NETPHONE INTERNET PHONE FOR THE MAC

Yet another Internet phone program has surfaced, this time for the Macintosh. New Paradigm Software Corp has signed a letter of intent to acquire NetPhone, the software package that enables Macintosh users to conduct long distance and worldwide telephone conversations over the Internet for the cost of local Internet access - but presumably only with other Mac users also running the software. New York-based New Paradigm is acquiring NetPhone from Electric Magic Co, San Francisco, in exchange for an undisclosed amount of cash and options to acquire New Paradigm Software shares. New Paradigm says it plans to develop a complementary Windows version of NetPhone, and to use NetPhone with its Copernicus product, which enables data to be passed from one computer program to another, without programming and on different machine types. Electric Magic is a multimedia software development and consulting company. Informix Corp chief executive Phil White said his company, Hewlett-Packard Co and GemPlus will unveil at the Telecom 95 conference in San Diego a Smart Card for day-to-day consumer use: however, he gave few details other than to say the Smart Cards would be used as a credit, bank and telephone calling card, and for such things as tracking mileage; Informix will supply the database server software that manages data for the services and encryption software to protect transactions, White said.

### PENTIUM FOR DESKTOPS, PENTIUM PRO (P6) FOR STATIONS, SERVERS

The Pentium is Intel Corp's processor for the desktop for the foreseeable future because the P6 (understood to be called Pentium Pro) is a server and high-end workstation part, Intel president and chief executive Andrew Grove told *PC Week*. "There is a road map of Pentium. Higher speed, multimedia, mobile, and OverDrives," he said. You will see a whole line of mobile CPUs." As for P6, it "is optimised for 32-bit software. It does not do anything very spectacular for Windows95. Nor does it need to, either. Win 95 and Pentium go very well together. The 32-bit software, as exemplified by NT, Unix, and Solaris, will shine on P6," he said, but declared that P6 was for workstations as well as servers, and suggested that it would finally settle the debate over whether iAPX-86 architecture can outperform RISCs. Intel started developing the P6 in 1990, and couldn't believe the personal computer software market would be so dilatory as to be still stuck on 16-bit code in 1996. As for Windows95, it "has 32-bit software, but it's not predominantly 32-bit software. As years go, we'll move members of the P6 into the mainstream also. But that's in the future." Grove agreed that for client applications, there is nothing beyond Pentium except more differentiated Pentiums, but said that P6 will change and add some of the attributes that make Pentium so good for multimedia. "We will reduce its cost and ramp [P6] up into the tens of millions in volume. [Today's] positioning is not a forever positioning. It's a position for the next 18 months. Nothing in this business is forever. On the multimedia Pentium code-named MMX, for multimedia extensions, due late next year, Grove said that it was "a way to improve performance for the basic Pentium," but that it was not as simple as putting a signal processor on a chip.

#### Delays beset P6

Meantime the schedule for multiprocessing servers using the Intel Corp P6 are hastily being put back because of problems with the built-in symmetric multiprocessing, Infoworld and Computer Reseller News report. Word is that the earliest four-way multiprocessors will ship in the first quarter next year, and they may be later than that. Intel is expected to start shipping P6s in November clocked at 166MHz and 150MHz, at \$1,055 and \$950 when you order 10,000 or more, but as has been made clear, they buy you very little over rather cheaper Pentiums unless you are running 32-bit code, even though uniprocessor workstations are expected to cost between \$5,000 and \$9,000 when they first ship. The company may also abandon the 133MHz version of the part. AST Research Inc, Hewlett-Packard Co and Dell Computer Corp are now all expected to start with 150MHz P6 workstations, and possibly single processor servers at the end of this year. Intel is allowing P6 machines to be shown at Network World this month.

### SYSTEM SOFTWARE ASSOCIATES SEES UNIX-BASED MANUFACTURING AND FINANCIAL SUITE SUCCESS

Chicago-based mid-range corporate applications developer System Software Associates Inc, attributes its highest ever quarterly earnings for the fiscal third quarter ending on July 31 to "the rapid acceptance of our new BPCS Unix client-server product line" saying that within six months it has become one of the largest suppliers of Unix Enterprise Resource Planning on the marketplace. Last year, long-retired System Software Associates founder Roger Covey rejoined the company as chief executive in an effort to sort out the long delay in the release of Unix versions of the BPCS manufacturing and financial suite. System Software Associates has recently begun touting its Common Object Request Broker Architecture-based Distributed Object Computing Architecture - DOCA - as the basis for BPCS Financials, and said BPCS Supply Chain Management will be using the new architecture by the end of the year. DOCA-based applications will also appear on IBM Corp's Advanced Series AS/400. The shift will be done on a demand-driven basis, said System Software Associates, which insists that many users are still happy with their dumb terminals. The company's net profit for the third quarter was \$11.2m, up 107% from the same period in 1994, and turnover went up to \$105m from \$86.2m. Revenues for fiscal 1994 as a whole were \$334m.

### BLAME FOR POWERPC DEARTH LAID AT APPLE'S DOOR BY PARTNERS, AS ITS ESTIMATES CAUSE OTHER SHORTAGES

The PowerPC alliance continues to be plagued by talk of a shortage of chips, and both Motorola Inc and IBM Corp are admitting now that supplies are more constrained than they would like. Why? They deny that there is any particular problem with fabricating the chips and instead cough gently and nod their corporate heads in the direction of their partner, Apple Computer Inc, suggesting that its rapidly-changing demand estimates are largely to blame. When Apple announced its last set of financial figures, for the quarter ending June 30, it became apparent that the company was facing inventory and component shortages. In total, it had around \$1,000m in back-orders to fill. However, Apple remained reticent about the extent to which this was the result of any of PowerPC processor shortages, the lack of manufacturing capacity, or a shortage of other components. However, the *Investor's Business Daily* talked to Frederick Forsyth, Apple's senior vice-president of worldwide operations, who made it clear that the company is suffering multiple shortages: processors are in short supply, but so are monitors, and even supposedly commodity items such as transistors and capacitors have seen lead-times double in the first quarter as demand boomed. To summarise: Apple got it wrong with regard to a large number of components, only one of which was the PowerPC processor. The situation was aggravated by the launch of new products and is likely to worsen by the launch of the new PowerBooks and Duos. The company is now attempting to build its inventories and Forsyth told the paper that it is having to strike longer-term deals with all its suppliers. The company is apparently trying to give suppliers an idea of demand a year in advance. But it acknowledges that shortages of some products will continue well into the next year. However, new capacity for PowerPC processors is on the way. Last week, Motorola formally opened its 800,000 square-foot CMOS 13 wafer fabrication facility in Austin, Texas. The plant should virtually double the company's capacity for making PowerPC processors, said the company. But the \$1,000m plant isn't expected to be in full production capacity until the second half of 1997. Test silicon is already rolling off the line, however, and the company went to the unusual lengths of announcing initial yields; 62%. Motorola describes this as unusually high for such an early test of a new production line. The facility has been designed to be able eventually to manufacture parts in 0.25 micron silicon technology. But how many PowerPC chips have been produced so far? You may remember last year when the companies announced when the first 1m processors had left their factories? Well, apparently the three have sworn never to do this again. IBM said the response from the media to the news last year - namely "yeh, sure, you shipped a million, where did they go, into your own warehouses?" - was such that they decided not to release similar information in future.

### MKS PLANS SQL, NT VERSIONS OF API/SOURCE TESTER

Commands and utilities house Mortice Kern Systems Inc duly debuted its API testing and C source code analysis tool, Code Integrity, at Unix Expo last week (UX No 548) and said it will offer support for C++ programs in the first quarter of 1996. It also plans an SQL version that'll help identify all those pesky differences between SQL implementations and will team with a 4GL or database vendor for that development. MKS expects interest in Code Integrity to explode when it adds Windows 95 and NT versions of the technology in the first quarter of 1996. The compiler work at the heart of Code Integrity is developed by the UK's Defence Research Agency. MKS will offer Code Integrity on IBM's OpenEdition MVS in the first quarter of next year; IBM's using the MKS work to do its Spec 1170 work on OpenEdition.

### FOUR SEASONS OFFERS FOUR FLAVOUR OF DEVELOPMENT

To shore itself up against the onslaught of the application partitioning wannabes now peppering the market, Four Seasons Software BV is chopping its Supernova Enterprise 4GL into four offerings. Supernova Desktop is designed for client application development. Supernova Classic is the standard database application development tool suite, with native database links. Supernova Server offers multi-user development whilst Supernova Enterprise provides a mission-critical component. Prices go from \$1,000 to \$5,000. The Bilthoven, Netherlands company, which has its US base in Edison, New Jersey, claims it's been offering application partitioning since 1991. In most cases, it argues, companies which claim to provide application partitioning have tools running on a PC client with SQL statements being executed by a distributed database on the server. This functionality - offered by the likes of Powersoft, Oracle and Cognos - is nothing other than the use of SQL stored procedures, it says. Even those companies which Four Seasons regards as its closest competition, Dynasty Technologies and Forte Software, only provide static partitioning, claims president Jossi Gil. Partitioning applications on Forte or Dynasty requires advanced knowledge about where the different parts will run and then compiling the partitions to specific systems. If at some later stage application parts are required to run on different systems, or need to be changed, Forte and Dynasty systems require the user to recompile the parts and reinstall them on the client and target systems he claimed. Four Seasons own dynamic partitioning means developers can run code on different systems without modification or recompilation, he said. Meantime, the company is shipping an independent platform, database and graphical user interface version of its 4s-Report enterprise report writer tool. Prices start at \$480.

### IBM TO GO FOR SPEC 1170 BRANDING ON MVS BY MID-1996

IBM Corp duly unveiled MVS/ESA SP Version 5 Release 2.2 OpenEdition MVS supporting XPG4 Base Branding and XPG4.2 specifications and some 1,100 of the Spec 1170 interfaces (UX No 528). The release represents the last point release before IBM submits MVS to X/Open Co for Unix 95 (Spec 1170) branding, at the beginning of 1996. It says it'll ship a Spec 1170 branded product by mid 1996, that's well before the majority of Unix house will get there. It's currently working-up a name. IBM says it now has 460 ISV's developing applications to its MVS OpenEdition platform.

### COGNOS ENHANCES CLIENT INTERFACE

Software tools house Cognos Inc is shipping Powerhouse Client Version 2.0, an enhanced graphical user front end for its server-based Powerhouse 4GL development environment. Version 2.0 includes Windows sockets, 3D graphics, DDE support, shortcut keys and extended help facilities. The Ottawa, Canada-based company says its second generation Axiant 2.0 development tool will be available at the end of February 1996. Powerhouse Client 2.0 goes for \$250.

### HP DEBUTS ENTERPRISE PARALLEL SERVER SOLUTIONS

To take care of those extra 5% of customers it estimates require the kind of compute power and storage not provided by its standard SMP server lines, Hewlett-Packard Co this week unfurls its expected interconnect technology for clustering systems into what it describes as Virtual Data Centres. Designed for very large-scale decision support users, typically with 1Tb data or more, the Data Centres will incorporate HP 9000 Enterprise Parallel Servers (EPS) equipped with a quarter-speed Fibre Channel link running at 266Mbps and a 'TCP Lite' protocol to provide 70 or 80 microsecond message latency. By the time Fibre Channel standards reach 1Gbps HP says it'll have implemented its own message protocol to drive latency down to 30 or 40 microseconds in a year or so. The interconnect will be used specifically to link fully-stacked T500/520 (12-way) or K-Class (quads) servers initially, in configurations that support up to 32 nodes. The interconnect board will come bundled where required or can be retro-fitted to existing systems creating EPS nodes. Oracle Parallel Server and Parallel Query are up on the systems from day one - the are due by year-end - as will Informix XPS, which is still in beta. Sybase MPP is still blue sky stuff. Surrounding technologies include support of CPU allocation to applications within the Process Resource Manager (PRM/9000) and HP GlancePlus integration of administrative functions. OpenView Operations Center 2.0 comes with additional 24 x 7 management functions and the HP MeasureWare agent software can now collect global, process and application data. There's no additional programming model, so HP defers to whatever the databasers provide. HP's parallel technology doesn't provide support for clustered file systems - it says it's working on it; the company says users looking for that level of functionality, including global shared memory and memory-mapped technologies should be using the Exemplar SPP parallel processing servers supplied by its PA-RISC partner Convex Computer Corp.

### PRAXIS SHIPS OMNIREPLICATOR

Framingham, Massachusetts-based Praxis International Inc is now shipping its OmniReplicator bi-directional data replication software for data warehousing environments with support for multiple databases. Originally expected in the first quarter (UX No 526), development and testing's taken longer than anticipated, the company says. The software is one of three data warehouse technologies Praxis is developing, the others are OmniWarehouse and OmniInfo. OmniWarehouse, Praxis' own multidimensional database for warehousing is expected around the turn of the year and is basically a re-write the company's Model 204 database. Whether the OmniInfo warehouse query mechanism will ever make it to market is unclear; if it does it'll be significantly different from the plans which were originally announced last October. OmniReplicator 1.0 supports bi-directional or one-way data replication between DB2, Informix, Oracle, Sybase and Praxis' open Model 204 databases. It supports one-way replication to AS/400, CA-OpenIngres, DB2/6000, Informix, Oracle Rdb, System 1032 and Teradata. The company will only uprate the one-way links for bi-directional replication if customers demand it. Version 1.0 is from \$20,000 to \$100,000 now, up on most Unixes. Model 20 supports in October, DB2 in November and Informix in December.

### INFORMIX ASSESSES MARKET

Informix Software Inc chief executive Phillip White says he sees no slowdown in the database server software market and estimated it growing at "30% plus" yearly. But he does not say if he expects the company to continue the 55% yearly sales growth of recent quarters, a question which became relevant last week when Oracle Corp surprised Wall Street with overall revenue growth of just 39% in its quarter just ended. Those rates compared with an average 50% growth the company had posted for sales previous quarters. White said Informix sees "great opportunity" in the weakness that Oracle experienced in Europe last quarter, when it was changing European management; the latest version of Informix's database, NewEra 2.0, will go on sale next month and NewEra 3.0, with embedded object-oriented technology, will be available at the end of the year. He added that the company will also ship its workgroup server software for Windows NT in the next quarter; a Unix version is planned for 1996.

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Massively parallel processing outfit **Maspar Computer Corp**, Sunnyvale, California says its commercial decision support systems developed with Data Parallel Systems Inc (UX No 517), has three beta users and will ship in October. System prices go from \$600,000. Meantime the company is offering a suite of parallel analysis applications on its systems for pharmaceutical companies. Entry level prices go from \$250,000.

**AT&T GIS** has given Dennis Roberson the CTO job.

Cupertino, California-based **Tandem Computers Inc** will offer Montreal, Canada-based **Mitech Computer Systems'** Planalyst merchandise planning and automated replenishment suite on its massively parallel Himalayas. Meantime, Tandem is offering Billerica, Massachusetts-based Bull-owned UniKix Technologies Inc's CICS-compatible OLTP software on its Integrity Unix boxes.

**SunSoft Inc** has rolled its enterprise management and network products groups into a single unit under VP and general manager Terry Keeley who's been at Sun since 1991.

Irvine, California-based **4th Dimension Software Inc** is OEMing **Dazel Corp's** client/server mainframe output management system, Control-D/Delivery.

**Aurora Systems Inc**, West Bloomfield, Michigan, has released MQMon Version 1 at \$10,000, said to support MQSeries management across heterogeneous networks in the MVS/CICS environment, and has AIX and OS/2 ports on the runway for a November release. AS/400, AT&T GIS and HP-UX implementations will follow.

PowerPC and 88k creator Keith Diefendorff has left **Motorola Inc's** Semiconductors Product Sector to join **NexGen Inc** in Milpitas, California as Director of Technical Strategies. In the newly created position he will manage the company's microprocessor architecture strategies and assist in managing agreements with Microsoft, Compaq and IBM Microelectronics.

Lou Gerstner will lift the fog right off San Francisco to present the keynote CEO address to Uniform 96 at the Moscone Center which runs from February 12-16. Given that he's slated to speak on Valentine's Day, we're confident **IBM's** chairman, CEO and golden boy will need no reminder to leave his heart in San Francisco. Joining Gerstner are other keynote presenters Lew Platt, chairman, president and CEO of **Hewlett-Packard Co**, and Jim Clark, chairman of **Netscape Communications Corp**.

**Versant Object Technology Corp** has appointed former Sybase Inc VP international marketing to the VP marketing position created when Dave Kellogg headed across the Atlantic to Business Objects SA. Oracle regional sales director James Lochry is on board as VP sales.

**IBM Corp** has put its PL/I language up on AIX including an optimising compiler and tools for accessing DB2, CICS, and others. PL/I for AIX is \$900.

The **Open Software Foundation** has named HP's Jim Bell interim president and CEO, succeeding David Tory. Bell is on a six-month sabbatical from his position as director of Open Systems Alliances for Hewlett-Packard Co.

Apparently 43% of **SAP AG R/3** Unix sales this year have been on **HP** kit. However **DEC** claims Alpha/Unix is the fastest growing platform of choice for running SAP applications and that if it continues to grow at present rates it'll overhaul HP by mid-1996.

**SunSoft Inc** has combined the planned Base Server and Network Server Solaris releases for Intel x86 systems, its back-to-the-future character user interface implementation of Solaris 2.4 x86, claimed to run most SCO and Interactive Unix applications out-of-the-box (UX No 528). Various packaging options of Base Server will be offered now at from \$500 for two users.

**Gupta Corp** has put its SQLWindows 4GL development system up on Solaris at from \$3,500 - the same price as its Windows product. However it does require **MainSoft Corp's** MainWin Windows-on-Unix API to function. AIX and HP-UX implementations are in the pipe. Native Oracle and Informix database connections are supported initially

Campbell, California-based **Halcyon Software Inc** is offering VBIX, a Visual Basic-compatible runtime engine for Unixes, which allows Visual Basic applications developed under Windows 3.1 to be executed on Unix/Motif as native applications. A complete development environment is due in the second quarter of 1996, along with Visual Basic 4 and plug-in OCX controls. No prices.

Even **DEC** was surprised when **Oracle Corp** told us the business it did on DEC VAXes and Alphas was its number two revenue earner in the fourth quarter of its last financial year, behind its **Hewlett-Packard Co** revenue stream. It hasn't calculated its first quarter breakdowns yet.

Meantime, **Oracle** says its Very Large Memory database-in-RAM technology will play on other architectures once there are 64-bit operating systems to leverage, though it expects VLM enhancements it'll provide to keep DEC out in front of the field.

On the issue of the 64-bit specs the Unix industry is drumming-up, **Oracle** says the aggressive schedules the fifty-odd have set will only be met if participants don't break ranks and reach for their marketing teams to pitch one approach against another. Apparently the major vendors had originally favoured a marketing free-for-all but holstered their guns at the insistence of the pack. The aggressive schedules were set precisely to attract widespread attention to the effort, **Oracle** says. The group was concerned lest its initiative be passed-off as yet another Unix field of dreams.

On loan from **Interactive Network Technologies**, David Archer has been appointed COO of **Petrotechnical Open Software Corp** in Houston, Texas.

**ICL Plc's** now selling its DAIS object request broker out of a new sales office in Santa Clara, California, run by Ian Foster.

**Heroix Corp**, Newton, Massachusetts has put its RoboMon Unix system administration software up on IBM, HP, DG and Sun Unixes at from \$500 to \$5,000. There's a beta in hand for NT.

Carlsbad, California, **TriTeal Corp's** TriTeal Enterprise Desktop 4.0 (TED 4.0) is the first to the winning post for X/Open's CDE branding.

**NCD Inc's Software Corp**, Mountain View, California has upgraded PC-Xware 3.0, its X Windows Enterprise desktop product. It includes an integrated TCP/IP suite and is available from September 30th. Prices start at \$545.

Somerset, New Jersey-based **Programmed Logic Corp** plans to beta its backup file system called Snapshot next month. Snapshot freezes one version of a file while enabling a second version to be modified. Snapshot ships in the first quarter of 1996.

Burlington, Massachusetts-based **Cognos Software Inc** will support Oracle's Express OLAP (UX No 544) API in Version 5 of its PowerPlay multidimensional reporting and analysis tool. Version 5 is due in the first quarter of 1996. Meantime Cognos will release Axiant 2.0, including its Impromptu and Powerplay 4GL engine at the end of February.

**Qualix Group Inc** has added SecureWatch to its system administration and security products. Securewatch is a high availability, secure Internet access and connectivity solution. Its up on Sun and HP workstations, prices start at \$25,600.

Mountain View, California-based **Adobe Systems Inc** is leaping aboard the Internet with a letter of intent to acquire **Ceneca Communications Inc**, a privately-held developer of World Wide Web publishing and site management tools. Terms were not disclosed.

With the demise of the **PowerOpen** PowerPC supporters club now - even according to its chief Tom Mace - looking like an irreversible process that could see it close its doors with empty coffers by year end, **IBM Corp** looks set to step into the breach with what its calling its AIX Multiple Vendor Program (AIX MVP). Under the program AIX OEM's will be required to complete a set of certification tests with the operating system running on vendors' hardware before they will be able to carry the AIX trademark. IBM claims the tests will give software developers and AIX users a consistent PowerPC ABI.

When **Novell Inc** chief Bob Frankenberg addressed the company's 400 Unix people in Florham Park, New Jersey last Tuesday before the deal went down - the ones it inherited from AT&T - we're told each and every one of them had a copy of the news flash we distributed at Unix Expo earlier in the day. When Frankenberg got up to speak one employee asked why they should carry on listening when it was all there before them in the flash. Frankenberg told them some of what we had written was wrong and continued with his speech. When he finished, the same employee got up and asked "so where was it wrong?"



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The weekly information newsletter for the UNIX™ community worldwide

London, October 2-6 1995

Number 558

## AT&T DEBUTS LONG-AWAITED BYNET INTERCONNECT IN WORLDMARK ENTERPRISE SERVER LINE

AT&T Global Information Solutions has finally given its five-year-old System 3000 line of Intel Corp iAPX-86-based commercial systems' originally launched by the then NCR Corp, a high-end, or enterprise makeover. The new Pentium-based (and Pentium Pro-ready) WorldMark servers include 4100, 4500 and 5100 models which share a single cabinet design and are offered in various multiprocessing, clustered and massively-parallel configurations. The high-end 5100M massively parallel system features the long-awaited implementation of AT&T's next-generation 20Mbps-per-node BYnet interconnect and supports up to 512 133MHz Pentiums across 16 subsystems with 32 CPUs per subsystem. It runs a Unix version of the Teradata database on a new 3.0 cut of the AT&T SVR4 MP-RAS operating system. The 5100M delivers the long-promised upgrade route for users of AT&T's existing Ynet-based 3600 system and back-end Teradata DBC/1012 systems, which were originally to have been merged in the well-publicised 3700 MPP unit which never saw the light of day (UX No 462). Designed for decision support, data warehousing and OLTP, a dual-node 5100M with eight 133MHz Pentiums and the BYnet adapter costs from \$660,000. As well as Teradata version 2.0 - the database and its host TeradataOS operating system are now emulated as a front-end, virtual application on Unix, eliminating the requirement for additional back-end application processing modules - the 5100M supports Oracle parallel server. Informix XPS ships in October, whilst Sybase MPP (the former Navigation Server supposedly co-developed by Sybase and AT&T) isn't seen until sometime next year. AT&T advises that only the Teradata option can accommodate applications with more than 1Tb data. It will continue to support, but not enhance, the DBC/1012 Teradata engine, and is offering a set of tools to suck existing Teradata 1.x data into the 5100M. System administration and management is provided a deskside administration workstation. The 5100C - which supports Oracle Parallel Server and/or AT&T's LifeKeeper fault resilient software, but doesn't ship with BYnet - is tailored for OLTP clustering and is regarded as the successor to the System 3575. A 5100C can accommodate two processor subsystems each with up to 32 90MHz or 133MHz Pentiums; up to eight 5100Cs can be clustered together. It starts at \$465,000 with eight 90MHz Pentiums. The 5100S departmental SMP server, with one processor subsystem, comes in for the System 3555, and costs from \$235,000 with four 90MHz Pentiums. The 4500S - which picks-up from the System 3525 - accommodates from two-to-16 Pentiums and is due in the fourth quarter at from \$82,000 in SMP or clustered configurations. The 4100 desksides are available in 4100C clustered or 4150S and 4100S SMP configurations with two-to-eight 90MHz or 133MHz Pentiums at from \$58,000. The new systems use AT&T's enhanced version of IBM Corp's Micro Channel Architecture bus.

## ICL CHOOSES HOME ADVANTAGE, TAKES ROSS HYPERSPARC

ICL Plc has been iffing and butting for the last five months over which Sparcs to use in future SuperServers. Now the Fujitsu Ltd-owned sibling says it's come down on the side of stablemate Ross Technology's HyperSparc (UX No 534). ICL, Bracknell, Berkshire, will move its SuperSparc-based Superserver range over to the Ross CPU from the first half of 1996, starting with the 150MHz cut, offering it in single, dual and quad-processor configurations. At 150MHz the HyperSparc reaches 180 SPECint92 and 245 SPECfp92. As well as the HyperSparc makeover, ICL will introduce a new line of systems in the first quarter of next year.

## X/OPEN INVESTIGATES APPLICATION BRANDING (AGAIN)

X/Open Co Ltd's kicking around the idea of application branding as a way of encouraging cross-platform application availability and easing user procurement headaches. It's currently gathering-up a working group to assess demand for such a programme, according to business development manager, Paul Tanner. Testing would likely require some "low hurdle" conformance to begin with. The group is cautious about pushing the idea too hard; it had its fingers burned once before over a similar idea it had in mind back in 1988/89 following the launch of XPG3. That initiative failed, said Tanner, because the requirements were considered too loose and lacked value-add to attract ISVs.

## FOR MISSISSIPPI READ POWERCLUSTER; POWERPC 620 IN 1997

Powercluster is the name chosen by Compagnie des Machines Bull SA for its clustering technology, previously known as Mississippi. Available now, it links up to four PowerPC 601 symmetric multiprocessing Escala nodes of eight processors each, over FDDI links. Clusters of four PowerPC 604 nodes will be supported early next year when the chip eventually flows, along with eight-node 601 systems. By the end of 1996 128-way clustering - linking 16-way PowerPC 601 boxes - will be available with ISL, Interserial Link, Bull's answer to the throughput limitations of FDDI. Alain Couder, president of the open systems and software division, said IBM Corp and Bull are still in discussions about IBM taking Powercluster for the RS/6000. However, the PowerPC 620 chip, which Bull has in its labs, won't be available until 1997, he added. Instead it'll offer 604s clocked at up to 200MHz through next year, Couder said.

## ULTRASPARC DEBUTS

Emerging from its latest stop at the CPU gas station, Sun Microsystems Inc's Sparc Technology Business this week announces official availability of 167MHz and 143MHz implementations of its 64-bit UltraSparc I chipset. They're rated at 240 SPECint92/380 SPECfp92 and 205 SPECint92/325 SPECfp92 respectively and are priced at from \$1,400 and \$1,000 (down \$200 and \$100 respectively on its June price list (UX No 540)) in 1,000-up quantities. A 182MHz device rated at 260 SPECint92 and 410 SPECfp92 is sampling now and will ship in the first quarter of next year at \$1,600 for 1,000-up. The 200MHz cut is still on the forecourt and is being demo'd at Microprocessor Forum. The 5.2m transistor part is manufactured by Texas Instruments Inc's 3.3v, four-layer metal, 0.5 micron CMOS process. STB claims it's around 100 SPECfp92 ahead of its original UltraSparc schedule and expects systems from the company's hardware unit and the compatible houses by year-end, though currently the list of supporters - see below - does not currently include Sun's biggest Sparc partner, Fujitsu or its ICL sibling. UltraSparc I stacks up against DEC's 8400/5/300 system implementation of the 300MHz Alpha 21164 which registers 341 SPECint92 and 513 SPECfp92. Hal Computer's HalStation 350 with a 118MHz Sparc64 achieves 212 SPECint92 and 271 SPECfp92. IBM Corp's RS/6000 43P workstation implementation of the 133MHz PowerPC 604 achieves 176 SPECint92 and 156 SPECfp92. Hewlett-Packard Co's 120MHz PA-7200 K-Class systems are rated at 167 SPECint92 and 267 SPECfp92. The Intel Xpress 133MHz Pentium system is rated at 156 SPECint92 and 117 SPECfp92. The Fujitsu Ltd Ross Technology 125MHz HyperSparc hits 152 SPECint92 and 181 SPECfp92. Sun's 90MHz SuperSparc II chip - not yet in systems - is touted at 148 SPECint92 and 143 SPECfp92. IBM's RS/6000 Model 591/R21 RS/6000 fitted with a 77MHz Power2 reaches 144 SPECint92 and 308 SPECfp92. Silicon Graphics Inc's Power Challenge Onyx 90MHz R8000 reaches 132 SPECint92 and 396 SPECfp92. Although UltraSparc isn't top of the performance pack, Sun is trying to move the performance goalposts somewhat by emphasising multimedia performance (through UltraSparc's extra Visual Instruction Set graphics instruction set supporting 2D, 3D image and video processing, MPEG-2 image decompression and audio processing) and networking data throughput (using extra block load/store instructions and split data and instruction buses). It's calling the work UltraSparc New-Media technology. UltraSparc Data Buffers are an extra \$85 per 1,000. The chipset consists of a Uniprocessor System Controller, UPA to SBus Interface, Reset/Interrupt/Controller and Crossbar Switch-Uniprocessor and costs \$450 per 1,000. The 12 UltraSparc OEMs are: Axil, Cray, CDAC, DTK, Force, Haitai Electronics, Hitron, Goldstar, Tatung, Themis, Toshiba and Trigem.

## SPEEDWARE ADAPTS ITS 4GL AS AUTOBAHN INTERNET AUTHORIZING TOOL

Speedware Corporation Inc, the Toronto, Canada-based software house that started out in the proprietary HP 3000 world, has adapted its 4GL technology to the Internet. Speedware Autobahn, introduced last week at Network/Interop in Atlanta, allows programmers to create dynamic Web applications where information posted to the page changes as the facts change. It can be used for such applications as stock market listings, sports results or how-to-order information on home pages. Autobahn sticks with the HTML standard and supports current browsers such as Netscape Navigator and NCSA Mosaic. It reckons it provides an alternative to the esoteric scripting languages and C code offered by other products. Speedware has basically embedded HTML onto its existing Speedware/4GL, which over the last few years has been selling on HP/UX, IBM AIX and more recently, Sun Solaris. The product is most likely to appeal to those who already have a 4GL mindset: Speedware claims to have interested its first Internet provider in Australia, and hopes to set up similar deals in the near future. It will also target companies using Internet tools on internal networks, and will be selling from the Net. The Autobahn server can be installed on HP, IBM and Sun machines, as well as Windows NT, and can access data from Oracle, Sybase, Informix, Microsoft SQL Server, DB2/600, and HP Allbase database management systems. Speedware reported \$28m revenues in fiscal 1994, but a \$1.5m net loss, although it claims to be heading back to profit this year. Earlier this year it acquired a Quebec-based company, Info Innov Inc, from which it got a client-server executive information system tool called Media. Speedware's other product is Oasis, a middleware tool that allows Visual Basic, PowerBuilder, Excel and Delphi users to bypass ODBC and uses DCE to connect up to HP, IBM and Sun servers. Pricing and packaging issues are still being sorted out.

## LOW PROFILE PYTHON COULD NEVERTHELESS CHALLENGE JAVA

Sun's Java may be making all the headlines, but there are other languages out there in the public domain that can do similar things. One of them is Python, an object-oriented interpreted language that was developed in 1989 by Guido von Rossum at CWI, the Centrum voor Wiskunde en Informatica, in Amsterdam. Guido later moved on to the Corporation for the National Research Initiatives, CNRI, in Reston, Virginia, where development continues. The first release was in 1991, and the latest version, 1.3, is due this month. Python is largely a new implementation of well tried ideas: modules and exceptions from Modula-3; syntactic features and high-level data-types from the teaching language ABC; extensibility and dynamic typing a la Lisp; and object-oriented programming and interpretation a la everyone. It's a general purpose programming language on scripting steroids. Standardisation is controlled by the author, along with the Python Software Activity (PSA), a set of informal working groups, sponsored mainly by CNRI. It's big advantage over Java is that it's free: full source and binaries are downloadable for various Unix platforms, Mac, OS/2, MS-DOS, Windows, Amoeba and others. There are no license fees, and the few restrictions relate to copyright. The numerous associated tools include development environments, GUI kits, a few database interfaces, several language specific interfaces (for example to Microsoft's Foundation Classes for C++) and some useful Internet utilities. Python's profile was raised recently by the decision of DataViews Corp to use it as its end-user programming tool, integrated in with its C++ framework (UX No 550). The Web's Infoseek International search system is written in Python, but Visix Software Inc apparently rejected the language in favour of Java for the latest version of Galaxy (*see back page*).

## TOSHIBA SIGNS STRING OF NEW SUN PACTS

Toshiba Corp has long marketed Sun Microsystems Inc workstations in Japan under an OEM agreement, but has now expanded the alliance to embrace integration of Sun systems throughout Toshiba to replace mainframes, and the adoption of Sun's Java and Hot Java Web software. Toshiba will also develop and build systems based on Sun's 64-bit UltraSparc and will adopt Sun's Media Server. It expects its sales of products using Unix to reach around \$2,000m over the three-year period ending in March 1998 as a result of the alliance. Sun's Netra Internet Server, Java and Hot Java technologies, and Toshiba's expertise in chips, displays and portable computers will be used in a project to develop new Internet access mechanisms for mobile users.

## XING TAKES ON PROGRESSIVE NETWORKS WITH STREAMWORKS,

Xing Technology Corp, based in Arroyo Grande, California but majority owned by Japanese typewriter king Brother Industries Ltd, looks set to give Seattle, Washington-based Progressive Networks Inc's RealAudio a run for its money. Xing, an expert in Motion Picture Expert Group compression, has introduced StreamWorks, which integrates with World Wide Web browsers to offer real-time sound transmission over the Internet. The company also offers real-time video transmission for those with fast enough Internet connections and fast enough PCs to decode them. However, despite the technical allure of sending video, Xing is initially concentrating on getting radio stations interested in broadcasting over the Internet. It claims 100 will be signed up by the end of the year. StreamWorks comprises four components: server software, the client software, an audio-video compression engine and an audio-only compression engine. The company claims a couple of benefits over RealAudio: in particular the server software can encode in real-time and pass it on to users. RealAudio, by contrast, is limited to delivering pre-encoded files.

### Rock, blues and humour

In addition, Xing said its server can adjust its encoding techniques depending on the speed of the link to which the user has access. One radio station using both StreamWorks and RealAudio is KPIG of Freedom, California, near Santa Cruz. The station has been offering RealAudio snippets of its programming for a while, but is now using StreamWorks to transmit its mixture of rock, blues and humour across the Internet. The station offers two feed-rates to its listeners - a slower 8.5Kbps version for slow modem links and a 24Kbps feed. Comparing the two technologies, KPIG's chief engineer and morning presenter Wild Bill Goldsmith said "Most people find the Streamworks 8.5Kbps audio feed to be superior in sound quality to RealAudio, which uses about the same bandwidth. The Streamworks feed is less grungy and handles music far more gracefully than RealAudio. Streamworks also offers higher bit-rate options that allow for med-fi and hi-fi feeds, mono or stereo, that are truly music-quality." The company is retaining its RealAudio content on the server said Goldsmith, on the grounds that there are already so many audio players out there. He said that the radio station approached RealAudio about doing a real-time feed, however "they seem to be moving slowly on it." Phil Barrett, vice-president of software development at Progressive Networks, said the company will be announcing real-time encoding for RealAudio in the next couple of weeks. He also said the RealAudio architecture is specifically designed to be able to take new compression algorithms. New coder-decoder modules will be released for the RealAudio player in due course, he said; these may improve low bit-rate or music quality. But why is a local radio station interested in broadcasting internationally? Quite simply, the station is hoping to use its programmes as a free teaser to get people visiting its money-spinning Web site. "I don't see us turning a profit on our NetCast for at least a couple of years, although who knows how fast this will take off? For now, we are primarily interested in attracting attention to our Web site where we do intend to start making money within a few months" said Goldsmith. The Streamworks browser is available now for Windows and X, with a Mac version due later this year. The browser costs \$30, though it is possible to download it for free, forfeiting technical support. The server software costs \$3,500 for a T1 or lower Internet connection and \$6,500 for a higher-capacity Internet connection, and is available for a number of Unix variants with Windows NT later this year. Real time encoding requires a separate dedicated machine sold as a package. The audio-only encoder costs \$2,500. A video encoding station priced at \$6,500 was due to be available at the end of last month.

## O'REILLY SURVEY SIZES US INTERNET USE

High-tech publishers O'Reilly & Associates claims to have carried out "the first statistically defensible study of Internet users" in the US, and says that 5.8m individual users now have direct Internet access at home or work. A further 3.9 million use commercial online services only, and 1 million have both direct Internet and on-line service access. Based on random digital dialing US households, the survey, *Defining the Internet Opportunity*, is based on interviews with 29,901 households. One Internet user in every 1,149 households was discovered. Most other surveys have been based on estimated numbers of users per host, or employed self-selecting samples, says O'Reilly. Further details on <http://www.ora.com>.

## UNIX TALKS BEGAN IN SPRING

Sources at the company confirm that Novell Inc's strategy to exit Unix, which culminated on September 20 with the news that it would turn the operating system over to the Santa Cruz Operation Inc (UX No 557), began last spring when Hewlett-Packard Co first approached it to insure there'd be a shrinkwrapped 64-bit Unix available down the road for the chip HP's developing with Intel Corp. Those talks bobbed along for awhile until this summer when Novell came to the conclusion it had to save itself for NetWare and ease on out of Unix. As we suspected (UX No 555), SCO was brought into the picture after a Novell board meeting in mid-August. The SCO side of the discussions - perhaps prophetically - were given the code name "Sleigh Ride;" the HP side "Rhine River Project" after a conference room in HP's Cupertino facility where negotiations first started to gel. Novell confirmed that HP was cool to SCO's involvement at least at first. Novell, on the other hand, thought briefly about acquisition or taking a majority interest in its Unix heir but abandoned the idea after concluding that it didn't achieve its goals - which were not to lose the SCO management team and to get as far away from Unix as it could. That's why it took less than 20% of SCO - so it wouldn't have to account for it on its own books. (What it actually got in trade was 19%-and-a-fraction which diluted down to something like 16.6%.) SCO, meanwhile, has left people scratching their heads over all this falderal about their spending time and money merging the SVR4.2-based UnixWare 2.1 (Eiger) and the Unix V3-based SCO OpenServer Release 5 (Comet) and integrating the 32-bit results with NetWare networking services. Neither Novell or anyone else relatively close to the situation believes that this is anything more than positioning - a way of trying to please everybody - and that who's to say what's actually under the covers by the time whatever comes out comes out. Apparently SCO won't be able to rely that heavily on the staff it inherits from Novell. Novell says that of the 400 people it has in New Jersey - about 300 of whom are engineers - only about 100 are expected to go to either SCO or HP, with HP taking the lion's share. Both companies are expected to rent office space from Novell so the folks they get they only have to move down the hall. Another 150 developers should stay with Novell and that doesn't include the 50 involved with Tuxedo which Novell is also keeping. The remaining 100 in marketing, support and admin will probably be set at liberty.

## SCHUSTER LEAVES SYBASE

After being shunted sideways to director of business development back in April, Stewart Schuster, the former Sybase Inc executive VP marketing credited as being the first to position an entire company and its products with the term client/server architecture, left the company early in September. After nine years in charge of worldwide marketing, Schuster appears to have paid the price for a series of stumbles which straddled the collapse of Sybase's relationship with Microsoft Corp, the seeming inability to correct database scaling and performance problems, and delays in bringing new versions to market. Schuster, now working as a consultant, board member and investor for software companies, was last week appointed to the board of San Mateo, California-based object-to-relational house Persistence Software Inc in a move which puzzled some experienced Sybase-watchers given Schuster's previous apparent distaste for object-oriented techniques. Former VP worldwide marketing at Sybase's PowerSoft Corp unit, Tom Herring, took over Schuster's role back in July, when he was appointed Sybase VP corporate marketing.

## A&T CUTS BEFORE THE SPIN

Cuts AT&T Corp is making at the former NCR before spinning it off include 1,000 of the 4,300 jobs at the company's Dayton headquarters and all 900 jobs at the personal computer manufacturing plant in Liberty, South Carolina. Also going are the jobs of 1,300 contract employees. In Europe, Germany bears the brunt of the cuts because that is where the personal computers were made - there it is closing the Augsburg plant, eliminating 700 jobs; it will still employ 700 in Augsburg after the lay-offs. The German plant had been operating profitably so it is possible another personal computer company will buy it. The UK is shedding 6% - 130 go in sales and marketing, and 46 at the worldwide automatic teller machine plant in Dundee, Scotland.

## NeXT SELLS \$8M OBJECT TECHNOLOGY TO MERRILL LYNCH

NeXT Computer Inc, Redwood City, California, is selling \$6m of object-oriented software and \$2m of consulting, training, and support to financial services house Merrill Lynch & Co Inc, New York. The deal is for all of NeXT's object-oriented technologies, including OpenStep on Unix and OpenStep Developer for Windows, WebObjects, Portable distributed Objects (PDO), distributed OLE for Windows (D'OLE), and Enterprise Objects framework. Merrill will use NeXT's goodies to develop new computer support systems across the firm, to enhance its financial futures and options dealing and support systems, to develop an expanded presence on the World Wide Web, and to unite its network of financial consultants and customers internally and via the Internet. Merrill's trading and financial services systems run on Solaris, SunOS and Windows NT, according to Edward Goldberg, Merrill Lynch executive VP of operations, systems and telecommunications. He said Merrill chose NeXT's object technology because they allow users to work on a variety of operating systems, which he thinks should be of less importance to a corporation than in the past. He said the organisation's IT strategy will remain diversified but is very confident about NT's future role within the organisation.

### OpenStep on AIX?

Next's Windows gambit, OpenStep for Windows, goes to alpha next quarter, betas in the first quarter of next year and will ship by mid-1996. The D'OLE implementation of its object request broker is claimed to allow developers to create applications with popular Windows tools which can access OpenStep objects running on DEC, HP, NT or Sun servers. It ships on NT next quarter with a Windows 95 version to follow. The Enterprise Object Framework database application development system will ship with D'OLE. "It makes Next objects look like OLE... and you don't have to do the programming like you have to with Iona Technologies Ltd and other systems," says NeXt CEO Steve Jobs. And the other object contenders? "Taligent is imploding... Microsoft will take three or four years to get its object act together," says Jobs; "we're wading into OLE and NT, and we'll be the best citizens," he adds. "We've looked at Java, but we don't know how fast it's going to run. We'll do Java on clients." Jobs didn't say whether Java will figure in Next's server offerings. Meantime, whilst Jobs is now considering putting OpenStep up on AIX, HP is still musing how NeXt technologies will play on its Unix offerings. All indicators suggest OpenStep will be sold on PA-RISC servers running HP-UX (UX No 552). Jobs said HP's still trying to nail down its client strategy - whether to play Next on HP-UX or NT/Intel clients - but thinks it's leaning towards NT.

## BUSINESS OBJECTS STARTER KIT LAUNCHED AT OBJECT EXPO EUROPE

One of IBM's lower profile object ventures was set up in 1993 with UK company Softwright Ltd, to form the Newbury, Berkshire-based company Integrated Objects, and last week it came out with Newi Solo, claimed to be the world's first business object starter kit. Newi stands for the grand sounding New World Infrastructure, and first emerged onto the market last year. It is a piece of Corba-compliant middleware that will allow objects written in C, C++, Cobol, REXX or RPG to co-exist. Eighteen months ago when it was first launched, Newi ran only on OS/2 and Windows, but now also runs on AS/400 and RS/6000 platforms. The new starter kit is called Newi Solo, and runs on standalone PCs. It is a cut down version for developers building simple object solutions, and Integrated Objects expects users "to cut their business object teeth on Newi Solo and then move up to the full product." It will be out in the fourth quarter, priced at £495 in the UK. The full version of Newi, which is now in use at customers in the finance, utilities and videotelephony businesses, costs £2,000 on Windows and OS/2, with runtimes at £100 - other platform prices on application. Integrated Objects chairman Martin Anderson is also the European chair of the Object Management Group's BOMSIG Business Object Management Special Interest Group.

### COMPUWARE ADDS PLAYBACK TESTING TOOLS

Compuware Corp, Farmington Hills, Michigan, has new automated testing tools for Unix called Playback which can be integrated with its existing Hiperstation and Playback for CICS mainframe testing tools, the company claims. ~~Compuware says Playback will enable~~ users to test MVS, Windows, OS/2, or Unix applications, and to automatically execute and manage the multi-platform process using a single tool. The software for all three systems offers object-oriented record and play-back for creating and executing test scripts, a testing environment and an interactive test development environment with built-in defect tracking. Prices for Playback for OS/2, Windows and Unix begin at \$2,850, depending on the platform.

### EDM ON THE UP AND UP, SAYS DATAQUEST

On the back of growing demand for E-Forms and Workflow software the worldwide market for electronic document management (EDM) software will rise to \$1,085m this year, up from \$918 million in 1994, according to Dataquest Inc, San Jose, California. The market will reach \$1,301m in 1996 and \$2,010m in 1999, Dataquest says. It adds all EDM areas will experience strong growth with the exception of the optical character recognition market, which is experiencing a steep per-unit price decline without an increase in volume. A new recognition software category called Document Recognition is likely to obsolete vanilla OCR by providing recognition of typography, page layout, and graphic element typing, as well as structural attributes for text zones.

### APERTUS SNA SERVER UP ON AIX

Apertus Technologies Inc, Eden Prairie, Minnesota, has released Express SNA Server for AIX, with prices starting at \$2,000. The software links RS/6000s and PowerPCs running AIX 4.1 with IBM mainframes and AS/400s. It features full AIX 4.1 SMP; gateway Windows, TCP/IP and other Unix systems over an SNA backbone; APIs for client/server integration; and MCA or ISA adaptors. It also includes a single SNA stack supporting Datalink types SDLC, Token-Ring, Ethernet, and QLLC; LU types 0, 1, 2, 3, and 6.2.; Telnet Server; and APPN support. Express SNA is available on SCO, UnixWare, HP-UX, AT&T GIS and Solaris for Sparc and Intel.

### CA NEAR WITH NEW OPENINGRES TOOLS

Computer Associates Inc is steeling itself to unveil some of the promised enhancements to its CA-OpenIngres database technologies outlined in its white paper released earlier this year (UX No 535). For starters, CA has finished developing its Open Replicator for use between heterogeneous databases, even where there is no OpenIngres server present, according to Yogesh Gupta, senior VP of product strategy. Presently available for CA-OpenIngres only, it will provide access and replication across Oracle, Sybase or other databases. CA is also finishing-up work with ICL Plc on a new parallel implementation of CA-OpenIngres plus the internally-developed FastPath dual-path database access system. CA has also completed work on a new GUI-based management workbench tool for CA-OpenIngres tuning and management, called Visual DBA which will be bundled OpenIngres customers at no additional charge. It's got new gateways to connect CA-OpenIngres with DB2 and IMS which it will offer as SuccessPack for DB2 and SuccessPack for IMS. Other gateways for Datacom and IDMS are due in a few weeks' time, Gupta said. Finally, the company is still working on a GUI-based object class definition addition to its object management extensions, which will form part of a new object application strategy.

### LICENCE MANAGERS AT WAR AGAIN

Gradient Technologies Inc, Marlborough, Massachusetts, is ticked-off with longtime rival Globetrotter Software Inc, Campbell, California. Silicon Graphics Inc apparently dumped Gradient's NetLS software in favour of Globetrotter's Flexlm software license manager, a fact that SGI and Globetrotter reportedly neglected to mention to Gradient before they sent out press releases. An official for Globetrotter said only that it is simply a case of one software vendor supplanting another. Gradient maintains Silicon Graphics bought the rights to use NetLS when the system still belonged to Hewlett Packard Co, and neglected to adopt Gradient's subsequent upgraded and enhanced models, iFORLS and then EZ-LoK. Meantime, Gradient is on the verge of issuing another enhanced version of EZ-LoK, which will run on Windows NT. EZ-LoK presently runs on Solaris, AIX and HP-UX. Gradient will this week release further information on its DCE port for AT&T's Unix SVR4 MP RAS 3.0.

### R&O PURSUES MEGA-META DATA WITH ATOMIC REPOSITORY INFORMATION MODEL

Munich, Germany-based R&O Software's Westford, Massachusetts unit has created a bunch of interfaces to third-party meta data stores for the company's Rochade repository. It says the links will ~~allow companies to build giant meta data warehousing models linking~~ CASE tools and databases in such a way that administrators will be able to conduct massive impact analysis and query operations. Rochade is a client/server meta data repository said to provide re-engineering, tool integration, process and project management. It runs on most operating systems and can manage up to 12 Unix servers at a time. Rochade uses an Integrated Repository Information Model (IRIM) to link-up with a variety of tools and databases including Accelerator, Key, Bachman, and ERwin, Sybase, Oracle, Cobol, DB2 and other third-party meta-models. However, IRIM will be superceded next year by what the company is calling the Atomic RIM or ARIM, designed to import CASE tools, identify whether Rochade can interface with them, and then automatically generate links. Rochade, currently at release 4.1E will be upgraded to 5.0 in the first quarter of 1996, with versioning at the attribute level. Present Rochade customers likely to beta 5.0 include Morgan Stanley, AT&T Lufthansa, Mobil, and NASA. To work-up its mega-meta angle, R&O is partnering with a host of tool and warehouse providers, including IDS Pro Scheer GmbH, Saarbrucken, Germany, for SAP support. Prism Solutions Inc, Sunnyvale, California has established an interface between Rochade and the Prism Directory Manager. Austin, Texas-based Evolutionary Technologies International's Extract ToolSuite retrieves information about all environments and data available through Rochade, as well as how to get the data. It then merges this repository meta data, updates it and sends it back to Rochade. Rochade also works with Business Objects' Business Objects query and reporting tool. It tells Rochade users where business information is in warehouses and how to get it. Finally, R&O has incorporated Sterling Software Inc's Key for Enterprise CASE tool into the Rochade data warehouse architecture. Sterling, based in Dallas, Texas, acquired KnowledgeWare earlier this year.

### PRISM ADDS DIRECTORY MANAGER 2.0

Prism Solutions Inc, Sunnyvale, California has a new 2.0 cut of its Prism Directory Manager which imports and integrates meta data from CASE tools and tab-delimited files into an information directory, enabling developers to document the content and structure of a data warehouse by exporting meta data in CASE Data Interchange Format (CDIF) into a chosen database repositories. Directory Manager now enables users to launch query tools via icons and to exchange and share meta data among various data warehouse components. It includes links to Business Object's Business Objects, Hewlett Packard Co's Intelligent Warehouse, Information Advantage's DecisionSuite and MicroStrategy's DSS Agent and Architect. Including the information directory, two directory builder seats, ten directory navigator seats, and one CASE import or meta data interface, the package costs from \$60,000 on Unix-based databases and \$75,000 for DB2. Additional CASE import or meta data interface options are \$10,000 each, additional navigator seats are \$450, and additional directory builder seats are \$4,000. It ships in the fourth quarter.

### CHEYENNE DIVIDES UNIX, NT, NETWARE

Cheyenne Software Inc, Roslyn Heights, New York is creating independent NetWare, NT and Unix divisions, each responsible for product development in that area. Cheyenne president and CEO ReiJane Huai will head the Windows NT-focused New Territory (NT) division. Jeff Finkle leads the Unix division which provides the ArcServe/Open line of storage management and HSM file management services for Unix networks. It'll put the recently acquired JetServe disaster recovery tools up on Unix, as well as Archive and new database agents for Sybase, Ingres and Informix.

### HALCYON DEBUTS VBASE DATABASE

Halcyon Software Inc, Campbell, California has released VBase, its multi-user SQL database server which runs on most Unix flavours and Windows 3.x, 95 and NT. Halcyon will have it up on DEC and AIX by the end of the year, according to president Don Hsi. VBase includes full data recovery, transaction logging, record-level locking, SQL and an ODBC interface. It also interfaces with Halcyon's recent Visual Basic on Unix - Vbix release (UX 557) - which allows Windows developers to run programmes on Unix. VBase is priced from \$1,000. Citibank, New York Life and Dow Chemical Co are running alpha and beta versions.

### HP NEEDS UNIX CONSENSUS TO BEAT NT, SAYS PYRAMID

To fulfill its destiny, leverage its R&D resources and create a 64-bit Unix that will keep its HP-UX solutions ahead of Windows NT, Hewlett-Packard Co needs the support of a mature, well-developed and innovative Unix industry, argues Pyramid Technology Corp. HP might now have control over a large piece of Unix's 64-bit destiny, but its long-term strategy simply won't work without some kind of Unix coalescence, Pyramid believes. To achieve what's so far proved unattainable, HP must create a level playing field that'll allow 64-bit Unix technologies to be deployed right across the industry Pyramid says. That's why, in its mind, HP initiated the 64-bit Unix API specification effort and why it's now in discussion with Pyramid and other vendors to create business relationships - not consortia - from which additional Unix technology development agreements will spring. Tailoring the 64-bit work for different chip architectures (ie non-PA/Intel) is not a problem; much of the processor-specific work likely to be required is already well understood and compartmentalised Pyramid says. The first issue is to complete and implement the 64-bit specification work that 50-odd Unix vendors are now working on. Establishing a common programming model is critical. Yes, their delivery timetable is too aggressive, Pyramid says, but the point is to unite and agree upon a common set of APIs largely before they have been created or implemented in products. The way it sees it, COSE, ACE, Spec 1170 and other 'Unixification' efforts have either floundered or failed because they tried to unite APIs after they'd been established and implemented in products. The challenge is to ensure 64-bit Unix work where it already exists - at DEC and Silicon Graphics Inc for example - can be accommodated. If the industry can agree and adopt some set of base 64-bit Unix functionality then those resources that would otherwise have gone into duplicated development efforts can be carried forward into the value-added technologies required to keep ahead of NT, Pyramid says. Specifically HP's already talking with Pyramid and other commercial Unix vendors about development requirements at the high-end of the market. Pyramid expects a bunch of agreements with substantive goals to be in place by the middle of next year that'll finally address issues still unresolved after years of discussion and consorting. The 64-bit specification work, along with Santa Cruz Operation Inc's effort to clear-up outstanding 32-bit Unix work in a single integrated low-end operating system will help Pyramid towards the goal of merging its own and its Siemens Nixdorf Informationssysteme AG parent's Unixes into a single offering by mid-1996. Pyramid didn't pick-up a single code drop from Novell Inc during its Unix tenure. It took source from AT&T's Unix System Labs and added its own SMP, high-availability, clustering and large file system technologies. Novell's inability to resolve its NetWare/Unix positioning meant the industry effectively stayed still for a couple of years, Pyramid says.

### AXIL HAS NEW SUPER/HYPER-SPARC SERVERS

Those new servers that Sparc-compatible builder Axil Workstations Inc couldn't quite bring itself to unveil in Europe a few months ago (UX No 543) have turned up in the US as the AxilServer S/420 line of systems. The one-to-four processor systems at the high-end of Axil's product range, but are positioned as mid-range units in the wider Sparc world. As a dual-processor, the server is claimed to occupy a configuration and price point not covered directly by any Sun Microsystems Inc system. The S/420 comes with one or two 75MHz SuperSparc IIs or 125MHz HyperSparcs, or up to four 100MHz HyperSparcs, from 64Mb to 1Gb RAM, up to 8.4Gb disk and 237Gb storage. A 100MHz HyperSparc uniprocessor S/420 with 64Mb RAM, 2.1Gb disk, dual Sbus channels and 9 Sbus slots costs from \$31,050. A two-way starts at \$35,250 - Sun's SparcServer 1000E costs from \$53,650 with two CPUs, but uses the faster Xerox-developed XDBus. A four-way S/420 goes from \$48,450 (a quad-processor SS1000E starts at from \$78,000). Axil side-steps the XDBus issue by employing its own ASICs to offer two Sbus channels on the boxes. Axil's RAID subsystems start at \$6,000 (software), \$9,000 (for hardware), whilst Axil Prestoserve costs from \$1,600 (2Mb) or \$2,000 (4Mb). Axil is also to resell Syntax Inc's TotalNet Advanced Server software.

### LBMS PROCESS ENGINEER TO OFFER ENGINEERING METHODS

Learmonth & Burchett Management Systems Plc, London-born but now headquartered in Houston, Texas, has incorporated the concept of re-using process methods in version 3.0 of its client-server based process management system, Process Engineer, with the aim of improving the overall quality of team-produced software. The philosophy behind the system, said VP of process management products Rick Pleczko, is to enable every member of the team to produce work of the best possible standard, rather than only the best members of the team delivering the required quality. To achieve this, Process Engineer offers a process library, which stores tried and tested development methodologies that can be accessed on-line and incorporated automatically into system development. The idea is that once a company finds a process that works, it captures it and stores the process in the library, to be re-used in future projects. In addition to the library, there are three main components: Process Manager, which enables defining, planning, controlling and measuring software development processes; Project Manager, which provides facilities to generate plans from pre-defined processes, store work in progress, apply estimating models and create reports; and Activity Manager, a workgroup product which enables work allocation and the on-line communication of progress and activity between developers and project managers. The company is concentrating on providing software that enables companies to write better software for themselves, such as Process Engineer.

#### Jettisoned

It is so confident that this is a growth area that it has jettisoned its general consultancy business to concentrate solely on its process management and systems engineering business. Process management, the company said, replaces the quality assured standards and guidelines previously found in large paper volumes. It offers guidelines on all phases of managing systems' development, from initial planning, staff resources, estimating development times, through work allocation, results management, and job completion to deadlines and budgets. Deutsche Morgan Grenfell, the investment banking and asset management arm of Deutsche Bank AG, is implementing Process Engineer in its London Centre of Competence over the next two years. The bank believes this will change the way its systems are developed, speeding up the process while ensuring the use of best practices. Learmonth & Burchett has also established a ProcessWare partnership programme, to enable specialists to contribute to its process libraries. Initial libraries will be available for Lotus Development Corp Notes, Powersoft Corp's Powerbuilder and SQA Inc's TeamTest in October. These aim to provide developers with specific guidance on developing applications using these tools. Process Engineer 3.0 runs under Microsoft Corp Windows, including Windows NT and Windows 95, incorporates electronic mail-based workflow, and supports full Object Linking & Embedding. Process library costs £25,000 and Process Manager, Project Manager and Activity Manager cost £3,000 each; version 3.0 is out next month.

### IXI LOSING MARKETING DIRECTOR TO MILLENIUM

Santa Cruz Operation Inc's UK-based Client Integration Division - the merged IXI/Visionware operation - will lose its director of marketing within a few weeks. Longtime IXIer Anil Malhotra is off to UK gaming software company Millennium Interactive, also based in Cambridge. As director of business development he's seeking to grow the \$4m company to a \$6m concern by widening its licensing arrangements, and is also charged with finding additional funding or a buyer for Millennium. The software house turns out around half a dozen PC games titles a year. Its most recently developed a technology claimed to be suited to the creation of personal agents because of its ability to learn from its environment. A prototype agent - "better than Microsoft Corp's Bob," according to Malhotra - has been used to track files and mail over a network. Time Warner is said to be close to signing a seven-figure deal for the software.

### **SUN PLANS TO CREATE DEDICATED INTERNET TERMINAL**

Undifferentiated personal computers are so cheap that although the idea of a dedicated low-cost Internet access terminal sounds an interesting proposition at first blush, further consideration makes one wonder how much money can be saved by pulling out of a personal computer all the things one does not need for Internet access. Nevertheless, first Oracle's Larry Ellison (UX No 557) and now Sun Microsystems Inc is proselytising for machines that would sell for just a few hundred dollars and simply access the Internet and other networks - with Sun's Java programming language installed, needless to say. The computers would be little more than a microprocessor, support chips and memory, keyboard, screen and a communications connection. While it may take several years for such machines to reach stores, some companies have created prototypes, says Scott McNealy, Sun chairman and chief executive. "People are way ahead of us already," he told Dow Jones & Co. "I have already seen designs of Java terminals" from other companies, and Sun was likely to make such machines itself, McNealy added. In addition, he said, the ability to connect to networks and manipulate Java-based programs could be added to video game machines and other consumer electronics devices at little cost. The concept is that an application would be downloaded whenever needed and dies after use.

### **STARLIGHT NETWORKS PUTS STARWORKS ON RS/6000**

Starlight Networks Inc, the company with the NetWare-derived operating environment designed to turn standard iAPX-86 and Solaris servers into video servers, has now done a version of the StarWorks system for IBM Corp's RS/6000 - and IBM is to license it, a move that suggests that IBM still hasn't resolved the muddle at the heart of its business that constantly sees it offering competing products for a single market. For better or worse, the MVS mainframe had been singled out as IBM's preferred video-on-demand server, and since margins on the mainframe are still much better than on the RS/6000, it will find itself bidding the mainframe first and losing the business altogether where it could have won it if it had bid RS/6000 from the start. Under the new deal, Starlight Networks has signed a worldwide development agreement for the StarWorks multimedia networking software supporting the AIX 4.X operating system on RS/6000, and has licensed StarWorks for AIX to IBM. Uniprocessor versions at 25Mbps and 50Mbps will be available from Starlight Networks from next quarter; StarWorks-25M for AIX will support up to 25Mbps of streaming data, or up to 20 simultaneous users at 1.2Mbps for MPEG video files; StarWorks-50M supports up to 50Mbps, or 40 MPEG users at 1.2Mbps. Support for a greater number of users will follow with support for multiprocessor RS/6000s. StarWorks-25M for AIX will be £15,000 for server software, client support, and support for live video one-way multicasting with the StarWorks-TV feature; StarWorks-50M will be £25,000. It will support MS-DOS, Windows, Macintosh and Unix clients over 10BaseT Ethernet and Token Ring, with support for FDDI planned.

### **HITACHI JOINS ORACLE ON MULTIMEDIA IN JAPAN**

Oracle Corp has chosen Hitachi Ltd as its first Japanese multimedia partner. The two are to work together on development of an interactive television system, with both companies developing video server systems and television set-top boxes that will link televisions to networks of Hitachi systems running Oracle's New Media software, with first deliveries set for the end of next year. Hitachi will provide large-scale system management and services applications and the system is being conceived to be used for on-line shopping, news-on-demand and movies-on-demand. The two companies will also jointly market the product globally. Hitachi and Oracle plan to co-operate in other areas in future, such as interactive real-time video delivery using ISDN and video-enabled enterprise local area network applications. They will demonstrate their combined technologies for interactive television at the Telecom 95 show in Geneva, opening on Tuesday.

### **NEC, MARCAM TO INTEGRATE SYSTEMS**

NEC Corp is joining forces with manufacturing software specialist Marcam Corp, Newton, Massachusetts to form systems integration subsidiaries in Singapore and the US at the year-end. For the first three years NEC will provide all the capital investment required for the two companies in addition to management staff, while Marcam will provide object-oriented technologies. Marcam has the option to buy 50% stakes in the two companies, and is planning to take the same size holding in each. They will offer consultation and systems development for core infrastructure systems for businesses using object-oriented systems in manufacturing.

### **HITACHI LAUNCHES ITS FIRST "PARALLEL MAINFRAMES"**

Hitachi Ltd has launched its first CMOS mainframes, presumably using the chips supplied by IBM Corp under their agreement last year within which Hitachi also agreed to take the SP2 parallel RS/6000. Hitachi was to start shipping the new MP5400 mainframes in September. It is designed to support networked computers running either Unix or Windows NT, although the latter capability will not be ready until the end of next year. Hitachi describes the MP5400 as a parallel server with relational database functionality and throughput time half that of its existing systems. Hitachi plans to sell 3,000 MP5400s over five years, with a third going out in the first 12 months, some to customers elsewhere in South-east Asia; the machines run VOSK/FS and VOS1/FS and Hitachi's HI-UX/WE2 Unix. Entry price is \$80,000.

### **4FRONT SOFTWARE SETS UP STORAGE SUPPORT IN UK**

The computer storage business looks set to grow beyond recognition and Denver, Colorado-based 4Front Software International Inc wants to be there to support it with Storage Support Ltd, its new support company exclusively for the storage industry. 4Front, a technology investment company established in the US but currently operating in the UK, has been on the acquisition trail since it was established in 1990, buying systems integration company K2 Systems Plc, CI Support Ltd, a hardware maintenance outfit, Xanadu Ltd, X terminal supplier and hardware supplier, and distributor Compass Computer Group Ltd in June. The group has a combined turnover of £25m. To set up Storage Support, it has taken 15 key staff from Compass with the necessary expertise in storage systems. The company will initially be based in the group's offices in Newbury, Berkshire, with satellite support offices throughout the UK. Managing director of Compass and Storage Support Joel Jervis said the storage business was getting ever more complex and with large RAID systems and optical media storing 3Tb or 4Tb of data, the investment that companies make in storage is considerable. Jervis said that although some maintenance companies offer support for storage as a part of their overall computer maintenance, Storage Support is the first company to specialise exclusively in storage systems. The company will offer support to manufacturers and to resellers. For manufacturers, it will offer back-to-base warranty logistics and help desk support, and for resellers it will offer help desk support as well as on-site maintenance. It will cover all types of storage from tape drives to high capacity CD-ROM jukeboxes. Jervis says the projected first year turnover is £2m, but this is expected to double in the next couple of years. One problem the group is facing in attracting resellers is the possible conflict of interests with its own reseller, Compass, which supplies and distributes disks from the likes of Seagate Technology Inc, Quantum Corp, Fujitsu Ltd and Conner Peripherals Inc. Jervis said Storage Support would be a completely separate company and would charge Compass for support, as it would to any reseller. He said the company would announce some major contracts within the next four weeks. Although 4Front is based in the US and listed on NASDAQ, it currently operates only in the UK, apart from its help desk support company ActionTrak Ltd, which offers worldwide support. The group has also recently set up Hiway Ltd to offer connection to the Internet and Web page design, and the company said it has about 300 subscribers to date.

### **NETSCAPE READY TO CHALLENGE NOTES AFTER PAYING \$109m FOR COLLABRA**

If it is wise, Netscape Communications Corp will exploit the ridiculous valuation the market has put on it shares by turning it into hard assets, and the Mountain View, California company has just started the process. It has agreed to pay \$108.7m in shares for Collabra Software Inc, and plans to incorporate Collabra's collaboration and messaging capabilities into future versions of Netscape Navigator and Netscape server products. Netscape declined to disclose any financial details about Collabra. Collabra was founded by Eric Hahn in 1993; he previously worked at Lotus Development Corp and was general manager of the cc:Mail division, which produced messaging products incorporated into Lotus Notes. The move by Netscape is seen as a challenge to Notes, because many people believe that the Internet could fulfill the same function as Notes more cheaply and easily: a firm will soon be able to set up a site on the World Wide Web and use that as a forum for exchanges of data. Netscape says that its acquisition of Collabra will facilitate the process.

## SCO GETS UNIX: WHAT UNIX-ON-INTEL HOUSES SAY

Whatever the outcome of the merged SCO OpenServer/UnixWare development, Esix Systems Inc, Anaheim, California, the Unix-on-Intel house now owned by ~~Minneapolis PC-to-Unix connectivity house James River Group~~ Inc, says its own cleaned-up version of Unix SVR4.2MP will continue to find favour with mission critical types. It points to Intel, the US Air Force and Hallmark Inc which use its implementation precisely because of its bug-free reputation. Esix and other Unix/Intel houses claim a key advantage over SCO is the immediate, first-tier technical support they can provide. Meantime, like Novell Inc, Esix appears to have shelved a planned PowerPC port of its Unix due to lack of interest (UX No 518). It's currently working on Internet server editions and Windows 95 clients for Esix Unix, which is priced at from \$1,200 for individual copies, with heavy discounts for multiple licences. The 15-strong Anaheim group says it accounts for around \$4m of James River's \$10m-odd turnover.

### Scaling

Scotts Valley, California-based Unix SVR4-on-Intel-turned-UnixWare OEM Microport Inc believes the transfer of Unix to Santa Cruz Operation Inc is good news, because for the first time it unifies the majority of Intel-Unixes, and "Unix is SCO's only business," adds VP and general manager Pete Holstrom. With DEC already selling 64-bit Unix, Silicon Graphics near and SunSoft working on it, Microport says it's important that Hewlett-Packard is doing 64-bit Unix-on-Intel work, even if it does hold the stuff for itself initially. Microport, a long-time Unix source company, hit the wall in 1990 and was subsequently rescued, but realised soon after that Novell Inc's UnixWare 2.0 product left it little room to manoeuvre. So it packed up its development work and started over as a UnixWare OEM. It believes Novell's \$30m UnixWare 2.0 development was money well spent, pointing to the product's eight-way scaling versus SCO's older Corollary Inc SCO MPX-based multi-processing extensions which Microport says top-out at four-way arrangements. UnixWare 2.0 already runs the majority of SCO applications in any case, Microport observes, and at Unix SVR4, SVR4.2MP and UnixWare 2.0, Novell code is already several generations ahead of SCO, it believes. Microport offers an Internet server implementation of UnixWare with home page tools, plus a bunch of LAN gateways. It welcomes all the driver work and reseller channel SCO will bring to UnixWare. Former Microport boss Spike Casper has joined Chicago-based benchmark and consultant Neal Nelson & Associates.

### EUROPEANS GIVE THEIR VERDICT

The troika of European vendors supporting UnixWare 2.0 - ICL Plc, Ing C Olivetti & C SpA and Siemens Nixdorf Informationssysteme AG - intend to stand squarely behind their original UnixWare 2.0 plans - at least for the time being. ICL is the most vocal in its support for the arrangement, no doubt at least in part influenced by the fact that it offers both Novell and SCO operating systems software on its Intel-based platforms. The company says it's still on course to ship UnixWare 2.0 on Sparc platforms by the end of the year and is committed to offering both future UnixWare iterations and SCO OpenServer versions leading to the combined UnixWare/OpenServer in the first half of 1997. SNI, which is porting selected middleware components from its SVR4 Sinix to UnixWare, says it will ship the first release in the next three weeks while the rest of the Sinix components will be on UnixWare by the end of the year (UX No 540). The Paderborner admits it hasn't got all the details, but for the present sees no reason to change its original plans and claims the future of Unix is much more assured with SCO. "With Novell, there was always a doubt as to how serious they were about the future of Unix," said one spokesperson, *see page 5* Olivetti is playing its cards much closer to its chest, saying it will continue migrating its SVR4-based systems over to UnixWare for the meantime; "we are reassessing the technical situation, and are speaking to SCO," a spokesperson said. The company expects to have reached a decision by the middle of October.

## ROUND THE COMET, UP THE EIGER AND ON TO MERGED UNIX-ON-INTEL

Under its now re-adjusted Unix development roadmap, Santa Cruz Operation Inc has a certification programme slated for 1996 designed to deliver a common set of drivers for OpenServer and UnixWare (and ~~their Comet and Eiger follow-ons~~), and for the 1997 merged product. Under the programme, developers submitting an OpenServer driver will get a UnixWare driver in return or an OpenServer driver by submitting a UnixWare driver. From early 1997, developers submitting a driver for either environment will get a merged operating system driver in return and those providing a merged UnixWare/OpenServer driver will get both OpenServer and UnixWare drivers back. An early development environment and migration tools for the merged product will be available from late 1996 that layer on Comet and Eiger. Comet, due by mid-1996, will include support for 4Gb RAM, Unix 95 compliance, CD-based storage objects, automated performance tuning, floating network licenses, multibyte support, bootable mirrored drives, enhanced mode Windows application support, user-level threads and a P6 compiler. UnixWare 2.1 (Eiger) includes enhanced NetWare 4 services integration - including transports, client, APIs, utilities, file, print, NDS and admin - additional hardware support, Windows support, easy install, porting and integration guide, a new C++ compiler and Merge (as a layered product). It's also due by mid-1996. The merged OpenServer/UnixWare will provide binary application support for both environments and a merged kernel, though SCO isn't saying whether it'll be SVR4.

### ILOG READY WITH VIEWS 2.2 C++ DEVELOPMENT SYSTEM

French C++ tools specialist Ilog SA is developing a new release 3.0 of its Views C++ library and GUI builder for the end of next year which will include a 3D vector engine for object-oriented structured graphics. The Paris-based company is tight-lipped on 3.0 but is readying Views 2.2 for the end of this October, with OLE 2 integration, more functionality and a new hypertext display which has an extensible mark-up language parser to simplify development of customised on-line help, documentation systems or Web browsers. OLE 2 integration means Views applications can be packaged within OCX components (OLE controls) enabling PC developers access to real-time monitoring, command and control and scheduling systems. Chief executive Pierre Haren says he will be talking to SunSoft Inc about using Java and Hot Java with Views. He reckons Views' display capabilities fit well with the animation capabilities of Java and has handed the project his North American VP sales John Lynch, previously a SunSoft sales director. Haren says the company is using the \$5m it raised from two US venture capitalists to open offices on the East coast and in Texas, and increase its international and direct sales force (UX No 526). It has forty R&D staff out of a total workforce of 160 employees which is expected to grow by over 50% over the next year. A handful of engineers are working out of new offices in Singapore which Haren expects to spawn some of Ilog's future technology courtesy of the Singapore state government-funded IT 2000 technology drive. Meanwhile the privately held Ilog claims profits of \$1.6m in 1995 on turnover for the year ending June 30th of \$18.8m, up from just over \$1m on \$15m in 1994.

### ITASCA LOOKS FOR NEW LEASE OF LIFE WITH IBEX

Ibex Corp SA, Archamps, France has acquired the low-profile Itasca distributed object data management system from Minneapolis-based Itasca Systems Inc, and is hoping to breathe new life into what was one of the first object-oriented databases around. Based on a series of prototypes originally developed in 1985 at the Microelectronics and Computer Technology Corp, Object-Oriented and Distributed Systems Laboratory in Austin, Texas Itasca is built on top of Common Lisp, and employs a distributed architecture with private and shared objects spread across Unix servers on a local area network. It runs on Sun, IBM, DEC and Silicon Graphics platforms. Applications can be written in C++, C, CLOS, or Lisp. Ibex has its own tool set, Distributed Archiving and Workflow Network built on top of Itasca and plans a 2-point (2.3.5) performance release at the end of September. A full new release of Itasca is now scheduled for 1996. Ibex has been the European distributor of Itasca since 1992, and has a US subsidiary, Ibex Object Systems Inc, based in Minneapolis, Minnesota.

# uni gram·x

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**Motorola Inc** has apparently gone on the record for the first time about the PowerPC 615, the one with the iAPX-86 instruction interpreter on board, and says that there are easier ways to enable Macintosh users to run Windows software: *Investors Business Daily* says it's not clear whether IBM Corp will proceed with the 615 on its own, although it has always been seen as an IBM product.

It is quite clear that Louis Gerstner is not overly impressed either with IBMers or with computer industry specialists, and to replace James Cannavino as **IBM Corp's** chief strategist, he has chosen a consumer marketing man who is currently the president of a fast food restaurant chain. Bruce Harreld, president of Boston Chicken Inc has been appointed to map IBM's future strategy and find the hot new products that will fill the hole to be left by the demise of the mainframe. His main qualifications for the job are that he had a frustrating time trying to harmonise the computer systems of Kraft Inc and General Foods Inc, and the fact that Boston Chicken is a major Notes user so he will be able to explain to bemused IBMers what is so good or otherwise about Notes.

**UnixWare Technology Group (UTG)** has participated in an initial meeting of the Advisory Board of UnixWare users Exchange - UUX - the emerging UnixWare users group it has been incubating with Novell Inc. The UUX board has put any decisions on ice until details of the SCO/Novell relationship become clear, but says it's ready to work with SCO and OpenServer users. SCO's apparently indicated a strong willingness to work with UTG through the transition period and beyond. Indeed SCO is to host a UTG board meeting later this month where the two are expected to negotiate a formal relationship similar to the one UTG has with Novell. A UTG members' meet and briefings of UTG's Japan council and other interested organisations will follow.

**Visix Software Inc**, Reston, Virginia, is using the Java-based scripting language to develop its next generation of tools. It did consider using the Python language - *see page 2* - but opted for Java for pervasiveness reasons. The first product to use this new technology is code-named Galaxy Interactive, an object repository designed for object and design storage and reuse. Its due to ship in the first quarter of 1996.

Toronto, Canada-based **Platform Computing Corp** will ship version 2.2 of its Load Sharing Facility software for sharing workloads across network resources in the first quarter of 1996. Version 2.2 includes load distribution across wide area networks.

**CenterLine Software Inc**, Cambridge, Massachusetts has ported its C/C++ development tools to AIX; TestCenter starts at \$1,500 and CodeCenter costs from \$2,000.

**Blenheim Group USA Inc** claims 34,000 attendees made it to Unix Expo.

The last time that a hardware vendor got involved in Unix development - **Sun Microsystems Inc** - it led to the creation of the Open Software Foundation. No-one's suggesting that anything similar will happen this time around, even with **Hewlett-Packard Co** apparently having dibs over Unix's 64-bit/Intel future, because as everyone's keen to point out, **X/Open Co Ltd** holds the Unix trademark, the Unix specification and the suites which test for conformance.

We understand that all of **Novell Inc's** existing UnixWare OEM contracts will pass over to Santa Cruz Operation Inc as they stand, at least initially.

**UniSoft Ltd's** apparently canned its PowerPC port of UnixWare 2.0 due to lack of OEM interest.

Object-oriented methodologists **Jim Rumbaugh** and **Grady Booch** have been working to create a unified method for object-oriented system analysis and design incorporating elements of their existing methodologies since Rumbaugh joined Booch at Rational Software Corp in October 1994. The two say they'll outline a draft version of the unified method at the Object-Oriented Programming, Systems, Languages and Applications show in Austin, Texas, between October 15 and 19.

Sources report that **Hewlett-Packard Co's** 64-bit PA-8000 is returning SPECint92 performance marks in the low 300s.

On the back of its deal with SunSoft Inc (UX No 539), UK GUI-builder **Imperial Software Technology Ltd** is opening for business in Palo Alto, California; US marketing manager Susan Hoffman is on-board from UniForum, where she was membership services manager. IST retains DataViews Corp as a US reseller.

**DEC's** apparently lining up a 200MHz Grandson-of-Mustang PCI/ISA box with 24Mb RAM that'll start at around \$4,000 (UX Nos 502, 525).

Market researcher **Palo Alto Management Group Inc**, Mountain View, California, says the market for parallel processing systems will rise by 40% a year or more to \$14,000m by 1999. Three-quarters of this figure will be accounted for by commercial applications, including OLTP, decision support and multimedia. It believes Tandem won 31% of the market in 1994, with AT&T GIS and IBM picking-up 19% each, Cray, DEC and Fujitsu splitting around 17% with the remaining 14% divided between 20 or so other vendors.

**General Automation Inc**, Irvine, California, has put version 4.1 of its Mentor database up on AT&T GIS's System 3000

New York city firm **MJM Software** has renamed Exemplar man page and source code example browser ForExample to avoid confusion with the Convex parallel system of the same name. For Example 2.0 starts at from \$400.

**TCSI Corp**, Berkeley, California, has introduced version 4.0 of its Object Services Package of distributed object management environment services, now also on NT and Windows. It costs \$19,300 per developer; run-times range from \$750 to \$6,000.

One talking point raised by **Santa Cruz Operation Inc's** takeover of UnixWare is whether it'll adjust its OpenServer pricing scheme, criticised on the net and elsewhere for being more costly than UnixWare.

Originally thought to be a SunSoft Inc Common Desktop Environment win, **Siemens Nixdorf Informationssysteme AG**, Paderborn, Germany, says it is OEMing Carlsbad, California-based TriTeal Corp's X/Open Co Ltd CDE-compliant TriTeal Enterprise Desktop 4.0. SNI will bundle TED with Sinix V5.4 Release 4. SNI is also putting CP Software Group's Uni-plex office automation software on its Pyramid Nile and RM Series servers.

**On Technology Corp**, Cambridge, Massachusetts, has released its Meeting Maker XP group scheduling software for HP-UX and Solaris. The software enables enterprise-wide group scheduling over Unix for a variety of client platforms. The server is from \$250, - clients are \$90-up.

**Bluestone Inc**, Mt. Laurel, New Jersey, will serve as North American distributor of Look!, a runtime C++ visualisation and source-level debugger developed by Objective Software Technology of Scotland. Look! 2.3 runs on SunOS, Solaris, AIX, and Windows 3.1 and NT. It costs \$2,000 for Unix and \$500 for Windows.

**Forte Software Ltd** has appointed Mike Hedger, former Oracle VP Marketing Operations for Europe, Middle East and Africa, as its UK managing director and VP of European operations.

**Arbor Software Corp**, Sunnyvale, California has poached Richard Sheppard as managing director for Europe, Africa and the Middle East, based in London. Sheppard previously was general manager of Middle East and African operations for Informix Software.

**Sequent Computer Systems Inc** is working-up a long-term plan for its future Unix requirement it'll have ready in a couple of months. It says the short-term output from the OpenServer/UnixWare meld is of no interest to it, and if it doesn't like what it sees of Hewlett-Packard Co's 64-bit Unix plans - remember HP will be competing with Sequent when the merged PA/Intel architecture surfaces - it'll go off and do its own 64-bit thing, just like it did to create its own SMP Unix SVR4 previously.

**Sun Microsystems Inc** king Scott McNealy met with **IBM Corp** CEO Lou Gerstner last week. Do you suppose they just talked about Java and the Internet or did other subjects come up?



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The weekly information newsletter for the UNIX™ community worldwide

London, October 9-13 1995

Number 559

## 620 ON THE BLOCK; POWERPC HITS A WALL?

The PowerPC 620 chip, expected to be IBM Corp and Motorola Inc's contender for the 64-bit systems space, is struggling to keep its place on the PowerPC roadmap following problems with the design schedule. The pressure has been increased by IBM's realisation that the performance of the 604 PowerPC CMOS process could be tweaked up higher than design points laid down a couple of years ago, in so-called 604 Plus and "Plus Plus" iterations. Indeed "it looked so good in performance that it drove past the 620," was how one IBMer described the way 604 has come along. James Thomas, director of RISC microprocessor development at the Systems, Technology and Architecture Division in Austin, Texas, insists the 620 is still being "actively and heavily debugged," but admitted that there had not been as much progress as was hoped for. "We wanted some limited availability. Although we have had silicon back, it is a tedious, time-consuming debug over 64-bit and SMP aspects." He said that performance projections were still valid, but that "we will be looking at the schedule very hard" and that "other ways of satisfying these requirements other than rolling out the 620" are possible. Randy Groves, VP for RS/6000 systems development, showed a chart missing out the 620 altogether, and heralding the 630 (the Power3 instruction set CPU, not a PowerPC unit) as the next major step on. Although originally designed and optimised for the technical market, the 630 could equally serve for commercial systems, he said. Problems with the 620 - and an apparent re-focus on the Power instruction set - reflect a wider malaise in the PowerPC camp thought to be the result of the nature of the triumverate itself, the difficulty Motorola is said to have had working to such short timescales and the fact that the partners were wrong-footed by what Intel Corp has been able to achieve with Pentium. A re-vamped PowerPC roadmap was supposedly on the runway as we went to press which IBM had planned to delineate at this week's Microprocessor Forum. When we spoke to Motorola it said it certainly hadn't blessed any roadmap, indeed it said the thing had been pulled whilst a slew of outstanding business issues are resolved with IBM. Moreover, Phil Pompa, director marketing, RISC microprocessor division in Motorola's Microprocessor and Memories Technology Group, said that as far as Motorola's concerned the 620 is a long way from dead. IBM admitted the PowerPC roadmap would more likely show up later in the month than this week, but insisted it would be in play by Halloween as customer meetings had already been arranged where IBM VP and general manager of Systems Technology and Architecture Division Phil Hester and his troops are to disclose the plans. Meanwhile, the PowerPC 604 has its own problems, related to the complexities of testing for use in SMP systems. The 604 suffered from cache coherency problems when working in teams of more than two. Those problems are now pretty much solved, according to Thomas, though systems vendors using the 604 still have to go through their own verification and testing efforts. Machines are now expected during the first half of next year.

## IBM CANS SINGLE SYSTEM IMAGE EFFORTS FOR THE SP/2

IBM has apparently canned various projects to provide a single system image for its scalable parallel SP/2 machines, something which Intel Corp and Unisys already provide on their parallel processors. "A single Unix command for 100 nodes is not always appropriate" said Robert Greenberg, VP of Power-Parallel systems development, RS/6000 division. He also pointed out that one failure in the operating system - still the area where most of the faults occur - could bring down the whole machine with a single system image. IBM does provide global devices and global IP numbers, and says that other systems management issues can be addressed by writing scripts. "You don't have to go into the kernel itself," he said. There is still some debate over whether or not SP/2s are being used for much real parallel work, or more often as "a LAN in a can" as the jibe of competitors goes. Greenberg said he couldn't tell, but did say that between 80% and 90% of customers had opted to buy IBM's interconnect switch with the SP/2, leading him to believe that most of them were doing parallel computing "at least part of the time."

## HP CRANKS LC DESIGN TO 7300

Hewlett-Packard Co this week unveils the next generation of its 32-bit low-cost Precision Architecture 1.1 RISC design (with integrated multimedia functions) as 7300LC. The 0.5 micron part will find its way into entry-level and low-end uniprocessor workstations and servers in the second half of next year of the type currently populated by its predecessor, the 7100LC. As expected (UX No 556) 7300LC will be the first PA-RISC to incorporate on-chip cache memory; the 64Kb data and 64Kb instruction caches will account for some 8m of the part's 9m transistor count. Between 512Kb and 8Mb second-level cache and up to 3.75Gb main memory (by the time systems ship) will be accessed through HP's 128-bit-wide data path. A bus converter will currently hook-up EISA-based devices - there's apparently a PCI bridge on the way. Performance is estimated at 200 SPECint92 and 275 SPECfp92 - around the same mark as DEC's year-old, but higher-end 275MHz 21064A - or 5.5 SPECintbase95 and 7.3 SPECfpbase95, ahead of all other SPEC95 numbers so far reported bar DEC's highest Alphas. HP's going all quiet on clock frequencies, claiming cycle time numbers for DEC's superpipelined Alpha have "corrupted the marketplace," though it's understood PA7300LC will clock at around 150MHz to begin with. There are no plans to fit PA-8000 and other non-LC PA parts with on-chip cache.

## SUN ADDS 85MHz KICKERS - SYBASE 11 UP ON 16-WAYS

With the UltraSparc rollout just around the corner, Sun Microsystems Inc this week starts adding end-of-life kickers to its high-end Sparc-Server 1000E and SparcCenter 2000E server lines. To begin with it's upgrading the 60MHz systems to an 85MHz cut of SuperSparc II, which is as far as Sparc Technology Business has been able to push the troubled Viking design whilst maintaining yields. The planned 90MHz iteration - which sampled back in February - won't see the light of day. The 85MHz device includes STB's re-worked multiple command mode cache controller which other Sparc vendors have already utilised in 75MHz implementations, but is new to Sun's own hardware. The controller can forward multiple cache misses to RAM; the previous controller could only send cache misses serially. Sun says the device increases system-level OLTP performance by up to 15%. STB was interested to learn how the hardware folk are making such a big deal of the six-month old technology, even giving the device its own product name (later found to be already taken).

## Put to rest

Running the as-yet unavailable SQL Server 11, Sun has given Sybase Inc a much-needed leg-up back into the database performance stakes recording 4,544 tpmC (transactions per minute) at \$396 per tpmC on a 16-way 85MHz 2000E with 320Gb disk running Solaris 2.4. The Sun/Sybase number comes in second overall in TPC's Unix list, behind a 12-way Hewlett-Packard Co T500 running Oracle at 5,369.8/\$535 tpmC and ahead of a 20-way, 60MHz SparcCenter 2000E running Informix at 3,524/\$495 tpmC. \$396 per tpmC gives the new Sun/SQL Server 11 platform the fifth best cost per-transaction rating, behind a Compaq/Sybase set-up, two IBM/DB2 systems and an SNI/Informix combination. Sybase Server 11 is expected to be available by late next month according to analysts. Sybase hopes the Sun numbers will help put to rest the database scaling issue which has been dogging it for many months. Although it's waiting on UltraSparc to officially unveil Solaris 2.5, Sun's been dropping 2.5-based configurations into many recent presentations, indeed SPEC92 numbers for the kickers are based on Solaris 2.5. With two-to-20 85MHz CPUs the 2000E is rated at 6,546 to 57,997 SPECrate\_int92 and 6,284 to 54,206 SPECrate\_fp92. The two-to-eight-way 1000E goes from 5,988 to 21,758 SPECrate\_int92 and 5,805 to 20,851 SPECrate\_fp92. Out this month the 1000E and 2000E are priced from \$50,100 and \$125,400. 85MHz upgrades are \$5,000 and \$10,000 respectively. SparcClusterPDB configurations go from \$387,025 for a 1000PDB and \$694,175 for the 2000PDB. Cray will add the 85MHz part to its CS6400 SuperServers from this week, promising a 35% performance hike with no price increases.

## ORACLE'S \$500 NETWORK COMPUTER IN EARLY 1996

There is no word on what processor it will use, but Larry Ellison is putting Oracle Corp's money where his mouth is with regard to low-cost diskless computers for use with on-line services, and the company ~~will introduce such a device in the first quarter of next year.~~ The planned \$500 Network Computer will run far fewer applications than a personal computer, Ellison said, but it will support applications such as word processing, electronic mail and Internet browsing. "The NC will be smaller, like a notebook computer, with maybe a 12" screen and a keyboard," he told *Reuter*. "There's no hard disk, no software, no floppy disk, because when you turn it on the operating system will come across the network. It's like a television - you plug it in (to the telephone and power plugs) and when you want to use it you switch it on." He said it would be sold through stores, not necessarily with the Oracle brand. "We haven't set up all the details yet, but it will be available in the first quarter." Oracle's plans for its own on-line service to knock the socks off Microsoft Corp's Microsoft Network have also progressed: now called Web TV, it will be available through an Oracle set-top box that also costs \$500. Cable access would cost about \$30 a month in rental charges, and the service would enable subscribers to download video on high quality lines from Oracle servers.

## SUN CONSIDERS DOING SOMETHING VERY SIMILAR

Unless the two are quietly in bed together on the project, Oracle Corp is not going to have things all its own way with its Network Computer because Sun Microsystems Inc is pursuing very much the same idea. According to president Scott McNealy, Sun is looking at the possibility of developing a low cost personal communications device: "This would be a little flat panel notebook thing with a fast microprocessor. It would be inexpensive, send and receive electronic mail, surf the Internet, download Java applications. It would run applications, one at a time, small simple, usable, like word processing," McNealy said, and repeated Sun's mantra: "The network is the computer."

## PEER LOGIC REVS PIPES FOR VISUAL BASIC; SOM-ENABLED VERSION STILL ON BLOCKS

San Francisco, California-based messaging middleware company Peer-Logic Inc is still working on the IBM Corp System Object Model-enabled version of its Pipes dynamic naming service (UX No 547), but has in the meantime cemented an agreement with Siemens Nixdorf Informationssysteme AG, which will offer Pipes on Sinix Unix. It's also released Pipes version 3.6 which includes support for applications written in Visual Basic. Peer Logic whose experience is in the runtime infrastructure underneath applications says it doesn't care whether applications are created using ORBs, APIs, CASE, C or queuing mechanisms, its concern is how at runtime they can use Pipes' dynamic name space ability. Meantime, although IBM Corp long ago finished the prototype of an integrated Pipes/MQ Series product, apparently neither it, nor Peer Logic, have decided whether to productise the thing. IBM's MQ Series queuing software lacks dynamic naming and Pipes lacks queuing, but the two messaging environments compete pretty much head-to-head in the market right now. The way Peer Logic sees it, all queuing systems are managed through the maintenance of tables, which is fine for a small number of systems, but makes dynamic, on-the-fly naming a la Pipes essential for large installations. So why not unbundle the Pipes dynamic naming service and licence it to all-comers in the messaging/partitioning world rather than maintain it in a system which requires applications to be Peer Logic-aware? Because although right now whoever owns the data store owns the account, in future whoever owns the management of that data will own the account, Peer Logic believes. The company claims around a dozen large Pipes production sites and says it's currently looking at how to support as many object brokers as possible. It may decide to offer one of the ORBs tailored specifically for Pipes, or even create its own. It's also particularly interested in Visual Edge Ltd's ObjectMap system. Peer Logic, whose chief Bob Scher is also president of the Message Oriented Middleware Association (MOMA), says the last thing the world needs is another standards body and therefore MOMA won't be playing that game. However at Networld+InterOp a few weeks ago MOMA members decided to begin defining services that are common to message-oriented systems and may eventually create a common set of APIs, though this is all blue sky stuff.

## VIRTUAL REALITY MARK-UP LANGUAGE WINS SUPPORT FROM FOUR COMPANIES

After hanging around the periphery of the World Wide Web for a while, Virtual Reality Mark-up Language received a boost at the Siggraph show in Los Angeles last month with InterVista Software Inc and Sunnyvale, California-based ParaGraph International teaming up to produce a virtual reality bundle with Integrated Data Systems Inc and Austin, Texas-based Portable Graphics Inc doing the same. At the same time IBM Corp and Worlds Inc announced and demonstrated Virtual Reality Modeling Language+, VRML+, a jointly proposed extension to the emerging standard. IBM and Worlds said they will begin distributing a free VRML+ browser this quarter, which will support multi-user virtual environments for OS/2, Power Macintoshes and Windows95 and NT. The pair are also building servers for RS/6000, Irix, Linux, Solaris and Windows NT. Intervista and ParaGraph used the show to announce availability of beta versions of the former's WorldView VRML Web browser on the Internet at <http://www.hyperion.com/intervista/> and ParaGraph's Home Space Builder, an "easy-to-use" VRML world creator for Windows, at <http://www.paragraph.com/whatsnew/homespace.htm>. The companies said both their products will be optimised to work over sub-28.8kbps modem links. WorldView needs at least a 50MHz 80486 with 8Mb RAM to render the worlds smoothly, a Pentium is preferable. It uses Microsoft Corp's Reality Lab three-dimensional rendering library application programming interface. It is also developing Macintosh and Unix versions of the browser though no dates were given.

### Home Space

ParaGraph International's Home Space Builder 1.0 (Beta 2), is claimed to be one of the fastest available under Windows and lets designers build worlds that include integrated text, pictures, sound, movies, Musical Instrument Digital Interface and walking shows. The designer can also link objects within the home space to other Internet sites. The beta 1 version is free and the beta 2 version of Home Space Builder is available for \$50. Moving on to the next duo, Integrated Data Systems and Portable Graphics are also intending to provide a browser and authoring tool combination. The VRealm browser and the VRealm Builder are expected to ship this autumn. The companies will make the products available for all major Unix systems, Windows NT, Windows95, OS/2 and Power Macs. The browser will be available for download over the Internet and will cost \$30 to register (a popular price for Internet client-end software at the moment). There is no pricing for the builder yet. Portable Graphics has also developed VRML extensions that it will be bundling with its Open Inventor software developer's tool kit. This will enable developers to add Internet capabilities to their existing virtual reality applications built with the tool.

## RELEGATION LOOMS AT APPLE AS BOARD BACKS SPINDLER

The chairman is still expressing full confidence in the manager, but the team remains very much adrift in the relegation zone and facing the prospect of the drop at the end of the season, it is still losing matches, most of the better players are out injured, and another key member of the coaching team has just quit. No, not Manchester City Football Club, Apple Computer Inc. Most now believe that Joseph Graziano quit as chief financial officer because he believed chief executive Michael Spindler should resign and that the board should sell the company. "I think Joe's leaving is significant," said Charles Berger, chief executive of Mac OS clone-maker Radius Inc: "He's one of the best chief financial officers in the industry not just in terms of his financial abilities but his grasp of business, his ability to add strategic direction to the company." IBM Corp is understood to have proposed \$40 a share for Apple, only to be turned down with a demand for \$60, but the shares are now down at \$36.375, valuing it at just over \$4,000m. "The board will continue working with Mr Spindler to address the challenges and exciting opportunities we face in the dynamic personal computer industry," said its chairman, Mike Markkula as Apple USA president James Buckley said the company was not for sale and Spindler's job was secure.

## **SUNSOFT CALVES SUNNET MANAGER INTO LOW- AND MID-RANGE NETWORK MANAGEMENT PRODUCTS**

Now under the charge of Janpieter Scheerder, SunSoft Inc will rationalise is sometimes confusing array of products into three streams Solaris, Solstice and WorkShop. First-off it's taking a knife to SunNet Manager, dicing the next release of its Solstice SNMP network management system due in the second quarter of next year into offerings that address the low-end and mid-range of the market. Solstice Site Manager (SunNet Manager 2.2.3) will manage up to 100 nodes at from \$2,000. Using the Cooperative Consoles system for managing changes across networks, Site Manager can pass event information up to Domain Manager, a second cut of SunNet manager 2.2.3 that can handle up to 10,000 and costs from \$10,000. Domain Manager can be configured to manage one large network or multiple Site Managers. Multiple Domain Managers can send and receive information between each other when used with Cooperative Consoles, Domain Manager can both send and receive event information. It also includes a new layout tool for viewing and navigating through networks. Domain Manager will include the ability to import NetWare Management System topologies and distribute information to the NetLabs Inc-derived Enterprise Manager for managing more than 10,000 nodes which tops SunSoft's Solstice bill. Although it's been out at OEMs since last year (UX No 524), EM - and the Nerve Centre event correlation system, also from NetLabs Inc - won't be available commercially until the second half of next year at around \$19,500. SunSoft will describe the next version of EM, which can now run SunNet Manager SNMP applications, on November 24 in Dallas. Next year the company promises a Desktop Management Taskforce and SNMP common agent which'll map DMTF's Desktop Management Interface to EM's CMIP protocols and to OMG Corba in future. Computer Associates International Inc is integrating the Site and maybe also Domain managers with CA-Unicenter under its recent systems management deal with Sun (UX 551). Sales of SunNet Manager have fallen behind HP's OpenView by about 1% this year, after enjoying a 0.5% lead in 1994. SunSoft claims 30,000 SunNet Manager installs.

## **NOW HITACHI TAKES HEWLETT HP 9000 WORKSTATIONS OEM**

Hitachi Ltd's commitment to PowerPC is as yet a lot less than overwhelming, and its 1994 agreement with IBM Corp was much less of a snub to Hewlett-Packard Co and the Precision Architecture RISC than it appeared at the time. Reminding people that it is a sponsor member of the Precision RISC Organization, it announced plans to follow NEC Corp in licensing and reselling Hewlett-Packard workstations, calling them Hitachi 9000 V series. The workstations will be sold and supported by Hitachi primarily in the Japanese market. The company is also offering PA-7100- and PA-7200-based servers and both will be loaded with the latest versions of HP-UX operating system and use the most recent, powerful processor, the 120MHz PA-7200. It is taking a high-end, mini-tower model and a high-performance desktop model. The Precision Architecture RISC may also find its way into the video server Hitachi is developing under its joint venture agreement with Oracle Corp. Hitachi is developing both the parallel server and set-top boxes and says it has not decided whether it will be using the PowerPC or the Precision Architecture RISC. Hitachi's PowerPC plans get aired from the 19th of this month.

## **DATA GENERATION HAS NEW TEST DATA TOOLS**

Data Generation Inc, Cape Elizabeth, Maine, has released version 3.0 of its Generator cross-platform software tool for designing and creating data and files for use in testing new applications, spreadsheets and databases. 3.0 comes with 23 new data fill types and runs from a graphical user interface or command line on most flavours of Unix, DOS, Windows, Mac, VMS and MVS operating systems. Unix versions cost from \$500. Data Generation will release a front-end data generator called DynaScript by the end of the year for reading and sorting external files into databases at from \$500, according to Art Conroy, director of development. Early next year it'll also debut a rules-based repository for Unix for extracting and testing database rules, he said.

## **WILLOW READIES WABI-LIKE CROSS PLATFORM DEVELOPERS KIT**

Willow Software [no Inc apparently], the Saratoga, California company that was once Multiport Inc and before that Hunter Systems Inc until it was bought by the Noorda Family Trust, Ray Noorda's personal venture capital arm (UX No 509), is starting to make the rustleing noises associated with letting people know you're in sight of your first product. Willow's Wabi-like technology has a name now. It's called Twin Cross Platform Developers Kit (XPDK) which is designed to let Windows apps be natively deployed on Mac, OS/2 and Unix boxes. Willow thinks it can standardize the Windows API for cross-platform development and, in the process, rob Microsoft of some of its taxes, a prospect that must warm the cockles of Ray Noorda's heart. The XPDK will provide a library based on Windows - though not, we must add, the original stuff - with added features like header files and standard development tools. It's not all of Windows either since it's still missing stuff like OLE and Microsoft's multimedia schema which it figures it can afford to be without right now since it's still little used. Following a reported alpha test that dates back to January (UX No 520), Willow says it was kicking off a beta of the Unix version of XPDK this week and fishing for sites. The beta program is expected to run until early December. Product is due at the end of Q4. The beta for the Mac is supposed to start in early December with GA following in Q1. There was no indication of when the OS/2 code would kick in. Final pricing wasn't announced but Willow pegged it between \$149 on Linux and \$995 on RISC and Intel Unix with no run-time royalties. The latter price will apparently include four updates. Code for all the platforms will eventually be contained on a single CD which Willow figures will lower its distribution costs. The company, now at 20 people and expecting to go to 40 next year, apparently doesn't have to start seriously looking at its P&L until the second half of '96.

## **BULL TO STAY WITH SMP, SAYS IT'LL CLUSTER IF ITS TECHNOLOGY RUNS OUT OF STEAM**

Compagnie des Machines Bull SA will stick with the High Availability Cluster Multi-Processing architecture for the foreseeable future, says Jacques Talbot, systems architecture manager of Bull's Open System & Software division. He said he did not expect anything better to be invented in the next few years. Alain Couder, president of the division, claimed the company had experienced only three hours' down-time in the last five years with the architecture. He added that the company was firmly planted in the symmetric multiprocessing camp and its plans were to fill the multiprocessing system with as many processors as possible and then "cluster when you run out of steam with symmetric multiprocessing power". He said this was in line with the thinking of Hewlett-Packard Co, Silicon Graphics Inc, Digital Equipment Corp and Sequent Computer Systems Inc. On Inter-Serial Link, ISL, Bull's answer to what it believes to be the throughput limitations of FDDI, Talbot said it could provide full duplex links between up to eight nodes, with no need for a central switch, as with FDDI, which is potential point of failure. It will be available when the Escala Powercluster server series gets above 48 processors before the end of next year. Dider Breton, vice-president of the division says the company's ambition is to achieve 10% market share with the high-end symmetric multiprocessing Escala Powercluster systems and Couder says the aim is to achieve this within the next three years.

## **LARGE-SCALE USERS RUSH TO ORDER HITACHI'S SKYLINE**

Sales of Hitachi Ltd's new MP5800 mainframe computer - the one known as Skyline by Hitachi Data Systems - are going far better than the company expected - suggesting that, as forecast, IBM Corp is going to lose significant business by not offering a new monolithic mainframe. IBM is also adamant that it won't take the Hitachi machine OEM to satisfy customers that don't reckon a parallel Sysplex will meet their requirements. Hitachi says sales of the machine have risen to 300 since the model was introduced in April, and credits heavier than expected demand from customers in the US and Europe. The sales figures, based on expectations derived from negotiations, are so far running well ahead of Hitachi's original estimate of selling 500 computers a year over a four-period, he said, and about 70% to 80% of the orders are coming from overseas financial institutions and large corporations. Hitachi admits that the MP5800 is the last of the line for bipolar mainframes and that developments in the next two or three years will enable CMOS chips to compete with bipolar, but says that some users need the speed and power now despite its higher cost.

## NOW THAT IT'S SHOT OF UNIX, NOVELL CHANGES ALL NAMEPLATES IN VIGOROUS HOUSE-CLEANING

By Matthew Woollacott and Maya Anaokar

Novell Inc's revamped strategy sees it refocussing on its networking strengths and, as a consequence, retreating from its battle to take on Microsoft Corp on the desktop, in all areas bar its GroupWise and PerfectOffice application suites. As predicted, the first casualty of the new look Novell is its long-term SuperNOS strategy, the combined NetWare-UnixWare operating system which had been due for launch in 1997. Novell denies that this a major about-face, saying that SuperNOS had never been intended as an operating system per se, but more as a conceptual strategy, which will be fulfilled through the deal under which Santa Cruz Operation Inc is taking over UnixWare. Despite its retreat from full competition with Microsoft, Robert Frankenberg, chairman and chief executive of Novell, could not resist making a few swipes at its erstwhile rival: talking of the new strategy, he said that Novell's goal is to compete "in areas that Microsoft doesn't, won't or can't address."

### Anathema

Similarly, he added that "we're talking about [supporting] all clients and all networks; this is an anathema to Microsoft." Specifically, Novell has embarked on initiative, codenamed Net2000, to develop an open set of application programming interfaces to extend NetWare services to heterogeneous environments. Novell says it plans to enhance client support for operating systems including Windows, Windows95, NT, Mac OS, OS/2 and Unix, while support for application servers including NT and OS/2 (as well as UnixWare, Santa Cruz Open Server and HP-UX) will also be incorporated. Interfaces will be provided for NetWare Directory Services, security, administration and management, messaging, licensing, object transaction, application management, communications, and back-up and storage. Also planned are interfaces for Novell's Advanced File System, Distributed Print Services, and NetWare's database, host communications, and remote access services. NetWare itself will be enhanced to include memory protection, clustering, and distributed object management. The company says the Net2000 interfaces will integrate with development tools including Visual C++, Borland C++ and other C++ environments, and proprietary tools such as Visual Basic, Delphi, and PowerBuilder. Programming models including procedural- and object-based methodologies will be supported and, as a result, Net2000 application programming interfaces and Net2000 objects will be provided, says Novell. For example, the company says that Net2000 interfaces will be available through a set of Novell-developed Object Linking & Embedding-Common Object Model objects for Windows-based clients. On other systems it will deliver objects through interfaces such as CORBA. Novell says the interfaces will be made available as a pre-release software developer's kit late next spring. Conceptually, all the Novell initiatives are designed to further Novell's grand vision: the Smart Global Network.

### Pervasive networking

Announcing the bold new strategy, Frankenberg said he expects a consolidation of existing networks into "one affiliated data network," over the coming years. While this will be "based primarily on the worldwide telephony network, it will include the Internet, and will improve it." With this vision in mind, Novell wants to be the company to supply interconnection access, and sees its NetWare Connect Services as the primary vehicle for doing this. Frankenberg said that AT&T Corp's forthcoming service based on the technology will become commercially available in December, and that five PTTs "covering major parts of Europe and Asia" will announce similar services in the near future. Frankenberg said further that he expects a further 15 PTTs to add support within the next year. AT&T's offering has been described as an "Internet with rules" that will provide a secure network that would enable NetWare users to log on anywhere and reach anywhere in the world - and Novell is producing a NetWare World Wide Web server which will be available in the first quarter of next year. Alongside wired access to this promised network, Novell sees other technologies - including cellular, cable television and radio - as important, as well as its recently-announced technology for providing energy management applications over power lines. In its pursuit of Frankenberg's oft-described notion of pervasive networking, it is aiming for 1,000m networked connections by 2000 on this global network, with people accessing information they want, wherever they are and whenever they want to. All via NetWare, of course. The final plank of the new strategy centres on Novell's application suites. Novell says that the next release of its PerfectOffice - designed for Windows95 - will include "a new set of networking features not available in other suites." Applications management, network performance optimisation, software distribution and NetWare Directory Services integration will be incorporated, says the company. On the GroupWise side, new features slated for the next release during the first half of 1996 will include a "universal in-box," says Novell, enabling users to combine electronic mail, speech messages, facsimile messages, work assignments, task management, and personal scheduling. A full replication facility to enhance mobile access and support will also be included, the company adds.

### Ironic

Accompanying the new Novell vision is a new Novell logo, a join-the-dots type of design, intended to convey the dynamics of the networked world, and some renaming of key elements of its technologies. The new nomenclature will use Net and Ware at every available opportunity: Novell NEST becomes Nested NetWare (an ironic move since Novell originally tried to distance NEST from its flagship operating system by naming it the Novell - rather than NetWare - Embedded Systems Technology); the "Yes" campaigns become YesNet, and even the company's public relations and marketing departments have got in on the act, dubbing their public relations activities MediaNet. This refocusing on networking also has the advantage of sidestepping the Windows NT threat because Novell is no longer treating NetWare as an operating system but as selection of networking services. By doing so and pushing the global network idea, Frankenberg has picked up Oracle Corp's chief executive Larry Ellison's idea that the personal computer is not the end-all and be-all of the computer age. Intelligent devices such as printers, facsimile machines and toasters, currently outsell personal computers 10 to one and Novell wants to get all these devices hooked up to the network.

## POWEROPEN ASSOCIATION MAY CLOSE AS IBM INTRO'S AIX VENDORS GROUP

As reported (UX No 556), PowerOpen Association, charged with specifying and maintaining an open, Unix-based operating system for the PowerPC processor is facing closure. President Tom Mace said that the organisation "just isn't getting enough dollars in" to keep going in its existing form and is downsizing its staff and operations substantially. A decision as to whether to wind up the whole operation will be taken within the next couple of months, says Mace. Frankly, the signs don't look good for PowerOpen. The Association's standard APIs and ABIs are based closely on IBM's AIX interfaces, so closely, in fact, that all of the Association members apart from Harris ended up simply licensing AIX from IBM to run on their machines. The PowerOpen Association became essentially an AIX talking shop. It intended to make money by certifying applications and hardware as being PowerOpen compliant, but it was never clear why companies should pay out good money to show that they conformed to the POA specs, rather than simply stating that they ran AIX. To help the Association into its coffin, IBM recently announced its own AIX talking shop. The new AIX Multiple Vendor Program (AIX MVP)'s remit reads like a clone of the original PowerOpen charter: "The founding principle of AIX MVP is to ensure that AIX is AIX, regardless of the system on which it is provided - whether from IBM or from other (OEMs). Under the program, an OEM system that carries the AIX trademark will have been required to complete a set of certification tests with the operating system running on the OEM vendor's hardware platform to demonstrate compliance with a rigorous AIX definition," says the IBM announcement. Even if the death of the Power Open Association is not a fait accompli it is difficult to see what its role would be in the post AIX MVP-world. Indeed, Tom Mace says that the PowerOpen Association's development and test technology will probably end up with the MVP if his organisation disappears. IBM also said that it intends to make future releases of AIX more modular, to help OEMs do their stuff. The new programme received immediate support from PowerOpen stalwarts Bull Information Systems and Motorola. Database manufacturer Sybase also leant support.

## ENCORE ADDS DIRECT SALES TEAM FOR INFINITY STORAGE

Fort Lauderdale, Florida-based superminimaker Encore Computer Corp says it is building a direct sales force taken from leading storage vendors to sell its new family of Infinity storage products. The company's aim is to expand the number of sales offices in key cities around the country including New York, Chicago, Detroit, Miami, Atlanta, Houston and Dallas. It said a significant number of trained sales and support people have already been hired and an aggressive (they're press gang people, presumably) recruiting programme is on-going as are continuing discussions with potential OEM partners to distribute the new storage product. Encore also added a new Infinity Gateway entry-level storage system for enterprise-wide data access for Unix system users.

## IBM TARGETS NETRA BUSINESS WITH INTERNET-FITTED RS/6000s

IBM Corp has seen how well Sun Microsystems Inc has done with its pre-packaged Internet Netra servers, and is set to offer a range of similar pre-packaged options, initially in the form of software stacks for the ~~RS/6000 line. There are expected to be seven variants: an Internet server~~ with choice of Netscape or IBM Explorer browser, a database server with either DB2 or third party databases, a Notes server for groupware, transaction server for CICS, systems management server, communications server and applications development server. Based on the sort of configurations customers are typically ordering, the packages will require one order number and one document to buy, along with easy install scripts. OS/2 versions of the stacks will also be available, and IBM is considering combined hardware and software bundles for the future. Meantime, recognising that most of the clients attached to its RS/6000s are non-Unix, IBM is also readying a bunch of middleware culled together from third parties called AIX Connections, which will include everything needed to connect up Windows, Mac, OS/2 and any Unix client up to its AIX servers. The move is partly to counter Microsoft's increasingly loud story that using Redmond software on both the client and the server is the most sensible option. Meanwhile IBM's anticipated E20 mid-range server is set to appear this Tuesday as a 100MHz, 604-based PCI machine, likely to replace the current MCA-based C10 and C20 boxes. It could also be the first machine that's hardware enabled to run operating systems other than AIX - NT, of course, springs to mind, although the debate over whether or not support of NT on the RS/6000 line will dilute IBM's efforts to push its flagship AIX offering is still continuing within the company. A new release of AIX is expected to accompany the machine.

### Get Connected with a common client

On a wider front, IBM has set a strategy in place to establish what it calls an "IBM common client", the idea of which is to get any client connected to any service on any server. Dubbed "Get Connected," and put under the control of Global Services general manager Dennie Welsh, the common client will be able to talk to IBM mainframes, AS/400, OS/2 and AIX servers. The client will come in a standard single package of client-connectors, including things like DB2 and CICS requesters and System View monitors, as well as the usual connectivity suspects such as TCP/IP, ONC, IPX, SNA and Appletalk. The aim is to get things moving over the next year, according to Donna van Fleet, AIX systems development VP. It's not too clear as yet just how extensive the bundle will be. Anything to comprehensive would be cumbersome and unworkable, while those things that get missed out could prove controversial. OLE, for instance, doesn't appear to be too high on the list at the moment.

## PLATINUM TOOLS TO BE INTEGRATED WITH HP OPENVIEW

Platinum Technology, fresh from its buying spree, has agreed to integrate its system management tools with Hewlett-Packard's OpenView Solution Framework. Platinum sees the non-exclusive deal as a foothold in the systems management market, where for all of its 17 acquisitions it still has only a small presence compared to a giant like Computer Associates, whom it's chasing. News of the deal apparently irritated CA, but Platinum wasn't sure whether that was because of the Platinum-HP relationship or because CA now has Platinum "on its radar screens" and is getting nervous about any move it makes. Platinum sees the OpenView agreement as a stamp of approval on its products. In the deal, HP gains an integrated suite of tools that target customers moving from MVS to Unix - a favourite HP haunt. Platinum will provide tools for managing problems, software distribution, performance, jobs and security. Multiple products are sometimes required for each function so Platinum will have 10 to 12 products for OpenView. Typical of HP's OpenView deals, Platinum must certify its tools for OpenView by itself based on documentation that Platinum systems management division marketing manager Susan Kahles described as being an inch-and-a-half thick. Its schedule with HP calls for the first three products - performance management, the Xfer software distribution product and AutoSYS - to be certified by the first quarter of 1996, but Platinum says the work will be done by the end of this year. The products are 90% finished. Similarly, the remaining products are supposed to be completed by Q2, but Kahles anticipates they'll be done by April. HP will have the right to distribute the tools - which will be the same as Platinum's off-the-shelf products - although Kahles said Platinum's 250-person sales force could take over in a sale oriented toward system management, since its people are better versed in the subject and HP is primarily focused on hardware. Platinum's tools will run on both Unix and NT platforms.

## IDE REVAMPS STP, GETS FULL REVERSE REENGINEERING

Interactive Development Environments Inc (IDE), San Francisco, California, will introduce version 2.0 of core Software Through Pictures (StP) development environment on October 16. The new ~~release includes a Motif interface and enhancements to make the~~ environment more PC-like, said an official, who declined to elaborate further. IDE has integrated TakeFive Software Inc's SNIFF+2.0 reverse engineering software onto StP's two object oriented analysis, design and code generation toolsets, Software through Pictures/Object Modelling Technique (StP/OMT) and StP/Booch. Previously, StP only had class capture reverse reengineering. SNIFF enables users to capture C++ code in analysis and design programmes using OMT and Booch, make changes to code incrementally, and save and reuse code. SNIFF can be purchased integrated onto StP/OMT and StP/Booch separately, at \$12,000 each, or fully integrated onto the combined StP/OMT-Booch product. SNIFF+2.0 costs \$3,000 purchased directly. StP runs on IBM, HP-UX, DEC and Sun. IDE still plans to release a Windows version of StP (UX 551), but not until the beginning of next year, the official said.

## GRADIENT PORTS DCE TO AT&T, SNAGS RESELLER AGREEMENT

Gradient Technologies Inc, Marlborough, Massachusetts, will port its Open Software Foundation DCE Version 1.1 implementation to AT&T GIS MP-RAS 3.0 operating system, and AT&T will resell all of Gradient's DCE products. Gradient's DCE includes SysV-DCE for UnixWare, PC-DCE for Windows 3.1, and PC-DCE/32 for Windows NT. AT&T SVR4 MP-RAS 3.0 is compatible with UnixWare 1.1, and runs on AT&T server systems including the 3000 line of Unix servers. SVR4 MP-RAS 3.0 includes Legent's Networking StreamWare TCP for MP-RAS, and Gradient's iFOR/LS software licensing system. The latter enables access to software distributed on the company's CD-ROM set. AT&T will resell all of Gradient's existing DCE products, while both Gradient and AT&T will sell SysV-DCE for MP-RAS 3.0. SysV-DCE for MP-RAS 3.0 will be available November 1. Pricing is determined by platform and ranges from \$2,000 a Model 3300 series Server license to \$16,000 for the Model 3600 series Server license.

## AVS ENTERS COMMERCIAL DATA MINING

Data visualisation software developer Advanced Visual Systems Inc, Waltham, Massachusetts, has revamped AVS/Express, its object-oriented application development environment for the technical market (UX 486). The new 2.0 release includes database interfaces for commercial data mining and visual OLAP applications. AVS/Express' multi-platform environment enables users to build interactive multidimensional visual capabilities into most Unix platforms, Motif, Windows NT and Windows 95. Users assemble icon components from GUI, graphics and visualisation libraries using drag-and-drop. Additionally, users can add high-end visualisation to existing applications by integrating applications developed by AVS/Express as a run-time component. Through V2's visual programming environment, the 3D visualisation programme allows users to select icon components to create custom displays, and compile into C++ or OLE. Users can create and modify objects, and combine them with higher-level application objects which can be called by the existing application. The new incarnation links 3D visualisation applications to commercial relational database systems, including Oracle7, Sybase, Informix, and just recently Arbor's Essbase (see below). AVS has integrated 2.0 with Oracle, Applix, Arbor, OpenGIS and ESRI. It costs \$18,000. 2.0 support for ODBC is in alpha testing, with release planned for Spring 1996. AVS has also inked an agreement with Arbor Software Inc to integrate V2 with Essbase, Arbor's multidimensional database server for planning and analysis applications for defined analytical structure, consolidated actual, projected and derived data, multi-user, and read/write data access. V2 will act as a front-end client to Arbor's Essbase multidimensional OLAP engine. Through Essbase's API, OLAP users can transform data into interactive 3D visual representations, and mine corporate data resources independently. Essbase data mining applications are used in telecommunications, financial services, sales and marketing for financial modeling, sales forecasting, exception reporting and capacity planning.

### **BE TO LICENSE BEBOX DESIGN; WILL RUN MAC OS TOO**

The dual PowerPC 603-based BeBox from Jean-Louis Gasse's Palo Alto, California-based Be Inc is designed to meet the demands of skilled computer users and developers that are frustrated by the limitations of current architectures. The company claims it is the first true real-time object-oriented system that features true pre-emptive multitasking, an integrated database, fast input-output and a wide range of expansion options - and an operating system that is "the technological heir to Pink," the object-oriented operating system that was to have been the foundation of Taligent Inc. It is claimed to enable users to run multiple compute-intensive programs simultaneously, synchronise music and sound, view and edit videos, and access the Internet, all at the same time. It includes software development tools and technical documentation, and the built-in database is accessible at all times, so users can continually store, retrieve, and update key information from multiple sources, Be says. It supports PCI and AT boards, and IDE and SCSI devices. The company says it plans four-processor and portable configurations, and the hardware and operating system are open for licensing. The BeBox will ship in mid-month at \$1,600 with the CPU board, operating system, input-output board, CodeWarrior for Be development tools, system case, cables, and documentation. It will be sold direct, and through resellers, value-added resellers and systems integrators. For those put off by the proprietary nature of the new machine, it will also run Mac OS one day.

### **ACROBAT GETS A MULTIMEDIA FACE LIFT**

Adobe Systems Inc has given its Acrobat electronic publishing software a multimedia make-over. New features in Acrobat 2.1 include a full-text search engine for CD-ROM developers, the ability to embed World Wide Web hyperlinks into Acrobat documents, and Movie Tool, which extends the Acrobat Portable Document Format, PDF, file format to handle multimedia elements including QuickTime and AVI video and audio files. This version moves Acrobat away from its simple 'electronic paper' metaphor, positioning it closer to a multimedia authoring tool. Version 2.1 of Acrobat Reader can be downloaded for free from Adobe's Web site at [www.adobe.com](http://www.adobe.com), along with 'Weblink', a plug-in for Acrobat Exchange which enables it to build active HyperText Mark-up Language links into Portable Document Format documents, enabling it to work with Web browsers. Weblink currently supports Netscape Communications Corp's Navigator and Spyglass Inc's Enhanced Mosaic, which will be bundled with the retail version of Reader. Rather than building its own Web browsing capabilities into Reader, Adobe's application launches the user's own Web browser as required. Movie Tool is only available for the Macintosh and Windows versions of Acrobat Exchange, and gives multimedia authors control over the placement and layout of a digital video file and the way it will be displayed. Movie playback is supported in Reader 2.1. The Windows and Macintosh versions of Adobe Acrobat Exchange 2.1, which support the new features are in beta, and will be launched this month for \$200. SunOS, Sun Solaris and HP-UX versions are expected next month for \$300. Acrobat Search for CD-ROMs, will be launched next month at \$700 and gives CD authors unlimited distribution rights on a per CD-ROM title basis with Acrobat Reader 2.1 bundled.

### **MOTOROLA NAMES FRENCH RESELLERS FOR POWERPC WORKSTATIONS, SERVERS**

Motorola Computer Group France has announced three members of the indirect sales and distribution network it is building for its PowerPC-based PowerStack line of workstations and servers. As a master value-added reseller, Aenix Informatique SA will distribute personal computer RISC stations, Series E workgroup servers, Series I departmental servers and Series MP multiprocessor servers. The company reported 1994 revenues of some \$7m with a staff of 25. Meanwhile, Coala Developpement SA and Dataconseil SA have been named value-added resellers, with expertise notably in integrating the PowerStack with AIX and Windows NT. With 16 staff members, Coala expects to turn in revenues of some \$2.5m this year while Dataconseil, which has a 100-strong workforce, projects turnover of \$16m or so.

### **ORACLE TO SHRINK PERSONAL ORACLE7**

Oracle Corp is looking to expand its share of the low-end client database market by shrinking Personal Oracle7. It is also considering adding an object-oriented layer to the Blaze SQL engine from its Power Objects tool to set Blaze up as a stand-alone application. The company plans to halve the current 16Mb memory required for the forthcoming Personal Oracle7 for Windows95 version by repartitioning the database, Nimish Mehta, vice-president of desktop products told the US edition of PC Week. It also requires up to 45Mb of disk space, but this is not viewed as a hindrance by the company. Blaze, the ANSI SQL 92-compliant engine at the heart of Power Objects, will have an application programming interface added and will have Open Database Connectivity support, according to Rob Bruce, client-server marketing manager at Oracle UK. However, it will not have replication or stored procedures, as these are not thought necessary at the low-end of the market. Bruce said that there was "a very, very clear difference" between the two products, adding that Personal Oracle7 "guaranteed the integrity of data," which is not the case with products that Blaze will compete with, such as Microsoft Corp's Access. Referring to Blaze, Mehta said "There is a need for something lightweight and SQL that supports an object model." Personal Oracle7 for Windows95 will be shipping in November, with Blaze 1.1 following in the first quarter of next year, according to Bruce.

### **INTEL SAID TO BE DELAYING VOLUME SHIPMENT OF PENTIUM PROs**

Intel Corp will delay volume ships of P6 processors to personal computer manufacturers until 1996 while work on a new, lower-cost support chip set is completed, US PC Week said. Codenamed Mars, the chip set will occupy about half the space on the motherboard and cost half as much as the Orion set, which is configured for the server market, a source claiming to be close to the Santa Clara, California firm said. Orion, which is designed for multiprocessor servers, was originally intended to be the chip set for the desktop as well, but its size, coupled with a lack of pressure from Intel's competitors, are thought to be the reason for the delay. The inability of the P6 to run 16-bit applications even as fast as the Pentium is also believed to have been a factor. Orion will probably be capable of handling up to four processors, while Mars will be limited to two. Similarly, Orion will have two PCI buses, and Mars one. Intel had intended to introduce high-end desktops, workstations and servers based on the P6 simultaneously, as it did with the Pentium, according to PC Week's sources. But the main launches will now be staggered. There are likely to be some Orion-based desktop personal computers, as the chip set has apparently been modified for desktop use, but the price is likely to make them an unattractive option compared with the Pentium. The company had said that the cost of owning one of the first P6-based computers would not be "as severe" as with the Pentium.

### **MAINSOFT PORTS WINDOWS TOOLS TO UNIX**

Windows-on-Unix house Mainssoft Corp has licensed and is porting Visual Components Inc's Windows development tools to Unix and will bundle them with its MainWin Studio suite which allows developers to create multiple versions of an application for Sun, DEC, HP, IBM, SCO and Silicon Graphics Unix workstations from the same source code that supports Windows 3.1 and NT. First up on Unix will be Visual's Formula One Excel-compatible spreadsheet and grid component tool, expected in the first quarter of 1996. Implemented as OLE Controls, versions of each Visual OLE component will follow, including the First Impression 3D charting tool, VisualWriter text processor and VisualSpeller spell-checker.

### **4TH DIMENSION ADDS RS/6000 PORT**

4th Dimension Software Ltd, Tel Aviv, Israel, has ported its production control system Control-M to IBM Corp's RS/6000. The software stores definitions, submits jobs, performs job status analysis, and monitors production. Control-M offers cross-platform interoperability with most flavours of Unix, MVS, VMS, and OS/400. 4th Dimension has also released a component for Control-M called Enterprise ControlStation, which is the GUI that enables administrators to use RS/6000 as the central point of control across all managed platforms. Control-M for RS/6000 will be available later in the fourth quarter at from \$8,400 per node. Enterprise ControlStation costs from \$16,000.

## TIVOLI IS INTEL'S SECOND SYSTEMS MANAGEMENT PARTNER

Tivoli Systems Inc has been allied with Intel Corp for the past year in an effort to close the management gap between its enterprise tools and Intel's LAN tools. As part of the alliance, Tivoli ~~licensed pieces of Intel's LANDesk desktop management system~~ to include in Tivoli TME. The two companies will continue to work on joint development projects. Tivoli has licensed two elements in the LANDesk family: its discovery agents, to be used in an inventory product, and its installation technology, which will be used to distribute software to desktops. Intel has provided technical support to Tivoli for the NT release of TME due this year and helped Tivoli adopt the Desktop Management Task Force's Desktop Management Interface (DMTF DMI). Intel will help market the product. Tivoli said its partnership with Intel will help it move into the NT market, specifically the workgroup and LAN segment, while Intel could gain a stronger hold on the enterprise through TME. The collaborators claim the LAN management market is ripe with potential; only 4%-8% of all PCs have desktop management systems, and those are supplied primarily by antivirus companies like McAfee and Symantec. The new products could be bundled with TME or treated as modules. They are expected to roll out by the end of this year and during the first quarter of next year. More on the phased implementation is expected to be announced in a few weeks. Tivoli's looking at how it might utilise other pieces of LANDesk, and is investigating integration at a higher level.

### LANDesk integration with CA

Intel has an existing systems management deal with Computer Associates Inc (which it originally struck with Legent Corp) however CA's senior VP of product strategy Yogesh Gupta, says the Tivoli and CA deals are different. Tivoli is using pieces of Intel's LANDesk, whilst CA is making sure that Unicenter integrates with the Intel system architecture. Gupta doesn't see the Tivoli-Intel pact having much impact on the marketplace because customers looking at LANDesk know it's being integrated with Unicenter. He expressed surprise that it took so long for Tivoli to announce it, saying "They shouldn't have waited until the end of '95." Gupta puts Microsoft's LANDesk and SMS systems management server in the same category, although he concedes they do different things, because they don't interfere with Unicenter's core business. Computer Associates is still working on integrating with the DMI interface. Gupta said the Intel technology is useful to CA because it focuses on hardware, while CA focuses on software integration. Meantime, Tivoli is to market Unison Software Inc's job scheduling software for use with TME.

## DODGE GETS PROCUREMENT FINANCIAL MODULE AWAY

Waltham, Massachusetts-based financial software house, the Dodge Group, won't win any prizes for speed to market but it's finally released a Procurement module for its OpenSeries Financials accounting software. Originally due soon after the general OpenSeries release back in April of last year (UX No 484), Dodge's UK managing director says the Procurement module has been available in pieces, though it never quite made it to market in one hit. OpenSeries Financials modules comprises general ledger and procurement, accounts payable and consolidations and uses a client/server architecture with a Windows front-end connected through an ODBC layer to DEC, IBM Sun workstations. An HP-UX version will follow by year-end. Databases supported include Sybase and Oracle. Procurement includes acquisition of goods and services, travel and expense reimbursement and cash disbursement components with various interfaces for use with in-house systems. Dodge reckons that 75% of its business comes from banking and finance and expects to do \$8.5m revenue this year. It's recently won Warwickshire County Council in the UK for its OpenSeries Financials package and signed up Salomon Inc in the US for its Procurement module. Module prices go from \$100,000. A typical sale is between \$300,000 to 500,000, it claims. With 75 employees on its books, it has offices in France, UK, Finland and the Far East. The company is looking to employ 120 by this time next year, and plans to go public in two years.

## DAZEL THROWS COLD WATER ON PSM/PRINTXCHANGE

Unix vendors may be eyeing the network printer control and management sector with renewed vigour (UX No 556), but Robert Fabbio's Austin, Texas-based Dazel Corp plans to leave them in the starting blocks with its own output management system. To further its ambitions, Dazel last week unfurled a series of partnerships and integration deals. AT&T GIS is integrating the Dazel software with its Unix SVR4 MP-RAS, whilst Tivoli Systems Inc will begin shipping a Dazel/Tivoli Event Adaptor next month as part of the Tivoli Enterprise Console. Dazel's already got Computer Associates International Inc and Irvine, California-based 4th Dimension Software Ltd in the bag (UX No 529), and has partnered with Powersoft Corp and Dynasty Technologies Inc to provide class libraries for third party vendors' add-ons (UX No 519). The company plans to sustain the edge it reckons it has over IBM Corp's Printing Systems Manager (PSM) and the planned Xerox Corp, Digital Equipment Corp and SunSoft Inc Printxchange alliance, with version 3.0 release of the Dazel output server and release 2.0 of its Dazel express client, both planned for the middle of next year. The releases will include new Unix and NT ports, plus unbundled offerings, along with added destination support for lino types used by print shops, email and Netware interoperability. Dazel has been shipping an output management system for the last two years and reckons PSM and Printxchange offer a restricted Unix-only print solution, instead of full enterprise server-based output management. PSM is an AIX-only DCE system, while Printxchange will only support alliance platforms, Fabbio says. Dazel additionally supports fax transmission, PCL, Postscript and ASCII, pagers and e-mail, with other Internet facilities in hand. Dazel is up on SunOS, Solaris, HP-UX, IBM AIX and Windows, with support for DCE and access gateways for MVS and Netware. A ten-user server licence goes for \$19,500, a single-user client licence is \$100.

## NEURON DATA PROMISES NEW OBJECT TECHNIQUES

Neuron Data Inc is strengthening its management team in preparation for an object-oriented product it claims goes beyond the Corba and DCE gateways and integration products it's previously described (UX No 546). The one-time French application development house, now based in Mountain View, California, says it'll deliver the new object stuff by mid-1996. Looking to reinvent itself as a high-end distributed enterprise application software house (UX No 546), it's appointed ex-Xerox Corp executive Hoshi Printer as CFO and VP finance and administration. Co-founder Jean-Marie Chauvet is now VP technology while Pany Christoforou, Neuron Data UK MD, becomes general manager of Europe.

## DELFIN REVS OBJECT/REALTIONAL ANALYSIS TOOL

Santa Clara, California-based Delfin Systems Inc is shipping version 2.0 of its InfoPower information analysis and reporting toolkit based upon Object Design Inc's ObjectStore object-oriented database. InfoPower is a collection of tools supporting complex information gathering, analysis, assessment and reporting and can be used to track markets or products including risk assessment and investment evaluation, Delfin says. Originally developed for the US defense industry, InfoPower can access Oracle and Sybase relational data and create an analysis environment for its own and third party application tools including Frame Technology's Frameviewer and Informix's Wingz spreadsheet. It uses a Motif/X-Windows graphical user interface and runs on Sun and IBM workstations accessing information stored in ObjectStore through an InfoPower API. Relevant subsets of information can be automatically accessed, either by using InfoPower's common query manager, or pasted from other application tools. Information is then entered into the database via the API. The publicly specified API consists of function calls for selecting and getting observations, entities and definitions in and out of the database. Version 2.0 includes link analysis for graphically illustrated relationships between objects and events in a hierarchical or network environment, timeline perspective for plotting events versus time supporting multiple views, variable scales, click and drag adjustment and hypothetical events, tabular data viewer with an automated connection to the numerical charting tool and numerical charting. A base license goes from \$10,000. InfoPower is distributed by ICL Plc spin-off DESC Ltd in Europe. Version 3.0 of the software is currently in beta and will ship by the end of the year with enhanced performance and entity/event link descriptions.

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The weekly information newsletter for the UNIX™ community worldwide

James Cannavino, replaced as **IBM Corp's** chief strategist by a man from outside the computer industry, has resurfaced at the Ross Perot computer services company Perot Systems Corp. He takes the new posts of president and chief operating officer reporting to Morton Meyerson, who retains the titles of chairman and chief executive. Perot Systems, which should double in size to around \$600m a year as a result of taking over Swiss Bank Corp's data processing operations, plans to go public the year after next.

According to Jeff Tarter's *SoftLetter*, **Novell** chief Bob Frankenberg was the third most highly compensated software exec in 1994 with a salary of \$836,334. Lars Turndal of **SCO** got \$639,672; Kanwal Rekhi then of Novell got \$237,607; Doug Michels of SCO \$226,791; Joseph Marenghi, executive VP, worldwide sales at Novell got \$324,676. By comparison Bill Gates and his cronies Mike Maples and Steve Ballmer got \$275,000, \$238,750 and \$238,750 respectively. Of course pay checks are not the only way all these boys are compensated.

**Visix Software Inc**, Reston, Virginia, is gradually building up a roster of object request brokers supported by its Galaxy application development system. With PostModern Computing Inc's ORBeline already under its belt, next up is Expersoft Corp's PowerBroker 4.0 which will be able to manage Galaxy and Corba objects from later this quarter.

The **Santa Cruz Operation Inc** OpenServer Release 5 and **Chorus Systemes SA** merged telecommunications product is code-named MK2 (UX No 521, 553), and is scheduled to ship in early 1997. MK2 is a binary offering for real-time telecommunications and embedded applications initially pitched at Intel Corp iAPX-86 platforms. The first major customer for the product is Siemens Private Communications Systems.

Latest noise out of **IBM Corp** suggests that all of Bill Colton's Power Personal System Division engineering team will end up in the RS/6000 division. It'll leave the PPSD marketing folks exposed: apparently they and the briefing center people have been told they need to look for new jobs within IBM as their roles are duplicated within the RS/6000 group. Apparently Bob Roblin, general manager PPSD worldwide marketing, has already found himself a new job somewhere inside IBM, although calls to his office said his title is currently unchanged.

The chorus of concern is rising following Joe Guglielmi's departure from **Taligent Inc**: now *Computerworld* hears the investors, IBM, Apple, and HP - who are already in for some \$100m in total - may pull the plug on further funding. HP is emphasising a three-pronged approach to objects in which Taligent is now just one option; no-one seems to know whether Apple has a plan to use the technology at all, which leaves Taligent looking very much an IBM's object-shop. It was supposed to create a pervasive, cross-platform object framework which would attract the ISV community.

**Microsoft Corp's** been all over the trade press countering a bout of speculation suggesting its days as an Object Management Group member are numbered: "We do not anticipate any change in our membership or involvement with OMG," it says categorically. However it's perhaps what Microsoft's not saying that speaks greater volumes. It's consistently avoided indicating whether it'll respond to Part B of OMG's COM-to-Corba RFP, or whether it'll abide by whatever OMG eventually specifies in the area.

As anticipated (UX No 549), **ICL Plc** is integrating its DAIS object request broker with Visix Software Inc's Galaxy cross-platform application environment to create SuperVise, a distributed system specification tool for Vise, ICL's high performance simulator. ICL claims the integrated product will allow users to customise the presentation of simulation data, and that Vise and SuperVise will enable designers to work on separate machines and platforms in different locations. Both SuperVise and Vise are available in beta form presently; ICL will release SuperVise in June 1996 with dates distributed versions to follow.

**Rogue Wave Software Inc**, Corvallis, Oregon, has acquired Inmark Development Corp, Mountain View, California. Rogue will integrate its C++ development library with Inmark's Zapp application framework and GUI development tools. The Zapp line includes Zapp Factory, an application designer and code generator; Zapp Interface Pack, a set of high-level objects; and Zhelp, an HTML help system.

**Siemens Nixdorf Informationssysteme AG**, Paderborn, Germany, will use Sun Microsystems Inc's microSparc RISC for its synchronous digital hierarchy transmission product line technologies. SDH is the European standard for optical network transmission.

**Petrotechnical Open Software Corp**, the oil industry's IT pressure group, has elected Landmark Graphics' Jim Downing, Schlumberger's Jean-Paul Marbeau and Texas Systems Center's Bertrand du Castel on to its board. Thore Langeland of new POSC recruit Statoil, and Bob Pindell of Texaco were elected board chairperson and vice-chairperson respectively.

The way we hear it, **SunSoft Inc's** still very much driving the Solaris-on-PowerPC train - the project's been held-up by IBM Corp executive management - knowing that there's a good deal of interest in the combine. However although it has a bunch of engineers working on the port and a whole group doing beta-testing, what SunSoft lacks is a full-time person to work with IBM Corp to recruit ISVs.

A one-time passenger, **Hewlett-Packard Co** reckons it's now firmly in the technology driving seat. It's co-developing what it expects to be the leading next-generation processor architecture in conjunction with Intel Corp. It says it's now clearly leading the Unix charge given that, a: its effort led to the formation of the 64-bit Unix API initiative and b: it'll be responsible for 64-bit Unix on the merged HP/Intel architecture. In addition it claims an excellent relationship with Microsoft Corp on Windows NT, by virtue of its Intel partnership, and its PC and printer businesses.

The database companies are gearing up for the battle to establish their parallel system offerings, and have been putting pressure on systems vendors not to issue competitive benchmarks, refusing permission for them to compare one against the other as a condition of distribution agreements. The official reason for this is that there are multiple ways of measuring performance depending on the precise application, and that the benchmarks won't tell the whole story.

**ICL Plc's** using the Ross HyperSparc to fulfill its Mbus requirements, but it and the other Fujitsu Ltd units are looking at UltraSparc for future systems, according to Sparc Technology Business.

**IBM Corp** has been doing its sums, calculating the likely cost of Intel Corp Pentium Pro (P6) systems by working through the cost of each of the components. Donald Friedman, director of strategy at IBM's server group, reckons that a four-way P6 system will cost at least \$100,000, the main cost drivers being the hard disks and memory. His feeling is that the P6 "is not as fast, and not as near, as we thought."

Friedman also claims that **IBM Corp** has persuaded up to 250 Unix independent software vendors to embark on a port to Open MVS, to be dubbed OS/390 this week. He says the number is growing.

*Computer Reseller News* believes Solaris is being optimised to run on Intel Corp-based Pentium Pro (P6) servers; partly in response to Microsoft Corp porting NT to Mips, PowerPC and Alpha, but also because Intel needs a well-tested, robust and highly-scalable Unix if P6 is to fly as a server.

As expected (UX No 550), the **Object Management Group** has garnered the support of the leading analysis and design methodology gurus for an Object Analysis & Design Task Force within its technical committee. It's issued a request for information, the results of which will be used to create a request for proposal for technology for interchanging information between different object analysis and design tools, and for Interface Definition Language extensions. Information is due by December 22.

**DEC's** sampling a new 333MHz cut of the 21164 Alpha it rates at 400 SPECint92 and 570 SPECfp92, and a 300MHz 21064 estimated at 220 SPECint92 and 300 SPECfp92.

Reacting to news that MVS is to be renamed OS/390 this week - and with OS/2 and OS/400 already IBM brands - Donna van Fleet, VP AIX development assured us that AIX would not be similarly renamed OS/600. "We've just gone through that whole branding thing. I'm not going to do that" she stated.

**IBM's** GXT 1000 graphics accelerator will be made to work on PCI machines from next year.

Fame is fleeting... We're told a recent episode of Fox TV's new Dweebz show in the US had the two main characters bantering about creating a distributed application. One says "I couldn't do it," the other comments "you could have if you only used Corba 2.0!"

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkins. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper



# unigram·X

16 OKT. 1995

The weekly information newsletter for the UNIX™ community worldwide

London, October 16-20 1995

Number 560

## SEQUENT AIMS TO STING COMPETITION WITH IQ-LINK

Sequent Computer Systems Inc figures with the next turn of the merry-go-round it's got a clear shot at the brass ring. Its interpretation of this new-fangled NUMA architecture that's just coming to the fore in symmetric multiprocessing is going to catapult it to the head of the class, says Sequent CEO Casey Powell, making it the playmate of industry kings Intel and Microsoft and making it forget its long history as a second- or third-tier player. It will make symmetric multiprocessing a commodity. Presumably after its new Sting boxes start rolling out late next year, it won't have to suffer the kind of embarrassment it did last week when a shortfall in bookable orders screwed up its third quarter quite royally. The lever on which Sequent is pinning its aspirations is a little interconnect called IQ-Link that it's been waiting for for five years, Powell said. The gismo, which circumvents the physics binding SMP, is going to let him put 252 P6 processors in a machine storing 100 terabytes of data and reportedly fetching 10 times the performance of conventional SMP systems. The building blocks of these machines are four-processor P6 baseboards that Powell likes to call systems when he's thinking about it. These boards, developed in combination with Intel, are more gussied up and ruggedized, if you will, than what will be Intel's typical fare but they still bring PC economies to big iron, as is typical of Sequent. Multiple "quads" each with their own cache and up to 1GB of memory, are connected by the intelligent IQ-Link which move data between them at a rate of 500MB/s using a whippet-like gallium arsenide data pump chipset jointly engineered by Sequent and Vitesse Corporation. The effective bus bandwidth of Sting systems scales linearly as quads are added and can be as high as 32GB a second for a 252-processor system. Sequent says the IQ-Link also increases system throughput by using sophisticated request queues to manage several tasks concurrently. The way Sequent employs Cache Coherent Non-Uniform Memory Access (CC-NUMA) architecture, something it personalizes as NUMA-Q, the data moves so fast between the quads that the system is essentially fooled into thinking its one large shared-memory or Big Bus SMP system. Current application software as well as NT and Sequent's Unix operating system will run unchanged and Sequent's current Symmetry boxes can be clustered with Sting. Powell says he has no idea what the pricing will be. Data General, which is going over to Intel, is also using NUMA architecture but Powell scoffs at the SCI interconnect it's getting from Dolphin Interconnect Solutions A/S and claims the systems DG famed development chief Tom West will be able to put together will be tiny compared to Sequent's. (*Sequent's Scalable Data Interconnect late, see page 3*)

## CA "TO RESELL UNIX" AS PART OF UNICENTER-SCO OPENSERVICES DEAL

We understand Computer Associates International Inc and Santa Cruz Operation Inc have signed an agreement that'll take them beyond the kinds of bundling arrangements CA already has in place with Microsoft, HP, Sun and others. In two or three weeks the two will announce CA-Unicenter for SCO OpenServer as a packaged offering that CA will also market, bringing, they hope, SCO right into the coveted enterprise space.

## STRATUS OFFERS HIGH-AVAILABILITY PC CLUSTERS

Finally realising "there's no one answer for fault-tolerance," Stratus Computer Inc this week puts its best foot forward introducing a range of Pentium servers with the unlikely name Radio, clustered using software from its Isis Distributed Systems Inc subsidiary and running UnixWare or Windows NT (UX No 554). Radio's neither an escape route from, or replacement for, the high-end VOS/FTX line of PA-RISC-based Continuum fault-tolerant line systems, Stratus insists, but says that as customers in target markets such as retail, branch banking, manufacturing and computer-telephony integration move to PC-type solutions it's "trying to redeploy resources to wherever customers go." Radio is available with Compute, Storage and Network nodes; Compute nodes, where applications run, come with two 133MHz Pentiums, floppy drive, EISA slot and SCSI. The Storage nodes come with a single 100MHz Pentium, up to 8Gb disk, SCSI, built-in disk replication software and the Chorus microkernel. Network nodes utilise a 100Mbit Ethernet hub or switch. Radio - Reliable Architecture for Distributed I/O - components can be hot-swapped and cabinets can accommodate up to eight nodes. Stratus says Radio offers basic (built-in) replicated disk storage and cluster management, with high-availability and continuous availability configuration options. For high-availability, users can buy an Isis Availability Manager framework which defines, monitors and detects failures and can restart any applications across distributed nodes or on re-allocated disk partitions; the system "baby-sits itself," as Stratus describes it. Continuous availability is achieved using Isis for Database (UX No 556), or Orbix+Isis (UX No 552) in conjunction with applications built to the Isis messaging API. Other features include "phone-home" notification (the clusters can automatically notify Stratus for shipment of failed parts) and 10Base2 maintenance network. Basic Radio configurations are priced at from \$63,000 to \$110,000. Facing up to a much more competitive world in an age of non-proprietary operating systems, Stratus recently announced it would cut 500 jobs to reduce costs (UX No 554), and has re-organised its core business into distributed computing and Continuum (non-distributed) product groups. It says it hasn't ruled out putting NT on Continuum.

## PPSD: GOING, GOING, GONE...

Power Personal Systems Division (PPSD) finally disappeared off the IBM Corporation map last week. Development and marketing of the Power Series and RS/6000 clients is being transferred to Irving Wladwasky-Berger's RISC System/6000 division: former PPSD general manager hardware development and RISC workstation business segment Bill Colton becomes general manager of the RS/6000 Austin systems development lab. Randy Groves, Robert Swann, Ronald Marter, Ion Ratiu and their units report to Colton. RS/6000 VP worldwide marketing Jeff Mason assumes responsibility for Power Series and RS/6000 client marketing groups. Development and marketing of the Personal Communications Assistant software, speech and human-centered computing move over to the IBM Software Group. The Kirkland, Washington-based technical support centre transfers to the IBM PC Co, which will assume technical support for NT and Windows 95 on the Power Series. AIX presumably goes to Austin. Kirkland's manager of development, Roy Clauson, now reports to Nicholas King, VP emerging technologies IBM PC Co's product and brand management unit. PPSD general manager Tony Santelli plus marketing chief Bob Roblin, Lineene Krasnow, Gary Griffiths and James Ebetino are supposedly managing a the transition while they find other roles inside IBM (UX No 559).

## IBM, BULL, WORK ON NEW MP DESKTOPS FOR 1996

IBM Corp and Compagnie des Machines Bull SA Bull AS are busily involved in developing a new set of multiprocessor desktop machines that will be launched next year, according to Bill Nohilly, vice president for advanced systems development at IBM's Power Personal Systems Division. The machines will be initially two-way, but four-way versions will follow, he told our sister publications PowerPC News. Initial offerings will be PreP-compliant, Nohilly says, but the intention is to make them upgradable to the new CHRP standard. Nohilly says this does not imply that IBM will necessarily sell Mac OS on its machines - "Who would buy System 7 from IBM?" he asks. Rather, he says, the upgrade is designed to give IT managers the comfort of knowing they have OS flexibility if they need it in the future. Nohilly says Bull is taking the lead development roll with the boxes, which have just gone into initial testing. The Bull-IBM development alliance has been subject to significant scrutiny in recent months, with rumours of friction and descent. However both Nohilly and RS/6000 Systems Development VP Randy Groves are adamant that everything is going smoothly now, although Groves admits there have been some rough patches in the past: "Now that we have got one actual product out, it's going much more smoothly... the relationship is better than it has been since the early days of PowerPC euphoria."

### BETTER LATE THAN NEVER: SUN MAKES ITS VIDEO SERVER ENTRY

Sun Microsystems Inc was well ahead of the pack with specially-configured Internet servers, but it has come dangerously close to missing the boat on interactive video servers. Better late than never, its Sun Microsystems Computer Co's Interactive Services Group has launched its first products as the Sun MediaCenter systems - **Sun MediaCenter 5, priced at \$30,000; Sun MediaCenter 20, at \$63,000; and the Sun MediaCenter 1000E, starting at \$280,000, for delivery in December.** The entry server includes 8.4Gb of video storage, capacity for six 30-minute true video-on-demand MPEG-2 or 16 MPEG-1 titles. The MediaCenter 20 is aimed at small- to mid-sized organisations and supports up to 25 MPEG-2 (or 70 MPEG-1) concurrent streams. The big system reaches 100 concurrent MPEG-2 or 270 MPEG-1 streams at high speed. They feature Sun MediaCenter software, device drivers and Fast Ethernet and Asynchronous Transfer Mode network interfaces. The software includes a Media Services layer for content and asset management, title load-unload, stream scheduling, data migration and video streaming to the network interfaces. The things are being pitched for video storage and retrieval, corporate training, video kiosks and video warehousing, where video-on-demand, or "near" video-on-demand is required. Although Sun prides itself on delivering 'balanced' server configurations, these systems are definitely unbalanced - weighted specifically for interactive markets, with hardware and software modified for fast throughput. In particular, a new Media File System tailored for fast forward and rewind tasks replaces Solaris' conventional Unix file system. Meantime, Sun's created an Inter\* (Inter-star) version of its Catalyst third party program specifically for the multimedia/interactive video crowd and claims Grand Junction Networks, Minerva Systems, Optivision, Parallax Graphics, Tecmar, Vela Research and Xing amongst its first product partners. ISV support comes from Aimtech, Oracle and Sybase. Integration partners are Allied Group, Andersen Consulting, EDS, Logica, SSDS and Teknekron Software. Sun's already aligned with Thompson SA on interactive TV; Toshiba is building video-on-demand systems using Sun systems and will OEM MediaCenters.

### RATIONAL SCORES JACOBSON FOR METHODOLOGIST HAT-TRICK

Rational Software Corp has acquired a fifty-four percent interest in Ojectory AB, the Stockholm, Sweden-based company whose co-founder is Ivar Jacobson the inventor of use-case technology. Rational already has object modelling technique (OMT) methodologist Jim Rumbaugh and object methodologist guru Grady Booch on board. Rumbaugh joined the company in October 1994 as part of Rational's acquisition of the Martin Marietta Information Group (UX No 508) and has been working with Booch on a unified object method. Jacobson will join Rational as VP of business engineering, although it's not clear yet whether Jacobson will remain in the US. Rational says it's acquired the company to extend its tools life-cycle and to provide access to the banking and insurance markets and plans to integrate Objectory into its business. It's also hoping Jacobson will add momentum to its own object oriented programme. The company denies its trying to corner the methodologies market, but with the addition of Jacobson the company has another influential member of the OMG's Analysis and Design Special Interest Group (UX No 550). Rational issued 272,087 shares in return for majority control of Objectory and hold an option to acquire the remaining 46% of the stock in January 1996. The total value of the transaction is expected to be between \$7.5m - \$10m.

### SAS DOES DATA WAREHOUSING AS ORLANDO

SAS Institute Inc, Cary, North Carolina, has developed a data warehousing system for use with its SAS executive information software. The package - Orlando - supports HP-UX, Solaris, AIX and Windows. It is available in November. The base SAS system costs from \$1,000, but fees for Orlando have yet to be determined. Orlando includes support for OLE 2.0, Lotus Notes and an interface to ODBC. SAS hopes to add other data warehousing tools, automated extraction, distribution, data scrubbing and scheduling tools to Orlando by early next year. SAS version 7.0 is in the pipe.

### XEROX REVEALS NEW SPARC-BASED DOCUMENT PRODUCTS

Xerox Corp has been threatening to eat its young by obsoleting the copier with multifunction laser printers for years, and last week finally brought mass market products down to the wire. As expected (UX No 557), Xerox introduced what it hopes will be the first offerings in a line of integrated office document management tools, and has entered into a **strategic partnership with Novell Inc to create printer service software for it.** The first products in the Sun microSparc-based Document Centre System line are the models 20 and 35 with up to 32Mb RAM and 540Mb disk. They run a LynxOS microkernel enhanced by Xerox and Sun and uses Tadpole Technology Plc circuit design. The System 35 is for up to 50 users, copies and prints at 35 pages per minute with resolutions of up to 600 by 2,400 dots per inch. System 20 is for groups of up to 20, and copies and prints at 20 ppm with 400 dpi resolution. System 20 is out now at from \$19,500. System 35 is due in the fourth quarter at \$38,600. Users can print, copy, fax, and finish documents using Document Centre's CentreWare interface software, the company said. CentreWare integrates Document Centre's features into a Xerox window on the user's desktop. Document Centre supports Mac, Unix/Motif, DOS and Windows. OS/2, NT and maybe AS/400 support will follow next year, according to Patrick Martin, president of Xerox Office Document Products division. Xerox will work with Novell to create other software for Document Centre architecture, according to Fernando Pozo, VP of network marketing. It's work on Novell NEST compatibility.

### CA ADDS LEGENT PRODUCTS TO EDS LICENSE AGREEMENT

Computer Associates International Inc, Islandia, New York, and Electronic Data Systems have extended their 12-year software license agreement to include software products from CA's recent acquisition of Legent Corp. The agreement will include all of Legent's client/server products integrated with CA-Unicenter, including AgentWorks, Paradigm and Legent's mainframe products, according to CA VP Gayle Kemper. Other unspecified Legent products which are being extended for use with CA technology and covered under the licensing agreement include distributed systems management, multiplatform agent-based management tools, client/server help desk and problem management, distributed storage management, cross platform connectivity, performance and capacity planning and operations management. The agreement also includes distributed data management and application management.

### PLATINUM ADDS DATA EXTRACTION TOOL

Adding to its database story, Oakbrook Terrace, Illinois-based Platinum Technology Inc has launched InfoRefiner 3.0, its data extraction and data movement tool, and Platinum Repository Open Enterprise Edition 1.0 (PR/OEE) its metadata management system. InfoRefiner 3.0 takes legacy data in DB2 for MVS, IMS hierarchical files, VSAM, and sequential file formats and integrates it into the relational structures for DB2. Version 3.0 supports replication and change propagation from DB2 as a source database and direct mapping to a single generic model for replication and propagation to heterogeneous targets. InfoRefiner is shipping now and is up on DB2 for MVS. Prices start at \$20,300. PR/OEE its three-tiered client/server architecture enables application logic, the repository engine and the repository database to reside on separate servers using Oracle or Sybase SQL Server software. PR/OEE is up on AIX, HP-UX and Solaris in the first quarter of 1996, prices start at \$50,000.

### BOOLE & BABBAGE PROBLEM MANAGEMENT LINKED TO PEREGRINE HELP DESK

Boole & Babbage Inc, San Jose, California, and Peregrine Systems Inc, Del Mar, California, have developed an application programming interface (API) for Boole & Babbage's Command/Post automation software and Peregrine's ServiceCenter help desk applications. The API will serve as a gateway for each product on client systems, and enable help desk applications to work as a centralised enterprise service center for tracking and resolving problems. Command/Post brings alerts from applications and systems to a single control point for analysis and correction. It deposits trouble tickets into the ServiceCenter data repository, where they are updated and technicians alerted. Command/Post runs on Solaris and AIX. Boole & Babbage will release Command/Post for HP-UX in March 1996. Officials were unsure of cost or packaging details.

## ULTRASPARC I SYSTEMS DUE NOV 7; STB UNVEILS ULTRASPARC II

Sun Microsystems Inc may be gearing-up to debut its UltraSparc I systems on November 7th, but its Sparc Technology Business is already off on the UltraSparc II journey, estimating the part will deliver 350 to 420 SPECint92 and 550 to 660 SPECfp92 between 250MHz and 300MHz when configured with 2Mb cache and up to 4Gbps bandwidth. UltraSparc II has 5.4m transistors, includes the New-Media MPEG-2 and video conferencing technologies and Visual Instruction Set. Texas Instruments Inc is fabricating the part in 0.35m, 2.5v, five-layer metal CMOS process. It'll handle up to 16Mb second level cache. Samples are due first half next year, production ships the second half. STB's still looking at 1000 SPECint92 and 1500 SPECfp92 for UltraSparc III (UX Nos 527, 555).

## SYBASE SEEKS TO RESTORE CREDIBILITY

Sybase Inc's top brass breezed in and out of London last week for the Sybase European User conference promising a product cycle that'll head off questions about its future and position in the market, arguing they're the broadest, strongest set the company's ever had. The team - chief executive and president Mark Hoffman; David Peterschmidt, executive vice president and chief operating officer; Dennis McEvoy, senior VP products; and Michael Forster president of Sybase InformationConnect division - brushed-off questions about when the long-awaited Sybase SQL Server System 11 (Cougar 1) will be announced, saying it'll debut this quarter, though *Computerworld* had already correctly reported the launch will be on October 30 in the US and London. System 11.1 (Cougar 2) is expected at the back-end of 1996. Sybase Navigation Server (now Sybase MPP) will be up on IBM Corp SP2s by year-end, it says. Funny, seeing as how the Navigation Server technology was developed on AT&T MPP boxes and that AT&T was supposed to have a six-month exclusive on selling Navigation Server sales before it went out on other boxes. Versions for Hewlett-Packard Co, Sun Microsystems Inc and Pyramid Technology Corp kit are being worked-up by Bruce Armstrong who was in charge of the project at AT&T. General availability of Sybase MPP is set for the first quarter of 1996, the same time as Powerbuilder Version 5.0 is due. The Watcom database engine, acquired when Powersoft Corp bought Ontario, Canada-based Watcom Inc (UX No 462), will appear as SQL Anywhere at the end of the year, supporting Transact-SQL and interfaces to the Replication Server and its gateway products. Hoffman agreed the products mark a make or break time in the credibility stakes and is confident Sybase will quickly regain the percentage point share of the relational database market it has lost over the last year. He says Sybase will have a third of the market by the end of the decade.

## MORE JOB CUTS ON THE WAY AS UNISYS RECASTS ITSELF AS THREE BUSINESSES

Still struggling to make some sense of Michael Blumenthal's brutal banging together of two hopelessly inappropriate merger partners, chief executive James Unruh announced on Friday that Unisys Corp would dismantle its matrix management system and reform itself as three separate businesses, with the aim of improving profit and revenue growth next year. The changes will not come without cost: the workforce will be reduced and it will take a "significant" 1995 fourth quarter charge for the restructuring. The three units will be a computer systems business, an information consulting and integration services company, and a global support services business, each with its own sales force. The last covers not only maintenance but also desktop services, network integration and related services. Maintenance, 65% of the business last year from over 80% in 1990 is forecast to fall to 30% in 1998. Unisys aims to cut at least \$400m from its current cost structure by the end of next year through cuts in administrative costs, facility consolidations and personnel reductions. The exact number of job cuts has not yet been determined. The restructuring is intended to enable the three units to compete more effectively and react more quickly to growth opportunities. The new structure will enable the company to explore options such as complementary acquisitions, new partnerships and other alliances that can enhance revenue growth and strengthen core competencies, Unisys said.

## SEQUENT'S SDI DATABASE SOFTWARE PUSHED BACK TO Q2

Sequent's vaunted Scalable Data Interconnect (SDI) page-sharing technology for distributing complex parallel database queries across as many as 120 Pentiums in clustered SMP nodes originally due last month (UX No 534), won't be ready until the second quarter of next year. Oracle Corp has already cut a beta version of its 7.3 Parallel Query database release enabled for SDI - production versions ship early next year. The problem, according to Sequent, is personnel issues, which have left remaining 5% of its SDI work dangling, specifically a driver for the Dynix/ptx operating system and ptx/Cluster software. SDI is not dependent on Symmetry or Sting system interconnects, and is expected to run over either topologies where the latest cut of Dynix/ptx, the enhanced version of Sequent's quad-channel I/O controller plus the as-yet unavailable drivers are installed. Although each system node runs its own copy of the operating system and has its own local memory, SDI allows compliant databases to process parallel requests against SMP clusters by spreading them around nodes. SDI doesn't connect systems together. Oracle's the only database company that's so-far committed to supporting SDI, though Sequent says it's talking to Informix as well. (*Sequent to deliver NUMA-Q architecture, see page 1*)

## IF NOT 620, THEN WHAT?...

Adding a bigger cache, cranking up its clock speed and switching to a faster, more compact silicon technology means that a 150MHz 604+ can manage SPECint92 225, according to James Thomas, IBM's director of RISC microprocessor development. That's the same figure as the 130MHz 620 was meant to achieve, so it's not too bad, says our sister publication *PowerPC News*. It is not too surprising either, given that much of the 620's increased performance was expected to come from its larger cache anyway. IBM is much more guarded about the SPECfp92 figures that the 604+ will achieve and is not expecting it to deliver the 300 figure that the 64-bit chip was expected to manage. Consequently, the company is looking to the PowerPC 630 (nee Power3) processor for high-end technical and engineering machines, says Randy Groves, vice president for RS/6000 Systems Development. Details of the 630 remain sparse, all we know is that it is 64-bit, and has a separate cache chip mounted alongside the CPU - rather like Intel's P6. Development of the PowerPC 630 (a provisional, working name) is being initially driven by IBM in-house, rather than by the joint Somerset lab. There's no word on when it will be available. Of course, the 604 cannot deliver the 620's 64-bit addressing capability, but no one seems very bothered about that at the moment. Certainly there is no indication that a 64-bit AIX is beyond the very early design stage.

## ...REST OF POWERPC PLAN ON TRACK

Despite the PowerPC 620's undoubted problems, and the 604's multiprocessing glitches, James Thomas, IBM's director of RISC microprocessor development, says the rest of the product line is on track to achieve the goals outlined in February. Thomas says the new 603 should be sampling by the end of the year and that it is already rolling off the production lines running at an average clock rate of 166MHz - though "gusting up to 170MHz or 180MHz". The chip uses for the first time the same more compact transistor geometry first introduced with the 100MHz 601+. The use of this finer fabrication technology means the processor (presumably to be called something like the 603e+) still manages to keep its power consumption down around the 3 Watts mark. Meanwhile similar progress is being made on the 604, which is also being shrunk using the new technology silicon. The next generation 604 will have 32K of instruction cache and 32K data cache (twice the size of today's) and is being given a makeover which involves tightening up a few areas of the processor design. The result should be a leaner, fitter 604 - the 604+ - running at 150MHz or faster. The hope is that this chip will fill in for the 620 until it, or a successor, arrives.

## COMPAQ TAKES SOLARIS x86 - AS INTERNET SOLUTION INITIALLY

Indicating perhaps the promise of things to come as it seeks to move further into the enterprise space, Compaq Computer Corp last week began selling servers running SunSoft Inc Solaris x86 in the Asia Pacific region packaged as Internet solutions at from \$8,000 to \$32,000. An entry-level configuration comes with a 75MHz Pentium Compaq ProSignia 300, 1Gb disk, 32Mb RAM, Solaris x86, Internet Gateway Server and 10 SolarNet WebScout clients. The 75MHz ProLiant 1500 has 32Mb RAM, 2Gb disk, the same Internet software plus Firewall-1 and a 25-client SolarNet WebScout pack. The 100MHz ProLiant 4500 with 64Mb RAM and 4.2Gb disk includes additional management tools and Netscape Communications Server for Solaris.

## REPORT BLAMES MARKETING HYPE FOR PARALLEL PROCESSING CONFUSION, BUT GENERALLY APPLAUDS SMP/MPP TECHNICAL WORK...

By Ray Hegarty

UK market researcher ButlerBloor Ltd launched a new report entitled "*Parallel Database Technology: An Evaluation and Comparison of Scalable Systems*" in London last week (UX No 551). The 535 page tome claims to offer the first in-depth look under the parallel database processing hoods. ~~It took 11 parallel databases and 14 hardware offerings and examined each against eight key criteria: market presence~~ and continuity, complex query, simple query, update, hybrid workload, performance accessibility and portability. The report sends benchmark comparisons straight out of the room, depicting them as simple "marketing tools." DBMS products evaluated were Adabas D, CA-OpenIngres, DB2/6000 Parallel Edition, Informix DSA, Sybase Navigation Server, Tandem NonStopSQL/MP, Oracle7, Oracle Rdb, Red Brick Warehouse, Teradata and WX9000 RDS.

### Dis-information

Perhaps its most important finding however is the yawning gap between the technical reality of the parallel database market and the hype that marketing departments generate. This gap provides the opportunity for "database and hardware marketing people to confuse the market with technical mumbo-jumbo that they don't fully understand themselves," warn the report's authors, Dr Mike Norman and Dr Peter Thanisch of the Edinburgh Parallel Computing Centre. An explicit example of this - what the authors call "dis-information" - is the distinction often drawn between "shared-disk" architectures, where each request from the server(s) can obtain any data item regardless of where it is stored, and shared-nothing architectures, where the data in the database is partitioned between disks, giving exclusive control of access to servers or agents to access the data in its own disks' partitions. Typically, massively-parallel vendors may suggest shared disk system configurations are flawed, whilst in reality there seems to be little clear difference in the scalability of the two approaches, the report says. Other features lead to far greater differences in both scalability and performance, including throughput, response time and what the report calls the "chemistry" between the platform, the DBMS (database management system), the volume and structure of the data in the database, and the workload.

### Myth

Another myth exposed by the report is the characterisation that performance problems are easily solved by throwing CPUs at the system. This approach ignores DBMS design, the way applications have been developed and the CPU interconnects, which together are far more important, it says. In the same breath the authors turn on the widely held notion that SMP (symmetric multiprocessing) systems are suitable only for medium-sized applications and MPP (massively parallel processing) for the high-end. Adding CPUs doesn't mean applications are able to exploit them, the report suggests, finding that some MPP systems it looked at such as the nCube 2 and nCube 3 were no match for the performance of many SMP systems. The report describes SMP as a shared processor memory platform; MPP having private memory.

### All-rounder

The report votes Informix's Dynamic Scalable Architecture (DSA) - which features the as-yet unavailable Online Extended Parallel Server 8.0 (OnLine XPS) - the best all-round parallel DBMS technology, saying it has significant benefits over its competitors on all applications, and in particular, data warehousing. One criticism is Informix's weak concurrency model. Informix DSA is a shared-nothing system which means problems can also occur when the same transaction involves multiple processes, when all processes must know that all locks have been acquired before updates can be made. With a uniprocessor or SMP system, where a coherent access to memory exists, it is possible to run a single-phase commit protocol because all processes can read data in shared memory and know exactly what's happening at any time. In MPP systems with distributed memory it is necessary to run some other commitment. Most DBMS employ a variant on the two-phase commitment protocol. Informix has not implemented this two-phase commit and the authors weren't given details of the mechanism, but Informix said last week it's using what it calls a "one-and-a-half phase commit" technique which it's in the process of patenting. It declined to give further details. In the MPP camp the report champions Tandem's NonStop SQL/MP, giving Informix, DB2 and White Cross special mention. It highlights Tandem's long track record in the MPP market but warns against complacency over the competitive advantage it has traditionally enjoyed as IBM and others are hard on its tail. The authors consider both Informix and Oracle7 as competent across the board in the MPP

arena; Oracle Rdb might be with them were it not for its weakness in parallelising complex queries. Sybase Navigation Server (now Sybase MPP) disappointed the authors, although they concede that System 11 release addresses many of the scalability issues. In particular, the report criticises Sybase's complex query rating because it doesn't separate planned queries from ad hoc queries (although it accepts it's not targeted at this function). Other weaknesses include high overhead of inter-process communication leading to performance problems in the workload, and a weak pipeline.

### Bottleneck

One important difference between Informix DSA and Sybase Navigation Server, the report notes, is the bottleneck generated around the coordinating process which partitions queries. With Informix, partitioning can be dealt with by any CPU Virtual Processor (VP). This can be done because the meta-data which specifies how data is partitioned is held in a table which is visible - via a caching mechanism - to all VPs on all nodes. Sybase allows only one layer of each query to be active at any one time, with the results of intermediate joins stored as temporary tables stored in subsequent joins. This means the result of intermediate joins are stored as temporary tables which are used in subsequent joins, allowing these tables, as well as the tables they are joined to, to be redistributed between joins. This approach may be valid where the database is tightly coupled to the hardware, and where disparity between the relative speeds of disk and memory are not high, says the report, but most DBMS vendors now take the view that the most efficient option is to use pipeline parallelism and flow control inside the pipeline to avoid having large intermediate results present inside the system, thus avoiding the overheads of using disk. Informix enables join partitions to be made independently at each layer of the pipeline and independently of the distribution of the tables to the disk, claims the report. This enables processing to be load-balanced even if data is skewed on the disk. John Spiers, Sybase European marketing director, says the report is fundamentally flawed, based as it is on a subjective, academic analysis of theoretical technology and not on users' experiences or the authors' own hands-on experience.

### Complex queries

In SMP implementations, Informix and Oracle both figured strongly in the performance categories, with Informix having the edge in the area of complex query, because of what the report considers the careful design of features such as pipeline parallelism. Oracle7 is let down by its limited pipeline parallelism, with only two layers able to be active at any one time. This means that with complex queries, there can be a requirement for large amounts of temporary storage leading to an increase in disk and a slow down in the pipeline. Version 7.1 stores to disk via the database cache, Version 7.2 uses direct access to disk, significantly improving performance, the report concludes. Another problem, is that until Version 7.3, Oracle does not use hybrid hash joins, which when joining tables increases speed. The third weakness is in the "slight limitation" that Oracle has in the ability to parallelise all queries. Whilst the authors admit that the ability to parallelise small queries is one of the major deficiencies of shared-nothing databases, it is not something Oracle suffers from. However Oracle will only parallelise a query if there is at least one full table scan in it. This is required to get a wave of data going up the query pipeline. Once this has occurred, other components can occur in parallel.

### Optimisation

Adabas was also highly rated for complex queries, as was Red Brick Warehouse where it provided impressive indexing capability although its ability to update - a by-product of its target market - is questioned. Oracle Rdb and CA-OpenIngres (*continued on page 5*)

## ...VOTES INFORMIX BEST ALL-ROUND PARALLEL DBMS TECHNOLOGY

(continued from page 4)

came bottom in the report's complex query rating scheme. Neither can parallelise joins, the report concludes. Resource allocation and ~~query optimisation are the key features here. Several products did~~ not have query optimisers, and used serial optimisers which know nothing about parallelism to find a serial execution plan. This means the user may have one processor or one thousand processors and the optimiser would find the same query execution plan. Indeed CA-OpenIngres V1.1 is generally considered poor, lacking effective MPP coherency control and no-row level locking. In referring to Ingres, the report describes the lead Ingres once had in the relational world and the subsequent cash flow crisis and ASK Group buy up as "truly lamentable." CA says it has already "identified [the] weaknesses" and will address them in future updates. The company agrees with Sybase about the subjective nature of the comparison. The report categorised applications as retrieval dominated (data warehouse) and update dominated (OLTP) without touching on such issues as activity location, it points out. Important questions over fat-client, thin server, thin-client and fat server were ignored. Theory is one thing, real-world complex data is quite another it insists. Navigation Server does well in pre-planned queries where it has available different partitioning strategies. Red Brick Warehouse is given the thumbs up for ad-hoc SMP indexing facilities. With 'simple queries' - a query with few joins and high specificity - Oracle Rdb came out tops in both the SMP and MPP category, largely because it is tightly coupled with operating system mechanisms rather than relying on threads to be fired up. In the SMP category a whole bunch of products were hard to order including Adabas, Informix, CA-Open Ingres and Oracle7.

### Shine

In the hardware arena the report evaluated scalability of performance, hardware configurability, availability, software configurability and management and support. In general, hardware platforms were considered "sound", with the majority of the platforms able to do the job. Although SMP machines can't scale as high as the MPP architectures, other comparison criteria, such as manageability and hardware and software configurability contributed to the SMP boxes scoring higher marks than their MPP cousins. The report notes that SMP and MPP platforms are undergoing something of an evolution at present, and as parallel hardware technology continues to mature, it expects both hardware and software to converge into a more common architecture. The scalability category had Pyramid's RM1000 and the Convex Exemplar scoring highest, with IBM's RS/6000 SP2 and Meiko CS2 also highly rated. Hardware configurability found DEC as leader, with its AlphaServer 8400 system, followed by AT&T, Convex, Cray, SGI and Sequent, all of which were also rated highly. High-availability was dominated by Tandem and Digital with AT&T, Cray, IBM, Meiko and Pyramid offering strong capability. Software configurability was led by the SP2, followed by Cray, DEC, ICL and Sequent. The management of the machine was best dealt with by Tandem and White Cross, followed by Sequent but in general the report concludes IBM's SP2 is the system to beat performing well in all areas of comparison, but without ever quite managing to shine brightest in any one.

### Maturity

SMP platforms machines performed well, reflecting the relative maturity of the technology. DEC's 8400 clusters were also given the thumbs up, with AT&T's 5100 considered a reliable platform, although rated less scalable than might be expected. ICL Goldrush and Tandem will do the job, although the report advises against investing in these architectures until new generation products are launched. Pyramid's RM1000 is also rated highly overall, although the report again recommends ensuring the machine can be configured appropriately. SMP platforms which still managed to squeeze into best overall rank included the Cray CS6400 and SGI's Challenge, with Sequent considered a reasonable engine, despite its lower performance. CS6400 highlights include the system bus, I/O, fault tolerance, large disk capacity and its Sparc/Solaris compatibility, while Challenger offered a fast bus, a powerful R8000 processor and easy configuration.

## IBM UNVEILS ENHANCEMENTS FOR ITS SERVER LINES

Everything bar a personal computer has to masquerade as a server these days, so IBM Corp's vast grab-bag of announcements, covering System 390 mainframes, AS/400 business computers, RS/6000 Unix machines and Pentium-based machines from the Personal Computer Co characterised ~~them all as servers. It turns out that OS/390 is only a working title for the~~ bundle of MVS/ESA and 30 other software products that IBM plans to offer, which will get a new name when it's formally announced. The first release is to be generally available in first quarter 1996. The bundle - including Posix extensions, TCP/IP, Distributed Computing Environment, Distributed File System, Network File System, and LAN Server, plus Systems Object Model run-time and application class libraries - will save users about 30% on the unbundled price of each. There is a suggestion that communications enhancements to OS/390 will enable Windows, Warp and other graphical user interface-based client operating systems to access the mainframe directly rather than through 3270 terminal emulation, although what this really means is unclear - unless the mainframe is going to switch to ASCII coding and upset a vast army of users of EBCDIC-coded programs and data, the two are fundamentally incompatible and some kind of conversion is needed. IBM is promising to take over the hassle of integrating and testing the products that make up OS/390. On the AS/400, DB2 Multisystem for OS/400 distributes database queries over 128 processors on 32 networked AS/400 systems, and DB2 Symmetric Multiprocessing for OS/400 spreads database queries over multiple processors on single AS/400 symmetric multiprocessing systems that use one centralised database. The company also added a new high-end AS/400 Advanced Server with four PowerPC AS A30 microprocessors as the 53S - there was already a four-processor 530.

### RS/6000 E20

The new offering in the RS/6000 line is the 100MHz PowerPC 604-based RS/6000 Model E20 (UX No 559), a departmental server which uses PCI bus and can be integrated into personal computer local networks using an AIX Connections feature in new version 4.1.4 of AIX. AIX Connections costs from \$1,200 plus \$40 per each attached PC client, and is available from November 17. The E20 is estimated at 715 tpm and starts at \$10,000 with from 16Mb RAM and 1Gb disk. IBM was unable to supply SPEC numbers. The AIX version 4.1.4 upgrade supports PC desktops running NetWare, OS/2, DOS, Macintosh, Windows, and NT, and is available from October 20. Connectivity enhancements include the AIX High performance parallel interface driver at \$2,500, the 7319 Model 110 Fibre channel switch and adapter at \$35,000 and \$5,300 respectively, Turboways 100 and 155 ATM adapters at \$2,000 and \$2,700, Ethernet/FDX 10 Mbps MC adapter at \$800, the Escon control unit adapter at \$10,000, a block multiplexer adapter at \$4,400, and data encryption standards library routines for AIX at from \$150. Internet support is provided by IBM's own Web browser, or a package of Netscape services as PowerSolutions. The Power GXT1000 graphics accelerator is now supported on the PCI bus-based RS/6000 Model 43P workstation. The GXT1000 PCI attachment adapter costs from \$1,700. Also included are OpenGL and GL 3.2 version 4.1.4 and PEX and PHIGS version 4.1.4 for AIX, both at \$700. IBM also introduced TeamConnection, a LAN-based client/server application development tool presently available only on OS/2, at from \$2,000 per user. It will be extended to AIX and other Unix platforms next year. Build support is provided for OS/2 and MVS, with support for Unix, VSE, Windows, and OS/400 to come next year.

### TeamConnection

TeamConnection's database will be distributed by mid-1996. Team Connection market manager Ralph Rodriguez said it enables developers to share data, objects and code, and users can store development objects in the repository on the server to access and use it on workstations. IBM wants to get ISVs using TeamConnection to as a repository for storing other vendors' tools data. It has integrated several cross-platform tools, including VisualGen V2.0, VisualAge for C++, VisualSet for OS/2 Cobol, and PL/I for OS/2. Rodriguez says TeamConnection can probably support up to 200 users. IBM also previewed multimedia networking software Starworks for AIX, which delivers multiple audio and video data streams from RS/6000 to Unix, PCs and Macintosh via LANs. It supports multiple networks including Token Ring, Ethernet and FDDI. Its available in a 50Mb/sec server for \$29,000, 25Mb/sec for \$17,300, 12Mb/sec for \$10,000 and 6Mb/sec for \$5,200. IBM is also updating its Ultimedia Services for AIX to Ultimedia 2.1.3 to extend audio and video support to RS/6000.

### **IBM MUSCLES IN TO BREAK UP AMDAHL-DMR ACQUISITION PARTY**

All studs flashing, IBM Corp dived in to break up Amdahl Corp's party with DMR Group Inc by making the best offer so far for the Canadian computer services company. IBM Canada Ltd is offering offering \$Can11 for each class B share of DMR, against the agreed Amdahl bid of \$Can8.25, and the \$Can9.00 counter-offer from BDM International Inc. IBM has clearly set the marker price because DMR's shares jumped \$Can2.375 to \$Can11.25, but the IBM offer is conditional on 90% acceptance by DMR's class B shareholders, and a large portion of the class B shares have already been "irrevocably" tendered by DMR's three major shareholders to Amdahl. But IBM Canada got the benefit of a decision on Tuesday in the Quebec Superior Court which allows DMR's class A shareholders to convert their holdings into class B shares to take advantage of any takeover offer. BDM made an offer only for the class B shares and under the corporate bylaws, class A shareholders would be allowed to convert to class B stock if a bid was made only for the B shares. Such a conversion would sharply dilute the holdings of the three major shareholders. The conversion bylaws were upheld by the Quebec Superior court in the decision, but IBM has also structured its bid that depends on the conversion of the class A shares. "Our corporate cultures and commitment to the customer are very compatible and our people know each other, and work together well," IBM Canada President Khalil Barsoum said. DMR, doing \$225m a year and employing 2,800, would be operated as a wholly owned subsidiary by IBM and remain headquartered in Montreal. Amdahl said it will be appealing the Quebec Superior Court ruling on the A shares.

### **LLOYDS MAY MOVE CURRENT ACCOUNTS OFF IBM, ONTO UNISYS MAINFRAMES**

In one of the most amazing turnarounds in the history of bank computing, a major bank could be about to convert from IBM Corp mainframes to those of one of the fading also-rans in the proprietary mainframe business. Over the past 30 years, companies like Sperry Corp, Burroughs Corp and NCR Corp have watched helplessly as their retail banking customers around the world converted their biggest application, running current or cheque accounts, to IBM mainframes. But TSB Group Plc has been quietly creating the most advanced current account system in the UK on Unisys Corp 2200 series mainframes. It is the only major bank in the UK that updates its current accounts in real time rather than in batch (years ago, Lloyds Bank Plc told us it would like to be able to do just that, but the task to rewrite the software would be enormous and the mainframes available were not nearly big enough). And now that Lloyds and the TSB are engaged to be married, Lloyds says that it will be deciding in about a month's time whether to replace its IBM mainframes running the current accounts with 2200s running software developed by the TSB - which also handles its telephone banking. How did TSB Group Plc come to have those Unisys Corp 2200 mainframe systems? Back in the mid-1970s, the savings banks around the UK which came together to form today's TSB needed to standardise on a computer system, and the biggest ones had ICL Plc System 4s, derived from RCA Corp Spectra 70 licences - and Spectra 70s were poor copies of the IBM Corp System 360. ICL had phased out the System 4 and created 2900 as the common upgrade path for all its mainframe users, but the TSB software was written in System 4 assembler or even machine code. So when the then Univac Ltd came along and offered to pay to convert the software for OS 1100 if the group agreed to buy an 1100/90 mainframe, ICL pulled out of the bidding, and Univac effectively bought the business - but if Lloyds really does decide to adopt the successor 2200 machines, it will prove to be the best bit of business ever bought.

### **IBM CUTS 1,100 IN CONSOLIDATIONS IN THE US**

IBM Corp has embarked on its new round of job cuts, although the 1,100 announced in the US are thought to be just the tip of the iceberg. The actions are intended to improve its competitiveness, mostly in US sales and support operations. It is consolidating its sales and support staff at various locations throughout the US, but it has already covered the cost in the \$8,900m restructuring charge it took in July 1993. Nine sales support locations in the New York and New Jersey area will be consolidated in Cranford, New Jersey. Other places to suffer cuts include Rochester, Minnesota, where a property and site operations location will be consolidated with one contractor at the cost of about 60 jobs. National finance and planning support operations for areas and industry line management will be consolidated at White Plains, New York and Atlanta. The aim is to get sales, general and administrative spending levels, already down to 18% of turnover from 33% four years ago, down to about 15% or better, which is what its competition is driving towards.

### **ATRIA TURNS SGI MAGIC TOOL INTO CHANGE REQUEST MANAGEMENT PRODUCT**

Lexington, Massachusetts-based configuration management software house Atria Software Inc is making the natural leap to change request management, offering ClearTrack for tracking defects and enhancement requests through the software lifecycle. ClearTrack is a productised version of the Silicon Graphics Inc Developers' Magic Tracker, which Atria bought from SGI for \$1.5m. It'll take a one-time charge of \$0.07 against its third-quarter revenue numbers which are due this week. ClearTrack is intended for use with Atria's ClearCase configuration management and version control package, but can be operated standalone or in conjunction with other management packages too. The software ships in the first quarter of the year at from \$800 on Sun, HP and SGI Unixes. NT and Windows 95 versions will follow. ClearCase/ClearTrack bundles are available from \$4,600. Atria claims 21,000 ClearCase licences at 550 customer sites, most of them Unix. It's going up against the likes of Softool, Pure and BMC and says it'll partner for additional technologies such as quality assurance where it missed the boat when Qualtrak went to Pure Software (UX No 528).

### **OKI OFFERS MEDIASERVER, AUTHOR SOFTWARE FOR THE HP 9000**

Oki Electric Industry Co Ltd has come out with two multimedia software products: the Oki MediaServer video streaming software package for Unix servers, and the Oki Author multimedia authoring tool for Unix workstations and Windows personal computers. Oki is in the Precision Architecture camp and the products will first become available on the Hewlett-Packard Co HP 9000 family of workstations and servers in November in both Japan and the US. Oki MediaServer provides users with multimedia services such as media-on-demand within their current operating environment. It can support up to 200 video streams at 1.5Mbps on an HP 9000 and conforms to MPEG1, MPEG2 and the Digital Audio-Visual Council standards. Oki Author is designed for efficient development of multimedia business applications and supports multiple authoring metaphors. An HP 9000 with MediaServer is \$400,000 in Japan, and Oki Author costs \$7,500.

### **AFTER FIVE YEARS, POLAND ENDS BULL'S TAX CONTRACT**

Poll tax has unfortunate connotations, however you spell it, and after limping along for five years, Compagnie des Machines Bull SA's vast tax systems contract with the Polish government has finally collapsed. It was in deep trouble as long as two years ago. The contract to construct the Poll tax network had been terminated in August because "the final version of the system has not been approved by us and we decided to finish the system with the help of domestic specialists," deputy finance minister Jan Kubik said, announcing the setback for Bull last week. The 1990 contract had been worth \$80m. Termination came after Bull had failed to meet two deadlines on creating the vital accounting part of the system. The ministry withheld only \$2m in payments, and terminated when Bull demanded more money to finish it.

### **EVANS & SUTHERLAND GROWS IN FLIGHT SIMULATION WITH XIONIX BUY**

Evans & Sutherland Computer Corp, Salt Lake City, Utah is diversifying with the acquisition of Xionix Simulation Inc, a Dallas-based supplier of low-cost flight management system training devices, on undisclosed terms. The company's products are said to range from classroom-style desktop systems to mid-level flight management system trainer. Xionix will operate from Dallas as a separate business unit within Evans & Sutherland's commercial simulation sector.

### **IBM HAS DSOM READY FOR ALMOST UNIX- COMPLIANT MVS, SELECTION OF OBJECT TOOLS READY FOR NEXT YEAR**

IBM Corp has announced Distributed System Object Model for MVS 5.2.2 - the Open Edition MVS/ESA SP release that is now 90% compliant with the XPG4.2 standard needed to win Unix branding. The move is in line with IBM's strategy to provide object-oriented programming in several languages on all its systems. So far OS/2 and MVS have been announced, although a version for AS/400 will be announced early next year, the company said. Programming tools for MVS include a post-interactive debugger, System Object Model compilers, language compilers and a set of SOMobjects for MVS class libraries, have also been announced.

## ARTIFICIAL INTELLIGENCE, IN FORM OF CASE-BASED REASONING, FINALLY HAPPENS FOR INFERENCE

By Nick Patience

It may seem to many that the airy intellectualism associated with artificial intelligence and in particular, expert systems, is best left in the classroom. But one artificial intelligence paradigm, case-based reasoning, is not only being used in a useful commercial context - help-desk software, it is actually making money for the company concerned and has enabled it to float successfully on Nasdaq. Inference Corp, based in El Segundo, but shortly on the move to Novato, California, has been using artificial intelligence since 1979, but had difficulty convincing investors that it was worth the risk. So, from 1985 the company concentrated on software development tools, before shipping its first case-based reasoning customer service and support software product, CBR Express, in May 1991. A new chief executive, Peter Tierney, formerly marketing vice-president at Oracle Corp was appointed at the start of that year. The follow-up, CBR2, was released in March this year.

### Imprecise

The company finally managed to get its initial public offering away at the end of July at \$11 per share, raising around \$17m after expenses. The shares are currently trading on Nasdaq at around \$17 each. Inference now concentrates on the CBR2 family of products, having spun off the software development tools business to Brightware Inc, a wholly-owned subsidiary with its main products, ART, ART-IM AND ART Express in May. Limbex Corp, headed by Inference chairman Alexander Jacobson, also has a worldwide licence for Inference products. Case-based reasoning is a fairly recent development in artificial intelligence which attempts to mirror the flexibility and imprecise nature of human knowledge derived from previous experiences. Instead of constructing a set of rigid rules using if-then statements, as is the case with early rule-based expert systems, case-based reasoning maps current problems onto libraries of previous cases to see if a problem has been solved in a similar way before. If it has, then the same solution is re-usable. If it has not, then the nearest solution is found and adapted to fit the new one. Obviously, if nothing remotely like the new problem has occurred before, then the problem-solver will have to start from scratch and add the solution to the library. In practice though, companies that use case-based reasoning know most of the problems they are likely to encounter in advance and so can construct the libraries of solutions accordingly. The gaps in the knowledge are filled by asking relevant questions. Inference's initial foray into case-based reasoning help-desk systems, CBR Express, was an application shell for text input. The text was split into trigrams, and matched against all previous cases, achieving a 20% success rate, according to the company. The system then suggested lists of questions, the answers to which would enable it to home in on matching cases if it did not hit upon one in the first pass. For the first time, according to Chris McKee, vice-president of Northern European operations at Inference, analysts and potential investors understood what the product did, and the commercial viability of case-based reasoning. An updated graphical version of CBR Express is part of the CBR2 range. The authoring facility enables cases to be constructed. A case is made up of a title, a description, guiding questions and actions which need to be taken to resolve the problem.

### Weighting

The cases author can influence the importance of questions by weighting them. A test facility evaluates the quality of the cases and Express Generator creates case bases from documents, such as technical specifications, either in ASCII or Microsoft Corp Word formats. The Express help desk module in CBR2 provides call tracking problem management, system administration and management reporting facilities, from a single Windows-like interface, according to the company. It also includes a training scheduler and an inventory manager. Perhaps surprising to some is that the development work for Inference's CBR range is undertaken not in California, but in the slightly less glamorous and balmy surroundings of Slough in Berkshire. The employees there are more productive, as well as being cheaper, according to McKee. CasePoint 2.0 is the end-user tool to view case repositories created by CBR Express. Running as a client under Windows 3.1, HP-UX, IBM Corp OS/2 or Solaris, it can be used for file system access or via SQL links into relational databases. The company announced a CasePoint WebServer for internet access to CBR2 in April. Inference also supplies two pre-packaged internal help-desk knowledge bases for solving problems in 35 widely-used desktop packages. Last in the CBR2 family comes DP Umbrella SQL, under licence from Vycor Corp. It is an internal help-desk problem management tool, with various customisable components and application programming interfaces. Inference has also licensed knowledge gathered by ServiceWare Inc for sorting out the odd problem or two experienced by early experimenters with Windows95 as one of its pre-packaged knowledge bases. A different application for Inference's technology is the increasing use of call avoidance systems. These came about as software became more complicated, users more demanding and experienced technical support staff that could placate

disgruntled users more difficult and expensive to hire. The CasePoint WebServer is one example of this application, and Compaq Computer Corp and is one such manufacturer pre-loading Inference support software on its machines. Microsoft has signed to use CBR2 in future releases, but McKee would not reveal which ones.

### Metier

IBM used Inference software to produce a CD-ROM to aid developers working under OS/2. Gateway 2000 Inc uses CBR2 on its help-desks worldwide, as do Hewlett-Packard Co and Rank Xerox Ltd for their printers and photocopiers respectively. UK supermarket operator J Sainsbury Plc will soon have a case-based reasoning system based on Inference's CBR technology in each of its supermarkets in the UK for staff to solve the more straightforward problems which arise with the electronic point of sale system. Approximately half of the company's 330 stores have the system running at present with the rest up by the year-end. CBR3 is currently in development with the specifications completed. It will be a 32-bit application developed under Windows95, released some time in early 1996. McKee said that all of Inference's existing applications will run successfully under Windows95. Inference will not be resting on its laurels as far as expansion is concerned, as it has set aside around \$20m for acquisitions of help-desk-type companies both in the US and elsewhere, according to McKee. There is already a healthy help-desk software market, but McKee reckons that case-based reasoning sets Inference apart from companies such as Software Artistry Inc and Scopis Technology Inc. Clarify Corp produces software to do much the same as Inference's, but that is not surprising as it is developed using CBR Express. Despite being taught in many law and business schools for some years, case-based reasoning's forays into expert systems had been relative failures in commercial terms. But with Inference and the companies that are using its products to create their own help-desk systems, it may have finally found its metier.

### METADATA GETS A PRIESTHOOD

If an organisation uses more than one tool to access metadata for data warehouse processing, chances are it's having to keep multiple copies of the metadata repositories because the access technologies are incompatible. It's also nigh-on impossible to move metadata from one system which may be a multidimensional database over to an on-line analytical processing set-up. At least that's what the database and warehouse folk tell us. Maybe not for too much longer however. Last week half a dozen database access and tool vendors created themselves a metadata priesthood they're calling the Metadata Council. The idea is to draft a metadata interchange specification and implementation model by the end of the year that'll describe how metadata - in models to their liking - can be accessed by different tools and across different storage system. Council members are Arbor Software, Business Objects, Cognos, Evolutionary Technologies, Platinum Technology and Texas Instruments. It's not inconceivable that Arbor Essbase metadata could end up being used by Business Objects' Mercury query and analysis system.

### OVERLAND DATA OEMs CHEYENNE BACKUP SOFTWARE

Overland Data Systems, San Diego, California, has inked an OEM agreement to market Cheyenne Software Inc's automatic backup and restore software products for Unix, Novell, and Windows NT. Additionally, Overland Data will bundle its TapeXpress line of mainframe class tape cartridge tape and its digital linear tape products with Cheyenne's ARCserve/Open for Unix, Cheyenne HSM, and ARCserve for NetWare, Windows NT and Macintosh. Overland Data's TapeXpress line's L490E half-inch cartridge tape drive enables users to write to, and read from IBM, mainframe tapes. Cheyenne is based in Roslyn Heights, New York.

# unigram·x

The weekly information newsletter for the UNIX™ community worldwide

Well that little love affair didn't last long: Jim Manzi resigned as chief executive of **Lotus Development Corp** and senior vice-president of **IBM Corp**, saying "I have concluded over the past couple of weeks that I'm not the right person to be leading Lotus at this juncture in its history - the attributes that I believe made me an effective chief executive of a nearly billion-dollar independent company, aren't necessarily the attributes required of an executive leading a division within a much larger organisation," and "the challenges that excited me previously aren't necessarily the same challenges we face today;" no successor had been named last night but there are still plenty more people at RJR Nabisco and American Express Co for IBM to choose from.

**Ross Technology Inc**, the Fujitsu Ltd-owned Sparc designer, has amended its registration statement for its flotation - the Austin, Texas company is offering 3.5m new shares at a target \$12 to \$14 a share, to show that Sun Microsystems Inc will be coming in alongside Fujitsu as a corporate shareholder. It plans to offer Sun the right to buy \$13.764m shares directly from the company, at a gross price per share equal to the per share public offering price less underwriting discounts and commissions, and a warrant for additional shares at the same price to give it the right to buy shares up to a total of 9.9% of the company's outstanding capital stock as of the date of acquisition by exercise of the warrant. The underwriters are Robertson, Stephens & Co LP and PaineWebber Inc.

**Meta Group Inc**, Stamford, Connecticut computer industry research house, has filed with the US Securities & Exchange Commission to go public with an initial offer of 2.4m shares, 1.5m of them new. It expects proceeds of \$17.4m, and wants it for working capital and product development. Underwriters are Robertson, Stephens & Co, Donaldson, Lufkin & Jenrette Securities Corp and First Albany Corp.

People dismayed at the poor turnout at their press conferences might like to try taking a leaf out of the book of **Hewlett-Packard Co's** subsidiary in China. There, reports the *Wall Street Journal*, HP offers Chinese journalists the equivalent of \$12 to attend its news conferences, and insists that the money is for taxi fares - which could cost that much - but is also equal to a week's wages for some journalists... "it's not a bribe," it insists - "it's local practice."

The buyer waiting in the wings to wrap up acquisition of **Unipalm Group Plc** turns out to be Fairfax, Virginia fellow Internet access provider and Microsoft Corp affiliate **UUNET Technologies Inc**, and the price is indeed £4.50 a share. However it is in UUNET shares, which are traded only on Nasdaq, making them less attractive for British investors.

**BMC Software Inc**, Houston, Texas, has integrated its Patrol Knowledge Module application management software with Sybase SQL Server. Patrol automates and centralises control of distributed applications, databases, servers and networks.

Steer your browser to <http://www.morsepr.com/MMdocs/Bill.html> to preview the house that Windows 95 built. Seattle, Washington-based public relations firms firm **MorseMcFadden Communications** dispatched a boat onto Lake Washington, upon whose shores Microsoft Corp chairman Bill Gates is constructing his \$50m mansion, not far from Microsoft's Redmond campus, and posted its findings on the Web. The site features photos of the 40,000 square foot abode, as well as bits of trivia. The mansion reportedly includes an L-shaped swimming pool with music piped in underwater, a 20-vehicle garage, a theater seating several dozen people and a dining room for several hundred guests. "No, it's not true that the house has only 95 windows, though we will soon be conducting a contest to determine how many windows it really does have," promises MorseMcFadden. Not bad for your \$89 Windows 95.

**Aurum Software Inc**, Santa Clara, California, has hired three marketing executives to bolster the business support software house's share of the sales force automation and customer service markets. Susan Foley, director of product management, will oversee the SalesTrak and TeleTrak product lines. Laura Thompson, is new director of business development, and Matthew Duncan, director of marketing. Foley was formerly director of client/server field marketing at Oracle Corp.

**SecureWare Inc**, Atlanta, Georgia, the company Open Software Foundation chose over Addamax Corp to provide the technical basis for its secure Unix offering way back in 1990 (UX No 275), has a new LAN and Internet security package designed to run on Hewlett-Packard Co's 9000 Series workstations, SCO Unix and Windows, with NT and other ports to follow. Hannah is said to provide end-to-end authentication, access control, integrity protection and auditing without requiring modification to applications. No pricing.

**Digital Equipment Corp, Oracle Corp, Consilium Inc**, Mountain View, California and **Avnet Computer** of Tempe, Arizona have formed a marketing alliance to peddle the VMS version of Consilium's WorkStream manufacturing software to semiconductor and electronics makers.

**Computer Associates International Inc** made nice with China's Maoist regime last week, as company founder and chairman Charles Wang chatted with Deng Pufang, son of senior leader Deng Xiaoping. Both, it emerged, are the same age and were born in the year of the monkey. "I'm a monkey, too," quipped Deng to Wang, according to the *Associated Press*. Wang was in Beijing to donate 50 computers to two schools. The business software giant plans to open a Beijing branch by year-end.

**Applix Inc** has a version of its real-time spreadsheet that runs on Solaris and Windows NT for **Bloomberg Financial Markets Inc's** news terminals. The software, dubbed Real Time Spreadsheets, provides a custom GUI enabling users to analyse and graph Bloomberg's financial market data. Both are priced at \$2,700.

**Apple, IBM and Motorola** finally put their signatures to the Common Hardware Reference Platform specification; designed to unify the Macintosh and PReP worlds. The first machine - or rather a cobbled-together prototype - is expected to be shown at Comdex/Fall which runs from November 12th - 17th.

Although we haven't seen one of those "we're open for data warehousing and have got seven hundred partners" type announcements from **Tandem Computers Inc**, it's on the warehouse train, with employment openings in all sorts of decision support and warehouse areas. Declaring that it's already got most of the required technologies under its wing, the company admits "it's a good marketing ploy although in truth, and particularly with the large scale databases, it is a very customised process requiring a good understanding of business and technical needs."

**Hewlett-Packard Co**, Palo Alto, California is now shipping HP Distributed Smalltalk 5.0, which now incorporates OMG Corba 2.0. It is portable across most Unix systems and PC platforms, and enables developers to create their own APIs and partition applications. It costs \$5,000 for Unix systems and \$3,000 on PCs.

Former **Novell Inc** chief technologist Kanwal Rekhi says the first he learnt of CEO Bob Frankenberg's ill-fated SuperNOS venture - apparently entirely his creation - was when he read it in the trade papers and walked down the corridor to ask "Bob, what's SuperNOS?"

Dallas, Texas-based **ObjectSpace Inc** has revamped its ObjectMetrics module for gathering and analysing statistics on code development. The module, one of four offered by ObjectSpace, is designed to work with ParcPlace VisualWorks 1.0 and 2.0, VisualWorks/Envy (integrated with Object Technology Inc's code management system), Visual Smalltalk 3.0 and ObjectSpace's own ObjectCatalg code re-use system. It costs \$1,000 for five users. The module includes a metrics analysis tool for graphically illustrating technical comparisons between projects and applications.

As expected (UX No 559), **Cray Research Inc** has added Sparc Technology Business' 85MHz microSparc II to its CS6400 servers running Solaris 2.4. Upgrades for the 60MHz models are due later this next month. CS6400s start at \$400,000 and are OEMed by Amdahl Corp. Cray's got a 48-way CS6400 running a 1.6Tb Oracle database at its Beaverton, Oregon, division.

Widespread rumours continued to circulate around Wall Street circles and elsewhere which say **IBM Corp** is negotiating to acquire all or part of **Novell Inc**. The companies reportedly met in Scottsdale, Arizona, last week.

Throwing more mud at those "Microsoft out of OMG" stories still running round the trades, **Microsoft Corp** told us (just too late for last week's issue) that "Yes we will respond to Part B." Corbasters await COM specs and the submission eagerly.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: [info@unigram.globalnews.com](mailto:info@unigram.globalnews.com)

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Registered at the Post Office as a Newspaper



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23 OKT. 1995

UBN

The weekly information newsletter for the UNIX™ community worldwide

London, October 23-27 1995

Number 561

## INTEL-HP COMBINE SPLITS P7 INTO TWO?

Financial analyst and Intel follower David Wu over at Wall Street house Chicago Corporation reckons - not unlike other reports we've heard - that the Intel-HP combine is going to produce two 64-bit P7, aka H1, chips: one a low-end 2.5 volt P7 that's worth 1,000 SPECint92 and aimed at Intel's market and one he calls a "Super P7" worth 1,500 SPECint92 aimed at HP's bailiwick. Both the same architecture and both combining x86 and PA-RISC instruction sets, Wu figures the P7, done on a 0.35-micron CMOS process, graduating to 0.25, for '97 at the earliest or '98. The Super P7, only on a 0.25 process, he puts squarely in '98. Linley Gwennap, editor of the *Microprocessor Report*, speculated along vaguely similar lines at the recent Microprocessor Forum. He mused that Intel-HP would do an Intel-only piece and the now famous Intel-HP merge. But he played with the idea that the Intel-only silicon would be 32-bit as both a stepping stone to the full-blown P7 and a hedge against the 64-bit part's possible non-acceptance by the market. Wu dismisses such thinking and contends that would mean they weren't the same architecture. Wu also reckons that Intel will try to fix its problems with the P6 running 16-bit apps poorly with a "P6S" chip next year clocking 233MHz-266MHz although silicon gurus suggest that Intel's difficulties, which lie deep within the P6's pipeline, wouldn't be solved simply by jacking up the clock - the ratio of how well it ran 32-bit versus 16-bit apps would remain the same, according to Gwennap. Wu also suggests they'll be a third shrink of the P6, ultimately to a 0.25-micron process, that he calls a P67, due in 1997 and worth 700 SPECint92. Wu figures Windows 97 or Memphis, which he says will be pure 32-bit, will help the P6 problem. However, Microsoft has indicated to others that it's already shaken as much 16-bit code out of Win95 as it could so Memphis' value remains to be seen.

## TALIGENT RE-CASTS BUSINESS PLAN

Fending-off press speculation that its investors are going to pull the rug from under it and currently failing to convince anyone that it is anything more than the IBM Corp object shop, Taligent Inc's got to dig its way out of a hole. It's lost its CEO to boot. The company says it's got sufficient funding to see it through 1996 and acting CEO Dick Guarino is now working-up a new business model for the IBM/Apple/Hewlett-Packard object venture the company says it'll deploy in the first quarter of 1996 which will specifically address a product revenue stream. Taligent says it'll focus its efforts squarely on delivering its own CommonPoint application environment implementations on volume platforms, in its mind Windows NT (and Windows 95), beta versions of which are due by year-end. Although it's not by any means certain in what form Microsoft Corp's own object-oriented Cairo environment will see the light of day (it's currently expected early 1997), Taligent claims Cairo will provide a robust, distributed file system for Taligent to ride upon. Second prong of the plan envisages a re-packaged, cut-down, small footprint version of the 103-framework CommonPoint, designed for companies "which haven't swallowed OO yet;" a kind of Taligent early learning centre. (Wouldn't it have been sensible to do this from the outset, we wonder?). Although well-received in technical circles, it's said Taligent requires additional tools and database access and that its present complexity will likely frustrate anyone not skilled in object development. Taligent's also changed its application strategy. Its original plan was premised upon a widely-deployed object platform attracting swarms of ISVs. Right now only IBM Corp is selling CommonPoint, for which there are some 50 applications available. Taligent says it's re-focusing on other kinds of distribution methods, looking for vertical market VARs and system integrators to carry the product. There'll be a second release of CommonPoint next year incorporating the first iteration of its People Places & Things front-end metaphor. A CP Professional development environment is due in the first quarter. Taligent doesn't support the Hewlett-Packard Co-derived ISO/ANSI Standard Template Library format for storing C++ objects right now but will move to it in time. Meantime, a VP at Taligent investor IBM we spoke to last week said the root of the company's problem lies with original concepts and badly formulated marketing and positioning strategies (a planned TalOS microkernel finally fell off the map earlier this year as the company re-trenched around its CommonPoint application environment). Indeed the same VP suggested CommonPoint should really have been developed and marketed according to its basic strength, as a shared whiteboard environment.

## HITACHI BEGINS ITS MOVE TO POWERPC

On Tuesday October 24 Hitachi Data Systems Corporation (HDS) is supposed to start acting on the strategy it and parent Hitachi Ltd back in Japan have developed around their 18-month-old deal to OEM Power and PowerPC-based systems from IBM. Hitachi was being particularly inscrutable in the face of its pending announcement but it is believed that it will lead - albeit somewhat unimaginatively - by rebadging IBM's massively parallel RS/6000 SP2 boxes. Sold as the SR4300 running AIX, prices start at \$350,000. The Power2 machines are the ones that can theoretically contain 512 Power processors and which, of course, aren't going to the 64-bit PowerPC 620 because the chip has proved too wimpy (UX No 555). Immediately, Hitachi will use IBM's AIX operating system and then, as it has oft suggested, put a parallelized version of its own HI-OSF/1 Unix variant on the beast later on. (*Hitachi SMP boxes on the way? page 3*)

## ASSERTION DEFINITION LANGUAGE CLAIMED TO EASE SOFTWARE DEVELOPMENT

Sun Microsystems Inc, Japan's Information technology Promotion Agency (IPA) and X/Open Co Ltd last week made a beta version of the long-gestating Assertion Definition Language (ADL) publicly available (UX No 462). ADL is said to offer developers the ability to capture software interface specifications and automatically generate conformance test suites and interface documentation. ADL uses a C syntax-like formal notation to describe interfaces which are compiled into "readable" English and Japanese and into the C code that will test an implementation of the interface against the specification. ADL presently describes only C language interfaces; C++ and Object Management Group IDL versions are planned. The three hope ADL will eventually be linked to code-testing mechanisms such as the UK Defence Research Agency's TenDRA compiler technology - productised in Mortice Kern Systems Inc's Code Integrity - so that application code can be tested against API specifications and suites created using ADL. At the moment Code Integrity "tests the plugs and ADL tests the sockets," says X/Open test business unit's James de Raeve. Linking the two could provide a standard way of defining, designing, testing and porting code, reducing bug-fixing and porting costs and time. However TenDRA currently uses a Tspec language to define API header files, not ADL. The problem is money. Money that X/Open currently doesn't have, though all parties say they're looking at ways of making the links happen. MKS says conversion tools are one option. X/Open developed the first prototype test suites using ADL a year ago and has subsequently been used to develop tests for Object Management Group's Corba 1.2 specification and the Japanese version is being used to develop tests for part of the Posix specification. X/Open is working with OMG to specify Corba 2 interfaces in ADL and will use the language to develop Common Desktop Environment test suites. ADL 1.0 will ship on December 15. The ADL Interface Specification defines the signature and behavioral semantics of the interfaces. A Test Data Description defines the test data to be used during the test; a Natural Language Dictionary includes a glossary of terms to be used in the generation of natural language output. The ADL project is the culmination of various independent projects related to formal methods and software testing at Sun Labs, Stanford University and the Polytechnic University New York as far back as 1987. Sun Labs' ADL project was turned over to the IPA-funded Open Fundamental Software Technology project in 1992.

## ORACLE ADDS DIGITAL UNIX RUN TIME CLIENT TO RALLY

Oracle Corp, Redwood Shores, California, has added a Digital Unix runtime client for Digital AXP environments to its Rally application development tool. One of the products Oracle got when it acquired DEC's Rdb database division (UX 503). Rally is a 4GL application generator closely integrated with Oracle Rdb. It provides common forms and reporting capabilities for working with data from Oracle Rdb and Oracle7. The new issue brings Oracle Rdb and Oracle7 even closer, as it also offers a direct call interface to Oracle7 via SQLNet, whereas a DEC DB Integrator was used in previous versions. When Oracle acquired DEC's Rdb relational database, there was speculation (UX 504) that Oracle and Rdb would eventually become one product, with pieces of Rdb's technology being subsumed into Oracle7. However, Rally product manager Shirley Ann Stern said this probably will not come to pass as the databases are used in different markets, and their respective engines differ technically. She said that the two engines may never merge but their tools are common, so customers are asking for common system management environments around the tools. Rally's new run-time system will enable users to deploy applications that were developed on OpenVMS to Digital Unix AXP. The new issue of Rally also has added editing, tracing and debugging for Motif, and can use a graphical Motif interface. It also includes the Windows-based Rally Application Visual Environment (dubbed Rave), which displays a graphical picture of Rally's applications. Oracle may develop support for other Unix flavours in future, depending on customer demand, Stern said. Rally for Digital Unix costs \$330 for customers with an installed base.

## NEW WINDD HAS TIGHTER WINDOWS LINKS

Tektronix Inc's new 2.0 version of WinDD reportedly offers tighter Windows-Unix integration with support for Windows 95 and for cutting and pasting data across operating systems (UX No 543). Version 2.0 of the PC-on-Unix software, on the heels of a dot release that added NFS support, now supports Win95 applications as well as NT and 3.x. Since Unix applications are not yet OLE-enabled, despite the efforts by the likes of Bristol and Mainsoft, Tektronix built its own bridge between Windows and Unix so users can cut and paste data. According to WinDD product manager Mike Cruz, Tektronix created a hybrid link between X selection mechanisms and Windows clipboards. The link isn't dynamic, however; user action is the only link between the two environments. Text and graphics aren't recognized as objects. Cruz said Tektronix is working on supporting translations from object to object with protocols like Corba and OpenDoc, but doesn't expect anything until perhaps version 4.0. WinDD 2.0 also lets systems be configured remotely so that administrative work doesn't have to be done one console at a time. The new version does remote license administration and printer configuration and lets users log on with a single password for both Windows and Unix. Tektronix vaunts the fact that WinDD is in its second release while rival NTrigue from Insignia Solutions, which like WinDD is also based on Citrix Systems Inc technology, has yet to emerge. WinDD is now selling for \$2,500 for a 10-user license compared to the old \$3,500 because the PC file server function is now an option. It goes for an additional \$1,500, but Cruz said that won't raise most people's costs because there's little demand in Unix environments for WinDD as a file server; most just want WinDD to run Windows applications.

## COMPAQ - WITH MICROSOFT - TURNS TO TANDEM FOR SERVERNET CLUSTERING

Compaq Computer Corp has turned to Cupertino-based Tandem Computers Inc for the latter's ServerNet high-speed bus server-clustering architecture in furtherance of its ambition to turn itself into a full-line computer manufacturer. Microsoft Corp is also in on the agreement, and the trio will push it as the basis of an industry standard for clustering, as part of Microsoft's Windows NT Server availability initiative. Compaq and Microsoft also plan to add support for SQL Server on the Compaq On-Line Recovery Server. The Compaq servers will initially be offered with Windows NT Server, but Unix and NetWare are to follow. It will also work with database suppliers such as Oracle Corp, Sybase Inc and Microsoft to integrate their products into the strategy.

## NEXGEN SAYS P6 16-BIT TO DOUBLE PERFORMANCE

Milpitas, California-based NexGen Microsystems Inc says its Nx686 P6 knockoff - which it hopes to get out by the time the real P6 is "available to the mainstream PC marketplace" - will offer twice the performance of a P6 on 16-bit applications - which is the P6's *bete noir* - and 33% better performance on 32-bit code. If it can deliver as it says - and it's shown first silicon running Windows - it will deserve to target, as it intends, the mainstream high-volume market, a region that from the current vantage point looks pretty closed to the P6, or Pentium Pro, as it's now called, because of its poor handling of 16-bit apps. The Nx686, built on a 0.35-micron CMOS process by IBM Microelectronics, is supposed to be initially available at 180MHz. It's a single superscalar chip with roughly six million transistors. It extends the RISC86 architecture NexGen is using in its 586 part by decoding multiple x86 instructions per clock cycle which are fed into seven execution units. As might be expected, it uses a highly fashionable speculative out-of-order execution and two-level branch prediction. To feed the high-speed execution units, it incorporates on-chip L1 cache consisting of 16Kb of instruction cache and 32Kb of data cache. Like the Nx586, it has an integrated L2 cache controller with a private bus to off-chip SRAMs that lets the L2 cache memory operate at the same speed as the Nx686 processor. The L2 cache can be 2Mb. The part's die size is expected to be smaller than Intel's and hence cheaper as is the way it handles SRAMs. It will fit in the current NxPCI/NxMC chipsets.

## 21164A TO ADD INSTRUCTIONS IN BOW TO NT

DEC confirmed that the Alpha 21164a, due out next spring, should do 500 SPECint92 by the time it's a few months into production. It'll be the first Alpha produced in a 0.35-micron CMOS process. DEC's shooting for 2.0 volts dissipating 20 watts, considerably cooler than the current 45W-55W that's the best Alpha can offer today. That will put the 21164a nearer Pentium's class since a high-end Pentium dissipates about 18 watts. The 21164a will also be the first Alpha to include byte and word load-and-store instructions in an attempt to make the chip more compatible with the x86 world. Forever afterwards these new instructions will be standard. Alpha's older design, reading only 32 and 64 chunks of data, was fine for servers and workstations, it said, suggesting that the part is bound for a lower end of the market. It will ease porting device drivers to the thing and improve its emulation of Intel code. The silicon is designed with 9.66 million transistors and processes a maximum four instructions per cycle. L3 cache support will continue to be optional. It also expects to increase its support for synchronous SRAM-based designs. DEC described the part at last week's Microprocessor Forum in California where it was trying to send out the message that it delivers on its performance promises in contrast to, say, ohh, the PowerPC 620, for example.

## ICL, ORACLE IN SYSTEMS INTEGRATION DEAL

Oracle Corp has signed ICL Plc to a worldwide agreement to resell its entire product line as part of ICL's systems integration service. The agreement is being led by ICL Enterprises and is the fourth of its kind Oracle has signed in Europe under its Business Alliance Programme. ICL is training 100 of its staff in Oracle software and ICL companies bought £2m of the products between them. Oracle will act as consultants for its products, but leave the rest to ICL. It also has agreements with Ingres Corp and Sybase Inc, but covering only their databases.

## SUN PROFITS SOAR AMID 17% TURNOVER

Even when the figures from Sun Microsystems Inc are excellent, the company frequently comes in with disconcertingly low turnover growth, and the cheering over a 120% leap in fiscal first quarter profits to \$84.7m is tempered by the observation that sales were up only 17% at \$1,490m. This comes at a time when the vastly larger and more diversified Hewlett-Packard Co is growing considerably faster - and that largely on the back of Unix servers. The results nevertheless exceeded Wall Street's expectations. Sun's chief executive Scott McNealy said growth came in nearly all areas. "Everyone wants to know what's the silver bullet. But momentum is continuing across the board," he told *Reuter* in an interview. "There is no silver bullet." Sun said that continued expansion into telecommunications, financial services and manufacturing, coupled with its growing presence in the Internet market, helped drive revenues and profits to high levels - its servers still dominate the Internet market. The company says that at 44.2% of sales, the gross margin percentage was at the high end of recent historical ranges. It was 40.2% this time in 1994.

### HITACHI SMP BOXES ON THE WAY?

As expected (UX No 488) Hitachi, will seek to distinguish its OEMed SP2 boxes (see page 1) from Blue's by middleware, which includes OpenTP 1 transaction monitor for running on HP, Sun, SR4300 and Osiris, its IBM MVS mainframe compatibles; Transpatch designed for multiprocessing sequential input streams across multiple nodes and JPI, a job scheduler which allocates batch works to other nodes for processing. It'll also offer an external DASD (Direct Access Storage Device). Less clear is what Hitachi is doing about PowerPC symmetric multiprocessors which it's also expected to field - at least at some point. It's been suggested that Hitachi might put out boxes containing its own version of the silicon, leading to speculation that it might be the one coming from PowerPC cloner Exponential Technology Inc (UX No 552) which Hitachi will reportedly be building for the start-up, but since the rumoured 500 SPECint silicon is backed by Apple Computer Inc maybe it doesn't have enough horsepower on the floating point side to suit Hitachi's SMP tastes. Hitachi has rights from IBM to design its own PowerPC chips. Maybe it's come up with a remedy for what ails the sickly 620 which, as you'll recall, was specifically intended for SMP. Hitachi, now that it's getting the hang of this open systems business, is not supposed to stop at the PowerPC. It's supposed to go multi-platform with servers and add an Intel line running both Unix and NT (UX No 555).

### IPSYS OVERREACHES AND GOES TO THE WALL

Meta-CASE-cum-second generation client/server development tool supplier Ipsys Software Plc, of Macclesfield, Cheshire, has gone belly-up. The company is in the hands of the receivers following "poor management" decisions and some over-ambitious marketing strategies - including a US venture - according to Steven Law, managing director of Lincoln Software Ltd, which has acquired the intellectual property rights to Ipsys' Object IE application development environment for an undisclosed sum. Law says Lincoln's first task will be to concentrate on consolidating Ipsys' core technology. He's cautious about product development plans, but says the company will probably extend the product line to other platforms, including NT, and is also looking for new distributors and integrators. Earlier this year Ipsys was talking a good fight against second generation application houses such as Forte Software Inc and Dynasty Technologies (UX No 527). However it built up a substantial debt trying to crack the US market by building a direct presence out of San Francisco, California. Despite all the efforts of Ipsys co-founder John Lewis who spearheaded the US effort, the company's North American sales remained almost non-existent; wins included Canadian travel company Global, in Toronto, and direct mail specialist FingerHut in Minneapolis, Minnesota. Lincoln, which claims no link with the previous administration, despite also being based just along the road in Macclesfield, claims to have retained Ipsys' ten key technologists - with three or four staff doing all the other jobs - from the thirty technical staff Ipsys employed before its demise. Lincoln Software has four shareholders including Steven Law. Co-director Ashley Hall and "two non-participants". Hall and Law already own a VAR networks and PC business called Hallman Computer Co Ltd, based in Cheshire. According to Ashley Hall, Ipsys didn't recoup enough of its "heavy" R&D spending, and focused too heavily on the US venture. Lincoln will support the Ipsys products and "listen to the customer's feedback for a change." Ipsys Object IE is used to generate database and design code on Sun and IBM platforms. Ipsys became prominent in the early 1990s through its rivalry with Bournemouth-based Systematica, another advocate of the so-called MetaCASE (computer aided software engineering) approach, where CASE tools tuned to individual organisation's particular software design methodology are built using complex development environments. Ironically, Systematic too foundered, partly thanks to Ipsys' more effective marketing at the time.

### PLATINUM TO CUT STAFF, DEVELOPMENT DEPARTMENT NEXT

With estimated losses of up to \$4.3m for the first quarter of its 1996 fiscal quarter, financial application house Platinum Software Corp is looking to cut over one hundred of its staff worldwide. An early casualty in the clear-out is Platinum UK, which is rumoured to be losing over half of its staff, including its UK MD Phil Edwards. A spokesman for the Irvine, California company claims Platinum UK will have fifteen "primarily channel managers" remaining in its operation. As we went to press Platinum was rumoured to have its development department in its sights, with one of the first US casualties including Dan Santell, head of research and development.

### ITC AIMS NFS SERVERS AT AUSPEX, NETWORK APPLIANCES

Invincible Technologies Corp (ITC), Franklin, Massachusetts, has introduced its Lifeline Information Servers Series, aiming to hit the spot it reckons Auspex Systems Inc and Network Appliance Corp have missed, offering Network File System (NFS) servers combined with what it calls intelligent centralised storage management. Companies are looking to provide NFS processing, it reasons, but coupled with other applications on the same server. A dedicated NFS server is hard to justify in the modern business environment, it claims. The Lifeline Series comprises the L200 and L275 series; offering the 200MHz or 275Mhz 64-bit, Alpha RISC CPU, connected via a 128-bit wide data path. The system runs either 64-bit Unix or Windows NT Server, both supporting 133MB/Sec PCI system bus combined with a 2MB, 12ns system cache and up to 512MB of RAM. The RAID controller is powered by a dedicated RISC CPU and supports up to 32MB of non-volatile cache. A Lifeline L2000, fully configured with 200MHz processor, 64MB of memory, RAID controller, 8.6Gb of disk space, DAT tape drive, Fast Ethernet card, 15" colour graphics console and Lifeline system software goes from \$35,000. Shipping now, ITC claim it will ship 300 units in its first year. Its already got a direct sales force in place in the US and plans to rely on channels in Europe, establishing its European headquarters in the UK. The Lifeline servers incorporate ITC's in-house developed MEDS (Management, Environmental and Diagnostic Subsystem), an on-board diagnostic capability that monitors numerous system parameters, such as disk drive status, temperatures inside the enclosure and the quality of the server's electrical power. MEDS anticipates and notifies ITC and the user of potential problems via fax, email or pager and displays the location of components requiring attention. Other Lifeline server features include redundant, on-line replaceable components, including power supplies, and cooling, a journal-based file system that ITC claims eliminate file system checks (fsck), RISC-based RAID I/O processors supporting user configurable RAID levels and removable, hot-pluggable disk modules supporting 2.1Gb and 4.3Gb 7200 RPM disks. Privately owned ITC has 50 employees and has its background in high performance, fault tolerant RAID subsystems, and its Advantage Series of storage servers providing removable disk expansion capabilities for SCSI, DSSI and FDDI systems. It claims a projected turnover of \$20m this year.

### STB PRESSES EMBEDDED SPARC CASE

Although Bill Joy's long-held vision that Sparc RISCs will eventually find their way into washing machines and other consumer and home electronics devices isn't with us just yet, Sun's Sparc Technology Business continues to advance the company's embedded systems case. After delineating plans and partners for its 'e' series microSparcs designed for the embedded market (UX No 555), STB's got one of its core technology licensees, C-Cube Microsystems Inc, to come clean and admit it's ditching a four-year-old proprietary RISC architecture used in its VideoRisc Compression Processor in favour of a new generation of microSparc-powered multimedia engines. The C-Cube device will support MPEG-2 video compression and decompression, H.320 and H.324 encode and decode, audio and videographic functions. STB's chosen a manufacturer for microSparc IIe, slated to ship in the second quarter of next year, but isn't saying which company has won its business: Fujitsu Ltd currently fabricates microSparc II+.

### OPENVISION ADDS SECURITY TO EVENT MANAGER

OpenVision has put out a dot release of its Open V\*Event Manager system management software which adds Kerberos-based security to its system manager. The optional configuration replaces the standard RPC (remote procedure call) with OpenV\*Secure RPC, providing user authentication services, data encryption and data integrity via the X/Open standard Generic Security Service API (UX No 548). 3.1 also monitors and manages SMNP devices by polling SNMP management information bases for event information. This leads to a tightly integrated event environment with SMNP-based network managers, and reduces wide-area network traffic, claims the company. The RPC also comes with OpenV\*SecureMax, the Pleasanton, California-based company's enterprise auditing security solution. OpenV\*Event Manager is up on SunOS, Solaris, HP-UX, AIX, Digital Unix, NCR Unix, Sequent and NT with Oracle, Informix and Sybase databases. Prices start at \$10,000.

## DEC'S LONG CLIMB-BACK TO PROSPEROUS RESPECTABILITY GETS UNDER WAY IN FRANCE

By Marsha Johnston

Based on a quick survey of users and distributors, Digital Equipment Corp appears to be making a slow but steady comeback in France. Its market-leading Alpha RISC architecture and low-priced quality personal computers, indirect sales policy and reputation for excellent service are all helping to rebuild DEC's installed base with new clients. More shipments of higher-end, more heavily configured workstations caused DEC's share of market revenues for workstations both in France and across Europe between 1993 and 1994 to grow to 13.2% from 12.5% and to 15% from 14%, respectively, according to Dataquest Europe figures. Although DEC's unit share market position in Europe dropped to 17% from 19% over the same period, its quarterly unit market share rebounded in the second quarter after a difficult first quarter, increasing to 8.8% from 8.4%.

### Blocking off

"It was likely to have been a result of the successful launch of the AlphaStation 250, which accounted for 40% of second quarter shipments, and reduced concerns by customers over the company's financial situation," says Dataquest workstation analyst Karen Benson. She adds that she expects to see the same positive revenue growth trend for the rest of 1995. "I think Digital has indeed succeeded in blocking off erosion of its installed base and is regaining market presence. Although it has all of the best ingredients with its leading technology, a very aggressive pricing strategy... it is taking much longer than anyone would have imagined," she said. In fact, among the six DEC users interviewed, only two said it was unlikely they would buy Digital for the few servers they intend to purchase in the next year. And one of those, Guy Vere, an engineer at Cap Gemini Innovation near Grenoble, said he would personally choose DEC technology, but is constrained by his client's preference for Sun Microsystems Inc, still the workstation market leader in France. The other three indicated that they were either considering or will consider DEC in upcoming purchase decisions. One, a manufacturer of pharmaceuticals, cited Alpha machines as preferable to upgrading its VAX 4200s to handle Oracle, while the other is evaluating DEC's Windows NT offering. Said Udo Haverkamp, data processing manager for margarine manufacturer Astra-Calve SA, "We are dreaming of Alpha for Sherpa [Corp.'s object-oriented product data management system], but we are not at that technical level yet." The only competitive threat to Alpha is apparently Hewlett-Packard's PA-8000 machine, due out in early 1996.

### Not clear-cut

A non-DEC user also said DEC was a possible buy for Windows NT clusters to replace an IBM host in the next two or three years. "Microsoft told us they are working with Digital on something native that would be supported by either NCR or DEC, so we're interested in that and will continue to monitor it." The system developer user also called DEC "a driver for NT solutions." More importantly, three separate distributors - one a wholesale distributor of DEC personal computers to value-added resellers and the other two value-added resellers for the full range of DEC products - were unanimous - DEC is gaining new clients in all domains, from small businesses to auto manufacturing. Says Benson, "Digital is now identifying and focusing on a small number of markets that clearly benefit from the Alpha technology (electrical and mechanical computer-aided design, geographic information systems and software engineering). The message is getting through and Digital is capturing interest from the power-seeking application developers and is on the right track for moving more volume." DEC's change to indirect sales was an important factor in gaining new clients, according to two of the distributors. "The margin for our sales agents is better for DEC than for Compaq or Hewlett-Packard, so they do a lot of work, talking up Digital over the better market image of Compaq or Hewlett-Packard," said a wholesale distributor. As a result of the change, said Jacques Rolland, sales engineer for Lyon-based ESC, "We have added pre-sales service and we even stock product." Benson concurred: "a clear focus on partners and channels is now evident, with a 'no direct' policy that is designed to reduce channel conflict and improve confidence." One of the distributors, however, noted that the indirect policy was not as clear-cut for Alpha as for personal computers, and needs to be. The majority of users also raved about DEC's service. One, who uses Digital machines that are owned by Electronic Data Systems Corp, said that when he fights with the General Motors Corp subsidiary about the low quality of its service, he threatens to go to Digital directly. "They have an excellent response time, usually four hours, with truly competent people," he said. Incessant price-cutting, demanded by the market, is helping DEC's case too. "They've really made an effort and now have an image of good products that are not expensive," said Cap Gemini Innovation's Vere. "They have good prices. It's actually hard to compare their prices to others because, on paper, Alpha is very powerful. We have to put it to work to see what we actually get in operation," said Haverkamp. DEC's weakest technology points remain the uncertainty about OSF/1 Unix and the proprietary nature of VMS.

### Won't buy VMS

"They are the only ones doing that operating system, and even they don't know if they will continue with it," said Vere. Jean-Daniel Jouanneault, software manager at Aerospatiale SA. "We won't buy VMS, we buy only Unix servers and DEC's is not recent enough." DEC's progress is not yet spectacular enough to sway all non-DEC clients. Take Marc Boussounian, information services manager at luxury goods maker S T Dupont's factory in Saverges, for example. An important Hewlett-Packard customer, he says, "Today, I don't have a good image of DEC. Given their delicate situation, I would prefer to stay with Hewlett-Packard." He adds, however, that he is virtually next door to a Hewlett-Packard manufacturing plant and that his two-dimensional computer-aided design applications do not need Alpha performance.

## COMPUTERVISION'S OPTEGRA TO STORE OBJECTS IN ORACLE

Computervision Corp, Bedford, Massachusetts plans to increase its focus on the product data management market with a new suite of object-oriented products called Optegra. Optegra is a mixture of the company's existing product data management, which are now object-oriented, plus new software modules that are stored as objects in an Oracle database. The database stores both files and the file attributes so that each file retrieved will bring up all the associated data. The database stores files written in IBM Corp's Catia, Autodesk Inc's AutoCad, Computervision's CADDs software as well as Microsoft Corp's Word and Excel. Computervision also plans to add SAP AG's MRPII by early next year. The structure of each design file is determined by the Configuration Master module. Navigator enables users to search and browse for documents as well as perform database queries such as budgeted versus actual weight or cost of a product. The workflow module enables the users to record and chart rules and procedures involved in the creation of a product design. Computervision said that management of product data has become an increasing concern for manufacturing companies that need a centralised database to store files from a number of computer-aided design packages. Optegra will be available within the next few weeks under Digital Unix, HP-UX, Solaris Unix and Windows NT. The full package will cost £10,000 for a 10-user licence although the company said that larger systems would be based on the cost of the product plus a consultancy and implementation fee, equating to roughly 50% of the product cost. The Lucas Aerospace division of Lucas Industries Plc, which manufactures flight control and engine control systems, will be purchasing 200 Optegra licences.

## BULL HITS TARGET OF \$20,000m SALES AS DEFICIT SHRINKS

Compagnie des Machines Bull SA wants another European partner to take a 17% stake during the second stage of its privatisation, chairman Jean-Marie Descarpentries said, announcing first half losses sharply reduced. Its 17% shareholders are NEC Corp, Motorola Inc and France Telecom, which likes to present the fiction that it is something more than an agency of the French state. The hard part will be finding a European company with the necessary means and interest: Siemens AG has the one, but likely not the other. The company is aiming for sales of \$20,000m by the year 2000 with a profit margin of 4%, Descarpentries said; the former figure looks hugely over-ambitious and unrealistic without an enormous acquisition. The first half loss was equivalent to \$25m, down from \$366m a year ago. Turnover fell 10% to \$2,480m.

## MENTOR GRAPHICS SNAPS UP PRECEDENCE

Wilsonville, Oregon-based Mentor Graphics Corp, in the process of buying VRTX developer Microtec Research Inc, has quietly eaten Precedence Inc of Santa Clara. Mentor Graphics will transfer all its internal FlexSim backplane technology to Precedence, effectively creating a worldwide centre of simulation integration expertise. Precedence will operate as a wholly owned subsidiary, with headquarters remaining in Santa Clara.

### CABLETRON UNVEILS SPECTRUM 4.0

Cabletron Systems Inc, Rochester, New Hampshire, has added new network management capabilities to its Spectrum enterprise manager with release 4.0. Cabletron developed version 4.0 because there is a big demand from customers to mix NT with Unix, according to Patty Chrystycz, director of network and systems management marketing. The new release ~~enables users to mix and match Unix and NT clients and servers.~~ Version 4.0 contains an enterprise-wide alarm management tool that Chrystycz said can monitor an entire environment, and lowers the cost of the bandwidth as it brings alarms into one viewing area. Additionally, it has a policy-based alarm notification manager, that users can enable through point-and-click to set up custom alarms to any destination in the network. Spectrum 4.0 also includes a new CASE-based reasoning tool that Chrystycz claims, makes it superior to HP OpenView, IBM NetView for AIX and SunNet Manager, as it provides access to network history and can recommend courses of action. Other network managers can identify faults, but can't resolve them automatically or reduce the number of faults that an operator must deal with, he said. Version 4.0 also adds support for exporting statistics, events and model information from Oracle to Ingres, Sybase and SAS, fault tolerance to allow continuous enterprise management, an FDDI RingView to view FDDI devices from any vendor in the ring configuration, and World Wide Web-based reporting. The 4.0 enhancements are all Cabletron's own work. It does not employ NetLabs object-oriented technology into its core platform, but uses its own object techniques. Spectrum 4.0 has 65 applications available for NT and hundreds for Unix, more than any other management platform, Chrystycz said. As part of the upgrade to 4.0, Cabletron is writing migration policy for customers who use the previous incarnation of Spectrum, version 3.1. 3.1 clients can run against Spectrum 4.0 servers, but 3.1 applications cannot run on 4.0, and 4.0 applications can't run against a 3.1 server. Cabletron is seeking ISVs for network and systems management, focussing on device management, advanced applications for network management, and systems management. Cabletron is also developing Spectrum 4.0's management gateway server for Novell NetWare, which will allow up to 250 servers to be managed from a single console without additional server software. It is also expanding SecureFast Virtual Networking product line for Spectrum 4.0, which it says will enable administrators to establish and execute policies on a per-workgroup or per-user basis in a switched environment. Spectrum 4.0 for HP-UX, AIX, Irix, SunOS and Solaris and Windows NT will be available in the first quarter of 1996 at \$15,000 for one server.

### TADPOLE RE-CASTS US UNIT

Still dealing with the consequences of the \$6m hit it took for the six months ending March 31 (UX No 539), Cambridge, UK-based notebook manufacturer Tadpole Technology Plc has restructured its US operation, appointing Randy Burns as president. The Austin, Texas-based operation, responsible for 70% of Tadpole sales last year, says the re-shuffle is designed to take the company back into the black for the remainder of the year. Burns, who under previous president Geoff Burr was Director of Operations, reports directly to Tadpole CEO, George Grey. Reporting into Burns will be newly promoted Deanne Curran, previously in charge of channel sales as VP of Sales and Marketing; Lloyd Bishop, previously sales manager of embedded processing as director of the OEM Business Group and Gerry Bula to the newly created post VP of Finance and Chief Financial Officer.

### IBI OFFERS WAREHOUSE REPOSITORY BUILDER

New York company Information Builders Inc is offering an Enterprise Copy Manager it says automates the process of building and maintaining a data warehouse repository. IBI claims the mechanism, which has four key components, will provide a single view of data from as many as 63 different data sources - relational or flat files - on 35 platforms. From a Windows interface users can select columns from an EDA/SQL-supported database or file and specify the target database information and actions to be performed on the data as it is copied. It uses IBI's EDA/SQL to retrieve data and load it into target databases. Copy Manager's four components define data input, specify a destination relational database, apply data transformation rules and cleansing logic (data 'scrubbing') and schedule the execution of processes. Copy Manager is up on Unix, MVS and NT servers - an OS/2 version will follow. Prices go from \$5,500 for NT where EDA is already installed to \$29,000 on MVS where EDA isn't installed. Windows clients are included. Copy Manager requires EDA/SQL Source Server on the source database platform. It costs from \$10,800 on Unix, \$24,000 on mainframes.

### PARCPLACE RELEASES VISUALWORKS 2.5

As it promised upon its acquisition of Digtalk (UX 540), ParcPlace-Digtalk Inc, Sunnyvale, California, is shipping a new version of its client/server tool for building portable object-oriented applications, VisualWorks 2.5. It now supports Digital Unix 3.2 and NT 3.5 in addition to SunOS 4.1.4, Solaris 2.4, HP-UX 9.0.5 and 10.0.1, and RS/6000 under AIX 3.2.5 and ~~4.1.x. ParcPlace is also exploring adding support for additional Unix platforms,~~ according to Nick Copping, VP of strategic relationships, who declined to elaborate on which ones or when. ParcPlace also plans to integrate a Web application development and deployment system into VisualWorks 2.5's Windows applications, Copping said. It will be enabled for Netscape and Mosaic, and is slated for later this quarter. Version 2.5 offers connections with DB2 and Sybase on PowerMac and Windows NT. The new release supports the current draft of the ANSI standard for SmallTalk, portable across many platforms without code recompilation. A new component packaging feature enables users to break SmallTalk applications into components that use only kilobytes of disk and memory. Additionally, users may create a repository of application components for any server SmallTalk supports, which can in turn be accessed by any client it supports. It also contains Unicode, with which users may develop national user interfaces for applications and support international standards. ParcPlace still intends to merge some DigiTalk technologies into SmallTalk, including the Part's workbench and visual wiring programme, Team/V development, SmallTalk link libraries, Windows 95 compliance and legacy integration (UX 550). ParcPlace-Digtalk pledges to deliver the upgraded version of VSE 3.1 in December; this will contain Microsoft OLE support, Copping said. The VisualWorks 2.5 upgrade for existing customers with support contracts costs \$400, and \$800 for non-service customers. New customers will pay \$5,000 for Unix platforms and \$3,000 for Intel and Macintosh platforms. Meanwhile, officials explained away ParcPlace Systems Inc's first quarter loss of \$1.3m (against a profit of \$1.0m the same time last year, on turnover down 14.3% to \$7.5m) as merely a pause in customer buying due to the Digtalk acquisition.

### MICROSOFT TURNS TO SOFTWARE AG FOR NETWORK OLE PORTS

Microsoft Corp has arranged for software giant Software AG to port the core OLE technology to non-Microsoft operating system including all major versions of Unix and IBM's MVS and OS/400. Software AG says it will take three years to finish all the ports but a customer will eventually be able to phone up and buy a version of network OLE for each. Software AG's Entire will be re-released as natively OLE-compliant without needing extensions. Software AG expects to have OLE ready to run on the first non-Microsoft platforms by early 1997. The last platforms won't be finished until the end of 1998. The deal complements earlier ones with companies like Mainsoft, Bristol Technology, Locus and Insignia Solutions. All of them are part of the Windows Interface Source Environment (WISE) program with rights to put Windows interfaces and programming environments like OLE available on non-Windows platforms. The pact goes hand-in-hand with Microsoft's deal with DEC earlier this year to make VMS OLE-compliant.

### ARBOR'S COMSHARE BUSINESS LUCRATIVE

The prospectus for Sunnyvale, California-based OLAP company Arbor Software Corp shows that nearly 30% of the company's revenues are derived from its reseller agreement with Comshare Inc, Ann Arbor, Michigan. Arbor's net income in the six months to the end of September was \$663,000 on revenue of \$10.15m, following net income of \$374,000 on \$11.5m revenue in its financial 1995 to the end of March. Non-US revenue generated by Arbor's London office accounted for 5% of the company's 1995 turnover and 6% of the last six month's revenue. 37% and 45% of Comshare's Arbor business over the same time periods was generated outside the US. Arbor has seven employees in the UK, the other 112 are in the US. Arbor began shipping the Unix version of its Essbase multidimensional database in June. It lists its multidimensional competition as Oracle (IRI) and Dun & Bradstreet (Pilot Lightship Server); a budgeting and financial application rival in Hyperion Software Corp; and OLAP/relational vendors as Information Advantage and Holistic Systems.

### SUN RE-JIGS LOW-END PRICING, CONFIG

Sun Microsystems Inc has re-jigged pricing and configuration of its el cheapo entry-level SparcStation 4. Now with a 110MHz microSparc II, 32Mb RAM, 1Gb disk and 15" screen, it costs \$4,300 and replaces the 85MHz model with 16Mb RAM and 500Mb disk at \$4,000. Sun says equivalent HP and DEC workstation configurations would cost \$6,600 and \$6,200 respectively. Sun's also knocking down the SparcStation 5. A 110MHz model with 32Mb RAM, 1Gb disk and 20" screen costs now starts at \$9,000, down from \$11,400.

## NETSCAPE ARRIVES IN EUROPE WITH SALES, MARKETING OPERATION IN PARIS

Netscape Communications Corp has opened a sales and marketing office to cater for its Northern Europe installed base. The division, which is headquartered in Paris, is currently staffed by three people. But Didier Benchimol, vice-president for European sales, said the European operation would expand to 25 people in the next six months following the opening of another two offices, in Scandinavia and Italy, in the next three months. Netscape said that 5% to 10% of its business came from Europe at present but that the European operations would "increase this significantly." Outlining Netscape's future product strategy, chairman and chief executive Jim Clark said the company plans to integrate Collabra Software Inc's messaging capabilities into future versions of Netscape Navigator, and to enhance the multimedia capabilities of Navigator. Providing support for Sun Microsystems Inc's Java programming language is one way that this can be achieved, he said. Release 2.0 will include support for Java to enable content providers to incorporate Java applets, or mini-applications written in the language, into their documents. Beta versions of Navigator 2.0 are out this week although the full release will not be ready until December. Following its sky-high valuation in the face of continued losses, Clark was asked when the company would become profitable. "Netscape could show a profit right now by cutting people and increasing revenues but this would not achieve planned growth and investment levels, so we therefore intend to go for a break-even strategy," he said.

## 48 HOUR RAD CHALLENGE SHOWS USOFT SEEKS QUICK SALE OF ITS DEVELOPMENT ENVIRONMENT

Maybe things aren't happening as fast as Unisys Corp's subsidiary, Brisbane, California-based USoft Inc would like: the firm, which bills itself as The Server/Client Software Company, has just launched a free service, designed to do away with traditional approaches to marketing and selling, offering to build companies model applications, within 48 hours, using the rapid application development environment it got when it bought Amsterdam-based TopSystems International NV (CI No 2,602). USoft Developer is a repository-based development environment that uses business models to create an application, rather than programming code. Apparently, the largest application built to-date has 8,000 tables. The company said that already under the 48 hour offer it has been doing up to 100 'challenges' a week in the US and that all the applications so developed have been successful. But president Michael Seashols was evasive about exactly how many companies had then gone on to buy the development environment, USoft Developer. He admitted it was not 100% and said this was because the people who had been shown the development tool's capacity hadn't necessarily had the authority to purchase, or there was no budget, or no immediate need for the applications. But he added that the 48 Hour Rapid Application Development Challenge, as this freebie is called, was a way of proving to those that control the purse strings, if actually pitching to them, that rapid application development tools can be used to build mission-critical applications, and as a way of speeding up time to market for USoft Developer. But he also admitted that by speeding up the marketing life cycle it was also a way of saving the company money. Of course, USoft is not offering this service to any old company. Those wanting to challenge the company must be able to deliver 10 to 15 tables for the planned application; the model may be built using software engineering tools, or a paper-based method; the planned application should be complex and business critical, not a departmental one; the company has to provide an overview of business processes, rules and limitations; and two people from the company have to be able to work with USoft over the 48 hours. Of course, the free challenge might be seen as a gimmick to push the company's product, but USoft said it is doing good business: turnover has doubled each quarter this year and TopSystems had monthly revenues of \$1m when it was bought.

## IBM INTEGRATING ARBOR'S ESSBASE

IBM Corp is integrating Arbor Software Inc's Essbase multidimensional database server into its Information Warehouse Solution. The work will allow Essbase to extract data from DB2 running on IBM and non-IBM servers. Lotus 1-2-3 users will be able to access data stored on Essbase servers and data on any DB2 system. Arbor will also support access to DB2 products from Essbase servers running on AIX, HP-UX, and Windows NT.

## IBM'S THIRD QUARTER COMES IN BELOW EXPECTATIONS; NEW HIT THIS QUARTER

IBM Corp is back in the red again for the third quarter after the hit it warned it would have to take on the Lotus Development Corp acquisition, and it will have to take another \$880m hit for further lay-offs and plant consolidations in the current quarter. Disconcertingly, this means that the company has already used up \$2,300m that remained to be used at the end of last year from the \$8,900m charge taken in 1993. The company made a net loss of \$543m for the third quarter, after the \$1,800m charge on the acquisition of Lotus Development Corp. Excluding the charge, IBM made a net profit of \$1,300m or \$2.30 a share, against a profit of \$710m or 1.18 a year ago. The \$2.30 compares with analysts' mean estimates of \$2.42 a share. Total revenues were \$16,800m in the quarter, up 9%, but "Our hardware sales were disappointing in the third quarter, largely due to supply imbalances in System/390 servers and high-end storage products," chairman and chief executive Louis Gerstner said.

### Supply imbalances

"Supply imbalances" means in the case of the disks and the tapes that they don't work yet, and in the case of the mainframes, they did not order enough power supplies. Including the Lotus purchase, IBM lost 96 cents a share for the quarter, and the market's disappointment was shown with a pre-opening fall of \$2.25 to \$91.50, although they recovered to \$92.25 once official trading began. Hardware sales were essentially flat in the quarter, at \$7,800m but revenues in all regions were up. RS/6000 workstation and storage product revenues were up on the year-ago period, and personal computer sales also increased - the wording suggests that the advance in personal computers was very limited. The AS/400 revenues declined due to a product transition to new models, expected this quarter. Mainframe revenues fell as a result of ongoing price cuts and the supply shortages. IBM's software sales "continued to show solid growth" and services and revenues from OEM products continued strongly, the company said. Lotus Notes users also increased "significantly" in the quarter, and it was also an "excellent" quarter for Lotus's cc:Mail electronic mail software. The company completed the quarter with about \$7,000m in cash. Revenues from North America were \$7,200m, up 9% on the year ago figure, and revenues from Europe, the Middle East and Africa were \$5,600m, up 6%; Asia-Pacific revenues were the stars, up 14% at \$3,300m, while Latin America was in line with North America, up 9% at \$725m. Currency unexpectedly had a favourable impact of some three percentage points - but that compares with six points in the first quarter, seven points in the second. Overall software revenues were \$3,100m, an increase of 14% on the year-ago quarter, while the low-margin services business grew 36% to \$3,100m. Maintenance revenues increased 2% to \$1,900m but must start to fall as the CMOS mainframes proliferate. Revenues from rentals and financing grew 11% to \$893m. The total gross profit margin was 41.3% in the third quarter compared with 39.9% a year earlier and 42.4% and 43.5% in the first two quarters of 1995, respectively. IBM and an independent valuation firm together arrived at the charge on the Lotus acquisition after estimating the value of the technology purchased. Of it, \$1,800m did not meet accounting definitions of "completed technology," and thus should be written off under accounting rules. Total expenses, excluding the Lotus charge, declined by 2% in the third quarter.

## PENTIUM SAILS PAST 80486 TO GIVE INTEL ANOTHER RECORD QUARTER

Sales of Pentium processors boosted Intel Corp's third quarter profits to record levels, as "users are moving rapidly to the new generation of high performance Pentium processor-based systems," said chief executive Andy Grove. "In the third quarter, we passed a milestone as Pentium processor unit shipments exceeded the 80486 chip for the first time," Grove added. The company anticipates a rise in fourth quarter revenues, but a fall in margins as personal computer manufacturers' inventory runs low. Intel has been stocking up on motherboards to go with the Pentiums in order to meet the expected demand. The company said it had also brought forward price reductions for the Pentiums from November 1 to this month to meet the Christmas rush head-on. Sales grew in the US, Europe and Japan but they declined in the rest of Asia. During the quarter the company repurchased a total of 4.9m shares of its common stock at a cost of \$321m, under an ongoing stock repurchase programme. Intel has repurchased 67.1m shares at a total cost of \$2,100m since the programme began back in 1990.

## LIKELY END OF 1956 CONSENT DECREE POSES MORTAL THREAT TO IBMULATORS

By Hesh Wiener

The two manufacturers of IBM-compatible mainframes, Amdahl Corp and Hitachi Ltd, are about to face a grave challenge to their survival. It is not the threat posed by IBM Corp's CMOS mainframes: they are still hobbled by small engines. It is not the potential of Parallel Sysplex technology: Sysplex compatibility is an engineering problem susceptible to large doses of talent, work and money. It is not the diminishing population of large mainframes: there is still more than enough demand to support three makers of very large commercial systems. If IBM hammers its mainframe rivals during the next year or two, IBM's lawyers will probably deserve more credit than IBM's marketing executives. But IBM's likely victory in its battle against the 1956 anti-trust consent decree will unleash the full power of IBM to compete in the large systems market. Later this year or, more likely, in 1996, IBM may no longer be encumbered by the consent decree. There will be no special restrictions on the company's activities in the used computer market.

### Daunting

It will be able to offer more packages of equipment, software, services and maintenance. It will no longer be obligated to share interface information with others. IBM's direct competitors in the MVS market are not without weapons of their own to wield. But, fundamentally, there are only two: the performance of systems and their price. To succeed, Amdahl and Hitachi will have to offer products that are markedly superior to IBM's in both these aspects. This is possible. But it is also very difficult, and it will become even more daunting if IBM achieves its stated technical goal - delivering a CMOS engine faster than 60 MIPS - before 1997. (IBM is expected to break the 40 MIPS barrier next year and then get past 60 MIPS per engine the year after that). Amdahl and Hitachi are acutely aware that IBM could, before very long, be in a much better position to knock them out of the market. This concern has goaded IBM's mainframe competitors to action. Each has its own plan. Amdahl will continue to market its current 5995M series of large engine mainframes as long as there is demand for them; in addition, it will deploy the Millennium series of CMOS servers by the middle of next year. The Millennium machines will be nearly twice as fast as IBM's quickest 9672s and similar in power to IBM's forthcoming CMOS generation. They will use nine-chip engines that run at 45 MIPS, mounted on a Central Electronic Complex with three to eight engines.

### Combat

Total Central Complex power is expected to be 285 MIPS to 315 MIPS. The Millennium processors will use Parallel Sysplex technology to achieve large single image systems - and until and unless Amdahl develops its own Sysplex controller, multi-rack machines will be linked by IBM 9674 switches. Hitachi currently offers its GX 8000 systems, which closely resemble IBM 9021s, and it will ship its first ultra-powerful Skyline processors very soon. Next year, (or possibly in 1997), Hitachi will have CMOS mainframes. Hitachi has licensed IBM System/390 chip sets, so its engine power will be the same as IBM's. However, Hitachi will build its own Central Electronic Complexes. Despite their ambitious product plans, neither IBM-compatible vendor is yet adequately prepared to combat IBM's emerging mainframe marketing strategy, which is based on the bundling of processors with other necessary goods and services. The processor component of IBM's deals is only a fraction of the total cost: system software can exceed the cost of a large processor during a full generation of three to six years. As a result, Amdahl and Hitachi will have to persuade customers that their computers are stunningly superior to IBM's offerings. Only then can they hope to offset the attractions of IBM's well-planned total systems package. Further, even if Amdahl and Hitachi can provide machines that are sufficiently fast, cheap and functional to offset IBM's CMOS and bipolar processors, they may still have to consider another big weapon in IBM's arsenal: the Integrated Systems Solutions Co, IBM's systems integration company. Hitachi has had an excellent opportunity to provide a full range of services through its partnership with 20% shareholder Electronic Data Systems Corp in Hitachi Data Systems. Yet Hitachi Data failed to see the strategic direction in which IBM would lead the large systems business. Hitachi Data should have worked more closely with Electronic Data Systems to reduce users' reliance on IBM software and thereby offset some of IBM's ability to control large accounts. Amdahl had the same opportunity to form coalitions with computer leasing companies, with developers of vital mainframe software (such as Computer Associates International Inc and Oracle Corp) and with providers of applications conversion services that could offset some of IBM's power.

### Courage

Customers that worry that Amdahl and Hitachi may not have sufficient commitment to the mainframe business should put their fears aside. Fujitsu Ltd (which supplies Amdahl's mainframe products) and Hitachi each have large home mainframe markets from which to launch big systems and their peripherals for the rest of the world. But neither of these Japanese manufacturers has been able to achieve abroad anywhere near the market shares they enjoy at home. If IBM's mainframe rivals have the capability and the courage to bring prices down ahead of IBM, they could pick up quite a bit of market share, particularly if they also offer performance advantages. They must begin this process now, well before their new products are generally available, and keep the pressure on as they roll out their next generations. If they hesitate, customers will be inclined to stick with IBM, probably to an even greater extent than in the past. From the September 1995 issue of Infoperspectives International, published by Technology News Ltd, 110 Gloucester Avenue, London NW1 8JA, phone 0171 483 2681, facsimile 0171 483 4541. Copyright (C) 1995 Technology News Ltd. All rights reserved.

## CAR MAKERS ARE BAAN'S FIRST VERTICAL MARKET

As expected (UX No 549) Baan International BV, Ede, Netherlands, is taking its Triton client/server enterprise resource planning software off to vertical markets, figuring they'll account for somewhere between a quarter and a half of its business by the end of next year. Its plan is essentially a change in marketing strategy rather than a technology makeover, though for its first vertical, the auto industry, Baan is offering four new modules which speak the language of the car-builders and their suppliers. Over the next 12 months the same modules will be tuned to the language and business codes of the electronics, complex manufacturing and food and beverage industries. Vanilla versions will also be available. All will be add-ons to the a common set of core Triton services. As well as the new modules - supplier scheduling, sales order scheduling, self-billing and automotive EDI (electronic document interchange) - Baan has teamed with i2 Technologies for scheduling, Sterling Software and Premenos for EDI, Wonderware Corp for shop floor scheduling and executing, and Bain Intelligence for product data management. The modules will ship in the first quarter of next year. It's creating automotive competency centres in Detroit, Stuttgart and Birmingham to support its initiative, and promises an Asia/Pacific centre will follow. Of the 28 car manufacturers worldwide, Baan counts Mercedes-Benz US International Inc as its initial win, claiming that as the majority begin to move off legacy systems over the next year or eighteen months that it'll pick up at least one more win in the short-term. Other auto suppliers it counts as customers include British Steel Forgings, Alloy Wheels, AMG, AO Smith, Dunlop parent BTR Cow Industrial Polymers and Ferrari body-shell builder Pininfarina. The company expects up to 10% of its total revenue to come from the auto industry by the end of next year. It's put 50 sales people behind the effort, under VP Bruce Johnson. Analysts expect Baan, now up to 1,300 employees worldwide, is expected to do between \$180m to \$190m this year.

## NOVADIGM RELEASES ENTERPRISE DESKTOP MANAGER FOR HP-UX, AIX, UNIXWARE

Novadigm Inc, Mahwah, New Jersey, has new tools for managing distributed software using HP-UX and AIX-based servers and new client managers for UnixWare and NetWare in the new release of its Enterprise Desktop Manager (EDM) software management environment. Novadigm said that the architecture can be tiered to include a hierarchical structure so that one management server acts as the master manager, controlling the configuration of subordinate manager nodes, each of which can support more clients. The new client platforms enable EDM users to deploy and manage updates to distributed software configurations on UnixWare servers and Novell LANs, the company claims. Pricing for EDM starts at \$20,000 for the management server and \$200 per client.

# unigram·X

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**Siemens Nixdorf Informationssysteme AG** reports a large Unix server order from the German postal service Post AG. The order is for 400 Mips Technologies Inc RISC-based computers of the RM400 and RM600 families for use in the letter service and personnel management departments. No value has been given for the big contract.

When Sun king Scott McNealy and his chief financial officer Michael Lehman called with their first-quarter results they were giggling and no wonder they were giddy with delight. They blew out all expectations and came in with soaring profits up 120% to \$84.7 million. Of course the cheering has to be tempered by the fact that revenues were only up 17% to \$1.49b but then again **Sun Microsystems Inc** is at the tail end of its product cycle - the new one starts on November 7 - so maybe 17% looks pretty good from that vantage point. Sun's gross margin was up 4% to 44.2%. Neither McNealy nor Lehman singled out any particular contributors. McNealy's of the opinion that Sun's luck will hold now that "Darwinianism," he said, has taught his boys the enterprise sell. He's willing any day any where to go mano a mano, especially on pricing, with Hewlett-Packard, who's claimed to be eating into Sun's lunch. Sun sales hasn't had performance to lean on for a long time but with the UltraSparc line in the wings, McNealy was thinking maybe they'll be the hot box kids again.

**Sun Microsystems Inc's** president Scott McNealy has a bon mot for every occasion, and he characterises Windows95 as **Microsoft Corp's** contribution to child-minding: saying the thing is not user friendly, he told *Reuters* that it would provide hours of safe activity in the home for children as they battled to get the thing to work on their baffled parents' home computers.

Sun's first UltraSparc box, a desktop, is due to roll out Tuesday November 7. The Ultra Computer perhaps.

**Sybase Inc** has reported third quarter net profits down 94.9% at \$1.1m, after a \$980,000 merger-related gain, on turnover up 7.2% at \$233.1m; nine month net losses were \$25.5m, after a \$24.0m merger-related charge and a \$20.0m charge for purchase of in-process technology, against \$54.5m profits last time, on turnover up 20.8% at \$689.3m. Net per share fell 93.5% to \$0.02 in the quarter.

**Cray Research Inc** tells *Reuters* that it expects to return to the black in 1996, but there will be further restructuring costs this year, although it did not elaborate: it has suffered smaller government budgets in the last year and turnover is lower although orders in hand so far this year are higher than the total for 1994; Cray said it recognised it needed to do more marketing and commercial sales and cut costs through technology partnerships; it is talking to existing partners **Sun Microsystems Inc** and **Digital Equipment Corp** and other companies and said it places great emphasis on Japan, where **Itochu Corp** and **Canon Inc** aid sales.

**Macro 4 Plc**, the Crawley, West Sussex IBM Corp mainframe and AS/400 systems and software developer has completed the acquisition of the issued share capital of Primary Systems Ltd for £2.75m in cash. Primary, based in Maidenhead, Berkshire, develops and markets systems administration and management software for Unix systems.

**Computervision Corp**, Bedford, Massachusetts, and SAP AG will develop a software interface for their respective data management and business-applications software families, Optegra and R/3.

**Software Professionals Inc**, San Mateo, California and the Electronics Research Laboratory of the University of California at Berkeley are developing remote systems administration services for Unix-based computing systems via the Internet.

**Innovative Routines International**, Melbourne, Florida, has released version 4.5 of its sort package, Cosort. It is now available for all Unix platforms, and contains Sort Control Language that provides data type recognition, field mapping facilities, support for calls from Cobol, and new summary report functions. License fees start at \$2,500.

**ICL Enterprises**, Reston, Virginia, has appointed two resellers for its AccessManager single sign-on network security product, which runs on most Unix platforms: HubLink, Inc, Columbus, Ohio and Klein Technologies, Inc, Vienna, Virginia.

**Sherpa Corp**, San Jose, California, has integrated its data management system with Oracle and SAP manufacturing applications.

Continuing its concerted strategy to persuade mainframe users that object-oriented Cobol is the way forward (UX No 508), **IBM Corp** this week adds new IBM Cobol set for AIX, VisualAge for OS/2 for Cobol and IBM Cobol for MVS implementations. The company says around 75% of the work that'll eventually end-up in the ISO/ANSI object Cobol standard is captured in the new releases - prices on AIX and OS/2 go from \$900 per user (\$540 for an introductory period).

**Sun Microsystems Inc** reseller Rave Computer Associates Inc, Sterling Heights, Michigan, is to distribute Axil Computer Inc Sparc-compatibles and holds exclusive rights to peddle the Axilerate Sparc upgrade boards in the US.

Barcode software maker **UniBar Inc**, Rochester Hills, Michigan, will offer Barcode 2000 label printing software for Unix at from \$1,200 in January.

*Computerworld* pegs **Intel Corp's** P7 as a two-punch move with a 32-bit part slated to arrive before the full-blown 64-bit affair being developed with **Hewlett-Packard Co** expected late-1997 the one that's backward compatible with iAPX-86 and Precision Architecture RISC instruction sets.

**Insignia Solutions Plc**, High Wycombe, Buckinghamshire specialist in facilities for running Windows environments and applications under Unix and other operating systems, has decided to float in the US but remain British. It has filed with the US Securities & Exchange Commission for an initial public offering of 3.6m American Depository Shares, each representing one ordinary share, 1.8m of the shares being new, and looks to raise about \$16.9m net for working capital. The underwriters are Robertson, Stephens & Co, Cowen & Co and UBS Securities Inc.

**Visix Software Inc** has named Chuck Teubner president and chief operating officer responsible for day-to-day operations of the company's worldwide sales and marketing, customer service and professional services divisions. He was senior VP, North American sales at Sybase Corporation.

**Thomson Software Products**, Thomson CSF's Alsys/Must combine, has licensed AdaMagic front-end compiler technology from Intermetrics Inc it says will allow it to get its ObjectAda 95 object version of the Ada programming environment to market on to the market by mid-1996. Thomson has meantime signed iitSoft, New Delhi, to resell its TeleUse Ada/Gui development environment in India.

**Technologic Inc**, Atlanta, Georgia, is offering a SuSub (superuser substitute) utility to provide selective access to privileged commands without requiring users to have full root privileges. Prices are from \$150 per seat on most Unices.

**Oracle Systems Corp** has opened a Vietnamese subsidiary in Ho Chi Minh City.

**Access Graphics Inc**, Boulder, Colorado, is peddling **Tadpole Technology Inc's** SparcBook 3 and P1000 Series notebooks.

*PC Week* has **IBM Corp's** director of performance, Kaivalya Dixit, denying the company plans to drop its introduction of the PowerPC 620 for servers (perhaps he's not familiar with the latest RS/6000 roadmap (UX No 559)).

Cambridge, Massachusetts-based **Vermeer Technologies Inc** says its new FrontPage Web publishing software allows developers to create Web sites and pages on Mac or Windows desktops and deploy them on Solaris Unix Web servers without reformatting any of the content. Irix and HP-UX versions will follow. Features include WebWizards, a collection of templates for importing ASCII and graphics, and WebBots, drop-in objects that add interactive functions to a Web site without additional programming. FrontPage costs \$700.

**FTP Software Inc** is shipping version 1.1 of its FTP WebServer and Secure WebServer for Unix created under its alliance with Open Market Inc at from \$1,500 and \$5,000 respectively: it's also distributing Vermeer Technologies' FrontPage Web publishing tools.

Apart from setting its sails to reach further into enterprise waters, and tackling some of the concerns observers have with its apparent lack of OEM experience, **Santa Cruz Operation Inc** says a chief motivation for its still under-the-hood pact with **Computer Associates International Inc** is the fact that both **AT&T Unix System Labs** and **Novell Inc** failed miserably when it came to systems management (UX No 559). The resulting CA-Unicenter/SCO OpenServer package which both companies are to sell won't relegate CA-Unicenter to the status of an application that runs under OpenView or SunNet Manager, it's a front-line item

**Daimler-Benz** is setting up a Research and Technology Center in Silicon Valley beginning with 25 engineers and scientists. It's housed in Palo Alto. It's particularly interested in multimedia and the Information Superhighway. It'll also get to visit a lot of its cars, won't it, guys.

Doesn't sound very likely, but one whisperer tells the *PC Week* gossip column that Steve Jobs could be on the way back to **Apple Computer** - taking **NeXT Computer Inc** with him? - and that within the past two weeks, Apple chairman Mike Markkula met Jobs to discuss the idea.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper



# unigram · X

1 OCT. 1995  
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The weekly information newsletter for the UNIX™ community worldwide

London, October 30-3 November 1995

Number 562

## MOVE OVER HP, FOLD UP YOUR TENT AND FADE SGI, SUN'S BACK

On Tuesday November 7 Sun Microsystems Inc will announce the Ultra 1, a high-end graphical workstation based on the most powerful chip it has been able to produce to date. Roughly a month later deliveries begin. The erstwhile "hot box" king has a lot riding on the move. It's as significant and seminal, it says, as the SparcStation 1 with its 8-bit graphics was back in 1989 but Sun figures it's got quite a story to tell about how this ain't your father's desktop and how this changes the desktop paradigm. In fact, it thinks the Ultra is the beginning of a new era in computing, one where all the pieces come together, where the sum is greater than the parts and Sun's riding on top. What Sun is most afraid of right now - and the reason it's been under a virtual blackout - is that Ultra might be dismissed as simply UltraSparc in a box. It wants people to realize that it's more than just a blazingly fast chip. Ultra 1's so altogether hot, says Sun VP Anil Gadre, it's going to "stop SGI cold and make HP regret the day it ever bought Apollo and got into workstations." Word of its coming has reportedly put Alpha purchases on hold and Alpha's the most performant chip the industry's got. Right now, in the absence of the UltraSparc, with Sun's performance leadership a fading memory, HP and SGI have been eating into its turf. That includes the technical market and Wall Street where Sun first came to hegemony. Even though there are reports of self-abusive discounting going on among the contenders, Sun has taken their impudence personally - very personally. Ultra 1 will first be deployed to recapture its ancestral keep - but not with just the latest reprise of the "hot box," it keeps repeating. If one harkens to what is fast becoming Sun lore, Ultra and its technologies were conceived back in 1990 in some very prescient gatherings of Sun founders Andy Bechtolsheim and Bill Joy, VP of engineering Ken Oaken and other Sun Labs gurus. The issue was basically how big is the problem? How big is the data set going to be? How big should the memory and the bandwidth be? Bechtolsheim and Joy reportedly decided size could not be overestimated. So Sun set about redesigning fundamental systems architecture from the ground up. It says it did not want incremental engineering. Anybody can do that. And it did not want compromises because it did not want to lose any segment of the market to a competitor because in some cases their graphics was better or their speed was better. Taking a leaf from Bill Gates book, Sun wanted it all. What it thinks it has achieved with Ultra and Java and Neo and other such things is a new definition of workgroup collaboration, a fulfillment of the tag line "the network is the computer," and a mastery of the Internet and corporate networks. Gadre also swears to God that they have done all this complete re-engineering without breaking binary compatibility. The Ultra 1, which uses Solaris 2.5, a 32-bit operating system dot release riding on a 64-bit chip, is "100% binary compatible," he says, claiming to have the ISV testimonials to back him up. Other sources say old software gets a six times performance improvement without a recompile. 2.5 is supposedly significantly faster on a Sparc 20 offering a 25%-30% improvement. But enough stage setting, down to some particulars.

### Ultra boxes

Ultra 1, which will be followed up in the next nine to 12 months by companion servers, will come in two basic models and apparently a bunch of configurations, all in the classic Sun pizza box vein. They'll all be uniprocessors. They'll use either the 143MHz or 167MHz UltraSparc chip. The 167MHz boxes are the ones to keep your eye on because they'll carry the ultimate in Ultra graphics, code named FFB or Fast Frame Buffer, and also because that's where Sun figures its sweet spot is. The 143MHz will just have existing TGX graphics. Ultra's aren't supposed to put the Sun 4s or 5s out of business, at least not right away. That's why they were just repriced or upgraded. Ultras will be competitively priced "significantly under" \$40,000-\$50,000 HP and SGI machines by which we take it they mean around \$25k, setting a new level of price/performance. As of last week, Sun was still tweaking the system so none of its numbers were final. It's been aiming to get a 167MHz box out the door that would do 240 SPECint92 and 350 SPECfp92 (UX No 540) and was still coming up a tad short at 235 and 330 respectively. It remains to be seen what they announce and what software they're referring to. (*Suns Ultra 1, continued on page 3*)

## SYBASE GETS SYSTEM 11 OFF THE BLOCKS

Sybase Inc this week - Monday the 30th of October in fact - will announce Sybase System 11 and doubtless surprise onlookers with the claim that it has more than resolved the scaling issues that have dogged its tracks for years. System 11.0, code named Cougar 1 and due to be delivered by the end of the year, scales near-linearly, the company says, to 16 processors. 11.0 was not expected to do better than six or eight processors, but it was expected to at least break Sybase's long-standing six-processor barrier. It was only next year with Cougar 2 or 11.1 that it was thought it might have done better. Sybase is still talking about 11.1 doing better - since it will run parallel queries across multiple CPUs - but now it's against a backdrop of 20-way Sun machines. (*Sybase System 11 continued on page 3*)

## BULL DEPENDS ON 620 WITH SON OF PEGASUS

Compagnie des Machines Bull SP would like to point out with the gallic precision that made the philosophes famous that for all the talk of the PowerPC 620 chip being taken out in the backyard in the dead of night and quietly buried that such a thing hasn't happened - nor, apparently if it has its way, will it. In the last few days, it says, it and IBM and Motorola have been talking a lot about the technology, business, strategy, resource and competitive issues surrounding the 620 and Bull, for one, is optimistic. Bull made it clear that 620 development and investment couldn't be stopped unilaterally. It would take the full consent of all the parties. Bull's interest in the widget revolves around a maximum four-way 620-based prototype it's built beguilingly called PegaKid, a chip off the old block Pegasus, the machine that went on to become Bull's strategic if pricey Escala line. PegaKid embodies Bull PowerScale II SMP architecture, a compact aggressive cost-effective iteration of Pegasus' original PowerScale design. Bull says the prototype, which it has running in France may not be optimized yet but the 620 samples it's using show no defects and apparently none of the SMP crises that the 604 displayed. Bull has great hopes of commoditizing PegaKid up against the four-way Standard High Volume (SHV) motherboard-based kit that'll be coming down the pike from Intel next year. It will apparently provide both MCA and PCI buses and a highly integrated economical chipset. Currently it's due in the second half of '96. It is of course possible IBM, which OEM'd the guts of Pegasus from Bull, will take PegaKid and a certainty Moto will under its OEM arrangement with Bull. Meanwhile, as we went to press last week, IBM and Moto said something that reminded us of them sitting around talking about their PowerPC concerns with Bull. They said they were going to collaborate on developing common manufacturing processes to build future generations of the chip. They said that this would give them greater synergy between the Somerset design team and manufacturing and result in better performance and quality. They'll go halves on people assigned.

## MICROSOFT SIGNS PART B COM-TO-CORBA RFP

Last week, the Object Management Group got 16 letters of intent to submit to Part B of its two-part COM-to-CORBA interoperability RFP - the part dealing with Distributed OLE. Microsoft said it would, as did Computer Associates, ICL and Novell, all of whom are only responding to B. DEC, Expersoft, Fujitsu, Genesis, HP, IBM, Iona, SNI, Sun Microsystems, Sybase, Taligent and Visual Edge are all responding to both. Meanwhile, Microsoft was supposed to freeze the Distributed OLE spec last week too and we understand it's posted out there in Cyberspace somewhere.

### PURE SOFTWARE TO BUY PERFORMIX FOR \$74m IN SHARES

Pure Software Inc of Sunnyvale, California announced definitive agreement to acquire Performix Inc, a provider of client/server load and performance testing tools. Pure will pay 1.875m shares, currently worth \$73.6m for Performix, based in McLean, Virginia; Performix claims AT&T Corp, British Telecommunications Plc, Electronic Data Systems Corp, Sprint Corp, Standard & Poor's Corp and Federal Express Inc among its customers.

### EXCALIBUR RELEASES UNIX-BASED SEARCH AND RETRIEVAL SYSTEMS

Fresh on its July merger with ConQuest Software San Diego, California-based Excalibur Technologies Corp has released RetrievalWare, a family of software products for building retrieval systems across databases and information systems. The tool includes most flavours of Unix and NT. RetrievalWare uses semantic expansion and network searching combined with adaptive pattern recognition processing, which finds multiple data types via fault tolerant fuzzy searching and automated indexing. RetrievalWare's software development kit includes distributed client/server and APIs, GUIs delivered as source code, visual basic custom controls and RDBMS interface. These are the foundation for its applications, including client APIs, text and database retrieval, real-time and retrospective text searching, and an end-user system for intelligence analysis and document imaging. It also includes a Web server, priced from \$12,500. The starter kit software development kit costs from \$5,000, with additional platforms from \$2,500. Shipping will begin next month. Meanwhile, Excalibur will release the next generation of its Electronic Filing Software (EFS) 4.0 late next year. EFS, presently incarnated as 3.65, runs on Unix workstations and platforms from Sun, IBM, Digital, HP-UX, and Digital VMS and Alpha AXP/Open VMS. Porting to Windows NT is planned. EFS is a content-based document management system.

### CRAY REALISES COST CUTTING HURTS

The need to cut its coat according to the far skimpier cloth allowed by the brave new world of open systems and workstations that deliver supercomputer power at a fraction of the cost is proving painful for Cray Research Inc, and the company is having to take a bath that is assuming Control Data Corp proportions, with the nine-month loss after charges coming to 45% of the declining turnover for the period. The company expects to report a fourth quarter and full year operating loss before charges - more of which will have to be taken this quarter as it continues to reduce its workforce. "Our third-quarter operating results continued to show improvements over the previous quarters this year and the fourth quarter will be better on an operating basis," chairman Phillip Samper said, adding "Our actions this year are setting the stage for a profitable 1996, particularly in the second half of the year." The company says its backlog at the end of the third quarter stood at \$355m, the highest level in seven quarters and up from \$326m in backlog at the end of the second quarter. The order book has grown 50% from the backlog at the end of fiscal 1994. "My optimism for 1996 is based on our orders, backlog and improved performance," Samper said. In the nine months, total employee population declined by nearly 330, or 7%, and jobs will decline further.

### PLATINUM EYES BUSINESS INTELLIGENCE MARKET

Looking to grab a large share of what it sees as a potentially lucrative market Oakbrook Terrace, Illinois-based Platinum Technology Inc has formed a business intelligence operation to sell its toolset as point product software solutions. Platinum says it's now aligned each of its business units to a component of its Platinum Open Enterprise Management System (POEMS), encompassing data warehousing, data management, systems management, application development and business intelligence tools. The business intelligence unit will be headed up by VP Fred Rook, formerly the chief technical officer and general manager of the Data Access and Connectivity Business Unit for Platinum acquisition Trinzic Corp (UX No 529). The units products include Forest and Trees, its visual development environment, ProReports its ad-hoc query and reporting tool, ProServer which supports production reports on the server, ProViewer, enabling the viewing and running of pre-designed reports, SQLAssist its ad-hoc query builder and Platinum report facility, a 3270-based DB2 report facility for query and report generation. Meantime the company says its shipping Version 2.0 of its ObjectPro application development tool on NT (UX No 542). AIX and HP-UX are due by year end.

### EUROPA WORKING GROUP TO STANDARDISE PARALLEL C++

The European Union's Esprit-funded Europa Working Group on Parallel C++ will deliver the first draft of what it calls a "proxy model" for object-oriented parallel C++ at its plenary meeting in Brussels on the 8th of next month (UX No 556). The aim of the Europa Working Group, which includes amongst its roll call ICL Plc, Convex Computer Corp, Digital Equipment Corp, Tandem Computer Inc, Compagnie des Machines Bull SA and academic institutions including INRIA, and University College London, is to provide a framework for the design of parallel C++ programming systems so there's standard functionality across different parallel C++ environments. The work will add parallel extensions to the sequential C++ programming framework by establishing a standard approach to the increasing use of the language for parallel and distributed applications. The idea is for hardware and software vendors to use the framework as a model for their own implementations, Europa says. Taking as its starting point parallel C++ research worldwide, including work on UC++ at University College London (UCL), CC++ (Concurrent C++) at CalTech, Charm++ at the University of Illinois and Eiffel at INRIA, the French National Institute of Research for Computer Science and Control, Europa is to build a proxy model where any C++ object can be represented by a proxy object, with that object extended to several platforms. The work has been underway for about nine months, said Alaister McEwan, a researcher with the Europa project, but further technology, which the group intends to consider, includes communications, bindings, mappings to hardware and parallel I/O.

#### Two years

Completion of the work is still two years down the line, he said. Consisting of three Special Interest Groups (SIGs) - architecture, applications and implementation - Europa is currently defining the procedure of language for parallel architecture. An architecture definition will follow a three-stage process via a draft - deliverable in Brussels - which will be submitted to the applications and implementation SIGs. These SIGs in turn will refine and implement the work of the Architecture SIG. Active members in the Architecture SIG include ICL Plc, which has been working on the UC++ language along with UCL. ICL wants to develop applications for its parallel machines, including its DRS 6000 and Goldrush multiprocessors. The UC++ project is typical of the work underway, claims McEwan. It provides two principle features to parallel C++; active objects, which encapsulate processes and asynchronous function calls (or message passing), allowing active objects to be called without the call being blocked. The unit of parallelism in UC++ is the active object. Any class instance can be made active, which means it exists as a separate process. A parallel program is, therefore, a collection of active communicating objects, whose communication takes place by calling the public member functions. This style of parallelism is derived from the standard object-oriented model, which fits in well with C++, and provides what is called coarse grain, or object-level, parallelism. Using class libraries combined with minor syntactic extensions to C++ and a translator from UC++ to C++ has proved to be the most flexible approach, the group said.

### COMPOSER 3.0 ADDS SUPPORT FOR UNIX WORKGROUPS

Texas Instruments Software has released the third generation of Composer, its CASE component tool set for building, deploying and reusing client/server business applications. Version 3.0 has added support for HP-UX workstations and client platforms, including ADA GUI, DB2 and OpenIngres support; a Unix TP emulator for interfacing between Unix servers and Windows and NT clients; and Internet access to clients. Version 3.0 has a client/server encyclopedia API that enables users to read schema, model and deploy data. Version 3.0 also has expanded Version Control capabilities, enabling development workgroups to work in any combination of Unix, Digital, OS/2 and Windows NT environments. Version 3.0 also features an enhanced GUI with multimedia and sound support, customisable message dialogs, and direct access to operating system specific files. Previously it supported Sun Solaris, RS/6000, OS/2, and Windows NT, 3.1 and 95 workstations. It has support for application development in HP-UX, SNI RM Solaris, most Unix versions of Oracle 7, RS/6000, Tandem SQL, Open VMS, MVS and OS/2 DB2. It supports HP-UX, Solaris, AT&T, Digital Unix, RS/6000, Windows and Sequent client/servers. Composer 3.0 starts at \$14,000 to \$24,000.

## SYBASE GETS SYSTEM 11 OFF THE BLOCKS *(continued from page 1)*

As expected (UX No 548), Sybase has bundled a family of databases under the System 11 nomenclature. SQL Server 11 is bound for OLTP and decision support applications independently or simultaneously. An extension to it called Sybase IQ and an add-on called Sybase MPP, formerly known as Navigation Server, are optimized for datahousing. Sybase is also going to finally make serious use of Watcom, which it acquired when it bought Powersoft Corporation last Comdex, and try hurling it against Microsoft along with the big-time SQL Server 11. The old Watcom SQL now becomes Sybase SQL Anywhere, a mass deployment product characterised by a small footprint and low cost. Sybase IQ and MPP aren't due until Q1. SQL Anywhere isn't due until later this quarter with one of its options, SQL Remote, which provides replication capabilities for mass deployment, won't be around until Q1. Sybase says all the products share a single architecture and offer a more plausible top-to-bottom cross-platform enterprise scheme than competitors such as Oracle and Microsoft. SQL Server 11 will be out on Digital Unix, HP-UX, AIX, Solaris 2.4 and Windows NT. Sybase has dreamed up a special anti-Microsoft bundle and pricing structure for the NT

### SUN'S RAZZLE DAZZLE

*(See Page 1 for Sun's Ultra 1 workstation)* Sun says the Ultra chip is not the whole story to its new boxes, though some of Ultra's razzle-dazzle is dependent on its on-board multimedia Visual Instruction Set (VIS) which supports 2D and 3D image and video processing, MPEG-2 image decompression and audio processing. The box has got an Ultra graphics card that basically incorporates all of Sun's existing graphics: 24-bit colour, 1280 x 1024 at 76MHz. It accelerates windowing, 2D/3D and imaging, 3D solids with double buffer/Z and all those good things while being compatible with all existing APIs such as X11, XIL and XGL. Ultra will be the first place the 3DRAM technology Sun co-developed with Mitsubishi is deployed to improve the speed of 3D rendering. It is said to incorporate the best of DRAM, SRAM and VRAM together, offering five to 10 times VRAM's performance. It does all that anti-aliasing, alpha blending and Z buffering stuff people are becoming fond of. Ultra 1 is also probably the first box outside of a supercomputer to use a switch interconnect architecture to heighten bandwidth to something like 1.3GB/sec, 90% of which is useable, and to improve performance on multiple transactions. It's got 288- or 576-wide ECC. Basically, it's got fast I/O, fast memory, fast graphics and fast networking and following Bill Joy's dictum, Sun's avoided any specialty hardware or software and just used high-volume components cleverly plugged together. Ultra's features will become standard on all Sun gear over time. The company says it has dozens of these boxes out now and promises to deliver thousands by the end of the calendar year.

### TANDEM TO REORGANIZE IN FACE OF POOR RETURNS; NEW PRESIDENT WANTED

Following that well-trod path gone down lately by AT&T GIS and Unisys, Tandem Computers Inc last week said it would reorganize at the same breath as was saying its fourth quarter was worth a miserable 17 cents a share on revenues of \$640m. It's going to be looking for a new president and chief exec, bouncing founder Jim Treybig over to chairman. The board says it'll consider both internal and outside candidate. No doubt this is the opportunity UB Networks Inc chief Roel Pieper, erstwhile head of Unix System Labs, has been waiting for. We always thought that when he went over to run the Tandem subsidiary, turning down some other plum opportunities, he was angling for a larger role. The time is right what with UB expected to become profitable in Q1 and then spinout as an independent organization again through an IPO. Thomas Perkins, who's now chairman, will move over to a regular board seat to accommodate Treybig, who with Scott McNealy was the long-lived CEO in the business. Now Scott's the sole survivor. Tandem also said it will form a new business unit to manage what it expects will be high-volume business from its ServerNet technology now that it's got a deal with Compaq to use the stuff as the basis for commodity NT clustering. Tandem wants to see it an industry standard. It has deal for it with NEC and Ericsson as well and expects others. The run will be run by Gerald Peterson, now senior VP, worldwide sales and marketing. Other key execs are still to be named. Tandem will be looking for a replacement for Peterson. The company is retiring its chief operating officer, senior VP Robert Marshall, and the head of its Solutions Products Group, senior VP Donald Fowler. It'll also be expanding its board by three seats. Tandem said it had a bad quarter because its Unix-based ServerNet stuff, the Integrity S4000, was delayed, limiting the growth of its Unix business, particularly with its telecoms customers, one of its key markets. The price of its products also yielded lower revenues than forecast. In addition, it had hoped UB would have turned in better results earlier, but, alas, revenues were down there too. It lost \$2.8m pre-tax in the quarter. Revenues for the year were \$373.9m Tandem's Japanese and non-telecoms business was up 43% and 14% respectively. Alternate channels also looked good. For the year Tandem did \$107.5m (91 cents) on \$2.285b, up 8.4% versus \$170.2m (\$1.50) on \$2.108b.

version so it can go up against Microsoft's own SQL Server 6.0, ironically a descendant of Sybase's own technology. The Unix versions will range from \$995 to \$133,900 depending on the platform and the number of users. It claims the system has scored unparalleled TpmC results of 4,544 or \$396 per transaction on a 16-way Sun 2000E machine carrying 45,000 clients and 315Gb of disk (UX No 559). It believes it will break into the five digits on a 12-way DEC Turbo Laser with 100,000 clients and 300 disk drives thanks to what are apparently 64-bit extensions in the 32-bit software. For data warehousing, Sybase takes the Unix-based SQL Server a step further adding Sybase IQ, a fast query engine, for unplanned ad hoc interactive and cost-effective query processing. It is based on what Sybase calls the Bit-Wise indexing technology, a bit-mapped decision support widgetry acquired with Expressway last year. It claims the stuff provides a 100-fold query performance improvement over the standard RDBMS and save money by requiring 80% less disk space, up to 98% less I/O and utilising existing - presumably cheaper - hardware.

### Sybase MPP

Sybase MPP is meant, as you would suspect, for massively parallel environments, scaling linearly to over 128 processors and touted as the only open systems parallel database in production. The Maui High-Performance Computer Center in Hawaii, run by the US Department of Defense and the University of New Mexico, reportedly have a 128-node RS/6000 SP2 system up and running the stuff and it's said to scan 100 million row tables in 60 seconds. Sybase MPP has been in the market on AT&T GIS 3600 platforms since last December and next quarter, at prices starting at \$110,000, the widgetry will move to HP 9000s, clusters of Sparcserver 1000s and Sparcenter 2000s and of course the IBM machines. Sybase has taken a new approach to large memory management, in cases over 2Gb, giving database administrator the ability to carve up the memory and the cache analysis tool to help. Sybase fancies standalones and workgroups - everything up from the PDA - can be serviced by SQL Anywhere which is now compatible and interoperable, it says, with SQL Server. Added are Transact-SQL compatibility, interoperability with applications via Sybase Open Client and Open Server APIs, replication to and from corporate databases via Sybase Replication Server and the aforementioned and optional SQL Remote. Platforms include Windows 3.x, Netware, OS/2 and MS-DOS but the real target is NT and Windows 95. Sybase says it's spend \$10m on QA so quality should be assured. Sybase will stage a satellite telecast worldwide and is also planning to launch the product via Internet with real-time audio supplied by Progressive Networks. It's a first Turn in at 10am EST on October 30;

<http://www.realaudio.com/live/sybase.html>

### NOVELL TO ABANDON FLORAM PARK

What with the abysmal condition of its Wordperfect operation and the licking it's taking on Wall Street, Novell is now apparently under orders to trim back wherever it can. That means that by the end of January Novell is going to abandon the building in Floram Park, New Jersey that it moved its Unix crew into less than three months ago, according to what Novell senior VP Mike DeFazio told the boys and girls who were once the proud Unix System Labs on October 20. It was a pricey, oversized facility to lease long-term from Exxon, a pricey facility to move into over the July 4th weekend and it promises to be a pricey deal to get out of. DeFazio also found himself apologizing for not letting recruiters from Hewlett-Packard and the Santa Cruz Operation get in there and hire the folks they're supposed to hire now that they've fallen heir to Unix. Seems DeFazio thought it best that the managers be in place first, an excuse that was not particularly well-received, especially since he knows where his next job is coming from. He's staying with Novell. SCO is expected to take 80-120 of the crew; HP up to 200.

### CA TO INTEGRATE UNICENTER, OPENINGRES, MANMAN/X

Computer Associates International Inc, Islandia, New York, plan to integrate OpenIngres, CA-Unicenter and ManMan/X manufacturing software for Unix into a network management suite, ~~according to David Cahn, director of product strategy. Code~~ named Rainbow, Cahn said CA will finish integrating the three by the end of 1995. It will add a configurable graphical interface, presently undergoing in-house development with the code name Real World, he said. CA will then embed workflow technology to model business processes and applications, and port the resulting system to most flavours of Unix and Windows NT. By mid-1996, CA plans to release the suite selling to business developers, he said. The suite will include Legent's Paradigm helpdesk, which is being integrated to Unicenter, as well as an Internet-like browser. Applications will include software distribution, job scheduling and financial management, CA is presently courting workflow vendors, but Cahn declined to name names or speculate on the likely cost of the system.

### IBM REVEALS SYSTEMVIEW ENHANCEMENTS

IBM's release 2.0 of SystemView for AIX will include Systems Network Architecture (SNA) and Application performance management as well as enhanced object-oriented services, according to Lynn Wilczak, director of SystemView Strategy and Plans in IBM's Networking Software Division. IBM plans to build new performance management services and procedural applications into the SystemView object-oriented framework using Corba-based standards, she said. Application performance management services will include a response time agent code enabling users to collect response time statistics from customers' applications to determine critical performance points. IBM is also trying to rationalise the 26 products, including NetView, in the single package, while beefing up the object-oriented technology that's already part of SystemView. IBM will release and ship SystemView version 2.0 for AIX in December, but hasn't worked out terms of upgrades to existing SystemView users, she said. Meanwhile, IBM says it's shipped SystemView 1.1 for OS/2 to 6,000 beta customers, and will formally announce and ship it by year-end. The company will port SystemView for OS/2 to Windows NT next year, Wilczak added. IBM will release SystemView 2.0 for OS/400 next year.

### TIVOLI LICENSES TIVOLI/PLUS FOR MAESTRO

Tivoli Systems Inc, Austin, Texas, has released a version of its Tivoli/Plus integration software for the Tivoli application management environment and Unison Software Inc's Maestro workload scheduling application. Customised features include a Tivoli/Courier file package to synchronise deploying Maestro software and Tivoli management environment tasks, message consolidation with the Tivoli enterprise console, custom event correlation, and detectors to find and manage performance and availability problems. The package also includes a Tivoli/Plus GUI to access all Tivoli functions integrated with Maestro. Tivoli is selling the package at \$9,000 per managed Maestro server. The Maestro workload management software is up on HP, IBM and Sun Unix, and is certified for use with HP OpenView and OperationsCenter and IBM NetView network management environments (UX No 526). Unison Software Inc is based in Sunnyvale, California.

### OMG SEEKS COMMON OBJECTS FOR VERTICAL MARKETS

The Object Management Group has issued a Request for Proposal (RFP) for a common set of business objects that it hopes will integrate business processes for all vertical markets down to the application level. Integrated Objects chairman, Martin Anderson, the European chair of the Business Object Management Special Interest Group (BOMSIG), says the RFP is scheduled for completion in January 1996, with initial responses expected in Q2. The idea is to have a set of small business objects providing basic functions combined to component-based applications for specific markets. The SIG is headed up by Cory Casanave, founder of Data Access Corp, and members include IBM, Oracle, DEC and user groups including Boeing, Mercedes and Eastern Electricity in the UK.

### OPENVISION LAUNCHES NEW VERSION OF CLUSTERING SOFTWARE

OpenVision Technologies Inc, Pleasanton, California, has a new version of its OpenV\*High Availability 2.0 failover clustering software for Sun platforms. Instead of requiring a backup server for each server in a mission-critical situation, the software reportedly allows one server to backup several at once. Release 2.0 supports asymmetric and symmetric configurations, Point-to-Point Protocol and multiple server failover. Shipping in December, prices start at \$10,000.

### AURUM PARTNERS WITH CTP

Client/server software maker Aurum Software Inc, Santa Clara, California, has entered a strategic partnership with client/server systems integration firm Cambridge Technology Partners (CTP) to jointly market and sell distributed client/server application development and business process mapping products. CTP will provide client/server systems integration and consulting, and Aurum its sales force automation and customer support applications product line, which consists of SupportTalk, QualityTrak, SalesTrak and TeleTrak client/server products. They run on Solaris 2.3, SunOS 4.1.2, HP-UX 9.0, AIX 3.0. CTP, based in Cambridge, Massachusetts, develops, maintains and supplies software and information technology for companies building advanced client/server distributed applications.

### ICL DEVELOPS ACCESSMANAGER FOR AIX AND UNIXWARE

ICL Enterprises Inc has released its AccessManager enterprise network security server software for AIX, UnixWare and NetWare servers. AccessWare has a secure single sign-on and controls user access to distributed network applications on SunOS, Solaris, and HP-UX platforms, IBM and DEC mainframes and desktops. It supports security applications including RACF, ACF2, TopSecret, DCE and Kerberos. It integrates with SecurID card, StopLock V and RACF Passticket. ICL said it will support Windows NT clients and servers, and Windows 95 and Macintosh clients in the future. Additionally, ICL has developed a customisable remote user version of AccessManager for users dialing in via terminal emulation, remote-node client/server and remote control.

### SYSTEM SOFTWARE ACQUIRES SOFTWRIGHT FOR OBJECT TECHNOLOGY

Looking to extend its so-far successful foray into the Unix market, Chicago-based System Software Associates Inc (UX No 557) has acquired for an undisclosed sum Softwright Ltd, the Langley, Berkshire-based company that specialises in building object-oriented business applications. Softwright was, until 1991, 50% owned by Micro Focus Plc when the management staged a venture capitalist-backed buy out and since then it has been 60% owned by management and staff, the difference being held by the VCs. Softwright customers include financial institutions and utilities. It has tried to keep pace with innovation and its business packages currently offer multimedia components. Its expertise in open systems, and Unix chiefly, is of interest to System Software, which has the image of lagging behind in the general move to Unix. System Software will immediately incorporate Softwright's object technology into its BPCS (Business Planning and Control Suite) line for Unix. Softwright will become SSA Softwright but will stay at its current location and there are plans for a research and development laboratory. System Software has also gained 50% of Newbury, Berkshire-based Integrated Objects Ltd (UX No 558), a firm Softwright established with IBM in 1993 to develop New World Infrastructure, a framework that enables business objects to co-operate and work together across a mixture of interfaces and communications protocols. The acquisition means System Software now has access to Integrated Objects' technology.

### INTERSOLV ACQUIRES TECHGNOSIS

Atlanta-based ODBC specialist Intersolv Corp, which is keen to move from its ODBC bastion to a full set of analysis and design tools, has acquired TechGnosis International Inc to broaden its virtual data warehouse solution. Under the terms of the acquisition Intersolv acquired Brussels-based TechGnosis for 3.4m shares of common stock and \$7.5m in cash. The transaction is valued at approximately \$80m, with Intersolv expecting to incur one-time charges of \$12m-\$15m in the quarter ending October 31. Privately held TechGnosis has 150 employees and claims revenue of \$13.8m. Intersolv will integrate Techgnosis' Sequelink middleware into its own DataDirect data access and analysis product to provide database access over TCP/IP, NetBIOS, NetWare, AppleTalk and DECnet.

## DATA GENERAL BEGINS PENTIUM-BASED SMP TREK

Data General began its anticipated trek from the Motorola 88000 to Intel last week, announcing, as it had promised, five new AViiON servers, all Pentium-based. These machines will evolve in the second half of next year into P6 units built around the new-fangled SMP technology, NUMA or Non Uniform Memory Architecture, and are expected to run right up the back of Sequent Computer Systems' similarly architected Sting machine officially announced a couple of weeks ago to take the blush off DG's rose (UX No 560). Unlike Sequent, which claims to be going ~~with a more reliable version of the four-P6 Standard High Volume (SHV) motherboards Intel is designing, DG will be using the off-the-shelf board giving it more of a chance to commoditize its MPP-like product (UX No 544).~~ It faults Sequent for its proprietary implementation, dismissing it as "last-generation stuff." It claims Sequent will be the only company fielding Sting whereas it suggests its own widgetry will be adopted more widely, leaving it unclear whether DG will OEM its boxes or whether Oslo-based Dolphin Interconnect A/S, the source of the interconnect its NUMA architecture depends on, has found other takers. DG expects to be the first company that commercializes a NUMA architecture. The boxes DG debuted last week include three enterprise-level servers topped by a maximum 8-way rack-mounted AV 10000 that will sell for between \$70,000 and \$160,000 once it's available next month. Like its mates, it's based on the 133MHz Pentium. The AV 4700 and AV 4800,

## AMD ACQUIRES NEXGEN; LOOKS TO WRESTLE INTEL

In a surprise deal announced long after we closed the last issue, Advanced Micro Devices said it would acquire NexGen in a \$840 million stock swap and operate it as a subsidiary. The move, a rare one in semiconductor circles, is based on mutual weakness. The entity that results will be stronger but whether it is strong enough to harry Intel significantly remains questionable. It will however present a more formidable obstacle to fellow cloner and competitor Cyrix. AMD says it's determined to continue on with its development of its repeatedly delayed K5 Pentium knockoff, now not due in volume until 3Q96, despite reports that its speed is not good, while NexGen proceeds with its Nx686, the most promising of the P6 competitors, now in first silicon and due in the second half of next year (UX No 561). Because the 686 is further ahead, AMD is cancelling its own K6 development, by its own admission an "expensive program," and will use those resources to bolster NexGen's efforts. Last week's big revelation was the fact that when Vinod Dham, the former head of Intel's Pentium operation, came over to NexGen in May as the company's number two guy, he decided that the 686, which is neither bus- nor pin-compatible with Intel, would be compatible on both counts with the Intel P54c.

### Not revealed

This was not revealed at the recent Microprocessor Forum where the chip, in first silicon, was shown for the first time publicly up and running Windows. NexGen has long taken the position that its incompatibilities disappear on a board which is what people buy. Dham apparently did not find that argument persuasive and also wants to wrestle Intel - in the face of the P6's difficulties with running 16-bit software well - for the mainstream. The redesign of the Nx686, which will be the only version to go into volume production, is code named Catapult. Both NexGen and AMD claim the addition of Intel compatibility will not change its schedule at all. AMD hopes its experience with Intel pin-compatibility will prove useful to Catapult. The new combo say they plan to continue NexGen's relationship with IBM Microelectronics, NexGen's fabricator, subject to changes in "business conditions" but at the same time produce the Nx686 at AMD's billion-dollar Fab 25 site, which next year will be capable of a five-layer metal 0.35-micron process. Currently Fab 25 has only gotten to 0.5-micron. AMD and NexGen will also attempt to shrink the die sizes of both their fifth- and sixth-generation products. IBM's production technology is generally considered superior to AMD's but it is rumored that IBM is showing favoritism to Cyrix chips, which it also produces, having been alienated by Dham's Intel-bred arrogance. AMD is not expecting high-volume revenues from Catapult until 1997.

### Notebooks

It fancies however that it could go into notebooks before the P6 while it figures the K5 will be too late for that. The powers-that-be at the two companies maintained that there should be little difficulty bringing their operations into line because of the strong similarity between their architectures and the way they both addressed x86-to-RISC instruction sets. They said the two lines together would form the K86 superscalar family consisting of the promised K5, the restyled K6 and a future K7 to be built out of the new K6. AMD's R&D capabilities, as witness the trouble it's had getting the K5 out, has been derided as "ripoff & duplication" though it claims the K5 will be better than the shipping Nx585 and will offer a chip whose performance is 30% superior to Pentium - when it gets here. NexGen's technical problems, once legendary, have now diminished but - at the rate it's burning cash - it's now got balance sheet problems, as witness their latest results. Sources say NexGen board member Marshall Cox approached AMD a couple of months about a possible combination. It lost \$20.5m in its first fiscal quarter, ended September 30, on sales of \$16.6m versus a \$5.3m loss a year ago on sales of \$7,000. The previous quarter it lost \$16.4m on \$12.7m. It attributed the results to Intel's pricing.

both towers and starting at \$20,000 and \$33,000 respectively, support up to four chips. DG brags that these are the first mission-critical Unix machines based on PCI. DG went to Corollary Inc, which has attracted a number of significant names, for its C-Bus II technology. DG also brags that it's the only vendor to be able to switch chips without significant dislocation of its software. It claims thousands of programs will be available on the boxes within 90 days. Already, it said, all the databases are there as well as the tools and communications stuff, attributing its feat to DG/UX's portability. The new line-up also includes two PCI-based departmental and workgroup-level servers, both based on Pentium100s, that DG expects to sell, in a new though expected shift for the company, with Windows NT, NetWare, UnixWare and SCO Unix. One is a maximum two-way called the AV 2000 that starts at \$6,500, the other a maximum four-way called the AV 3000 that starts at \$13,000. As a matter of fact, NT will run on all its Intel servers but it is still advocating Unix - or its case DG/UX 4.1 - in the enterprise. NT is there as investment protection for its customer base and as a come-on for its resellers. DG/UX 4.1, by the way, runs on both the company's Intel and Motorola machines which helps with the software migration. Ports, it says, can be done in a day. DG is touting 4.1 for its dexterity with MP scalability, high availability, clustering features and 7x24 systems management capabilities. It includes a unique "rolling upgrade" capacity so that an SMP configuration doesn't have to be taken completely off-line merely to upgrade the software. Each node will degrade as it is upgraded but doesn't have to be shut down. Before the NUMA configurations become available, DG expects these machines to go to the Pentium Pro in the first half. All the Intel machines except for the 10000 are available immediately. Data General is using Pegasus, AT&T GIS' version of LAN Server for Unix in a release it calls DG/Advanced Server so Windows clients can access databases, applications and services on AViiON systems running DG/UX. Hence DG/UX looks like native NT servers to Microsoft clients and appears as peers to NT servers. It is also using an NT-based Enterprise Management station as a single integrated platform to manage DG/UX and NT systems, its own CLARiiON disk arrays and other Unix systems from a central site. DG moved to Intel to improve its commercial position and increase sales and marketshare. Last week, it reported a net loss of \$46.7m for the year though in the fourth quarter it earned 4 cents a share due in part to reduced operating expenses. It lost \$87.7m in FY94.

## UNIGRAM.X WINS APPEAL; GETS OSF ANTITRUST PAPERS UNSEALED

An unhasty 13 months after *Unigram.X* [ first asked the federal courts in Massachusetts to unseal the documents filed with them in the antitrust action brought by Addamax Corporation against the Open Software Foundation, Hewlett-Packard Company and Digital Equipment Corporation (UX No 504), the court last week ordered that all but a small percentage of the records be opened to public scrutiny. Virtually all the documents amassed and filed during the course of the protracted legal dispute have been under lock and key at the instigation of OSF, HP and DEC who branded them "proprietary information" and "trade secrets" though it is believed they were really only concerned about bad publicity and commercial embarrassment. When we filed our first petition, only six of 250 documents and motions, the crux of the Addamax case, were accessible to the public. Addamax had agreed to such terms in order to conduct discovery and depose hostile witnesses. Subsequent to our motion to intervene last year, the courts dismissed the OSF-HP-DEC motion for summary judgement and the Addamax suit is proceeding to trial (UX No 540). Our lawyers - and we have amassed quite a few - advise us that the documents could be available to us this week.

### LATEST NETSCAPE OFFERING EXTENDS HTML, ADDS JAVA

Netscape Communications Corp has announced the feature set of Netscape Navigator 2.0, its next generation browser. The software, available for download in a beta version, changes the rules for both developers and users on the World Wide Web, extending HyperText Mark-up Language significantly, and introducing scripting, Java support, and a new Netscape application programming interface for building plug-ins to the software. At the same time the company announced Navigator Gold, a Web authoring tool which is due this quarter and offers drag and drop Web page authoring, including visual construction of tables, form design and text boxes. The company has also announced LiveWire Site Manager, a visual drag-and-drop tool that enables developers to view and manage Web sites in a graphical format, viewing hypertext links to and from a particular page or file on the site and modifying and deleting them using a point and click interface. In Navigator 2.0, the company has expanded HyperText Mark-up Language in a variety of ways, the most important of which is the introduction of frames, independent scrollable areas on the screen, each of which can be assigned its own URL Universal Resource Locator address. The use of frames would mean, for example, that a search engine could display the results of its search in a new frame, rather than having to re-paint the entire screen. Frames can also be used as ledges, frozen areas of screen that are maintained while the user looks through other pages. This is especially useful for having a fixed navigation bar at the bottom of the screen, or a corporate logo kept at the top. Not only should frames increase the author's control of the way that pages look, it should also speed things up considerably, avoiding the repetitive re-loading of images or text.

#### Support for Java applets

Next up is the inclusion of support for Java applets. Java - Sun Microsystems Inc's C++-derived programming language - can be used to embed small programs into pages, and these are compiled and actually run on-screen within the page, enabling applications such as graphics viewers and spreadsheets to be built into Web pages. To get this to work, Netscape will have had to implement an entire language interpreter within the browser, so it will be interesting to see just how bloated Netscape's memory footprint has become. The company has adopted a number of the elements of the Java language to develop its own internal scripting language for Navigator. The script seems destined to reduce the Web programmers reliance on Common Gateway Interface scripts at the server, adding to the portability of smart pages. Netscape said the scripting language gives the page designer access to events such as start-ups, exits and user mouse clicks. So it should be quite easy for the average HyperText Mark-up Language designer to get Netscape to play a particular sound in response to particular mouse click, or load a particular image depending on the time of day. This almost extends the Netscape Navigator software into the realms of a fully-fledged graphical user interface. Finally, developers appear to be leaping over each other to announce support for Navigator 2.0's new plug-in application programming interface. The interface is essentially an evolution of the old 'help app' concept, except that where the helper used to be an application in its own right, and it opened its own window, Netscape plug-ins will display their wares from within the Netscape Internet page. QuickTime movies, Adobe Systems Inc Acrobat and Macromind Director plug-ins are said to be just around the corner, and the company has development pledges from Kaleida Laboratories Inc, which intends to build a ScriptX plug-in and Tumbleweed Software Corp, developer of Wordperfect's Acrobat-competitor, Envoy.

### UNIPRESS GIVES AWAY SOURCE CODE MANAGER ON THE WEB

Unix development tool maker UniPress Software Inc, Edison, New Jersey, has released a free single-user version of its Source Code Manager (SCM) (UX No 531), SCM Lite, a configuration management system for managing source and binary files created by multi-programmer projects. SCM includes parallel development tools, source code control, release revision tracking and X Windows support. Available on the World Wide Web it's up on SunOS and Solaris, HP 9000, IBM RS/6000, Digital Unix, SGI, SCO Unix, 386/486 Unix and Linux. It normally goes for \$1,300 for one user, \$5,000 for five and \$8,000 for 10.

### UNISYS SAYS CHANGE WILL BE DISRUPTIVE BUT PROMISES IT WILL BE WORTH IT

Unisys Corp must be wondering if it will ever come right as it announces third quarter losses and says its plan to split into three separate business units will have a "disruptive effect" on 1995 financial results. It hopes that this time the reorganisation really will put the company in a position to achieve visible operational and financial progress in 1996. It reiterated that the plan will reduce annual costs by at least \$400m by the end of 1996. The company blamed the third quarter loss on weakness in its European and US operations and repeated that the size of the charge and impact on jobs have not been determined; it shed 4,000 jobs last year. The loss for the most recent quarter was \$32.2m or 36 cents a share, compared with profits of \$42.9m or eight cents a share, including \$12.1m from the discontinued defence business it sold in May 1995. Turnover is still slipping and was down another 1.3% at \$1,460m. Under the reorganisation plan, the company will form an information services, a computer systems, and a global support services - each with its own sales and marketing force to pursue growth in their own markets. "Planning for this realignment is on schedule, with implementation set to begin in January," the company said. Unisys did say that orders for its products grew in most major geographic areas, with double digit gains for departmental servers and desktop systems, information services, and desktop services. Strong growth in information services and personal computer systems was offset by a decline in mainframes. Total operating expenses fell in the quarter but the level was still not satisfactory. The shares shed a quarter to \$7 even.

### INSIGNIA FINALLY MOVES SOFTWINDOWS 2.0

After two years of development and delay and a backbreaking amount of work, Insignia Solutions was supposed to start shipping SoftWindows 2.0 for Unix as we went to press on Friday October 27. The stuff will finally provide RISC boxes with 486 emulation and the ability to run 386 enhanced Windows programs, basically everything the Microsoft league has on offer. Pricing remains unchanged at \$549 for the first user; \$429 for subsequent ones. The Mountain View, California company has had the technology finished for the last seven months but has been tweaking performance and testing since then. It includes Windows 3.11 and MS-DOS 6.22 pre-installed. Unlike some technologies, such as the recently announced stuff from Willow Software (UX No 559), it includes OLE and DDE. It supports DEC, HP, IBM, Sun and Silicon Graphics platforms. All but HP are OEM'ing it. It also provides access to PC networks such as NetWare, MANManager/Windows NT Server, Banyan Vines and Unix file servers as well as WinSock support so SoftWindows and Unix can use the same IP address. It supports Token Ring and Ethernet. Insignia describes the performance as scalable and workstation-dependent. It can be increased with additional RAM, more cache and faster CPUs.

### INFORMIX LOOSENS ITS PURSE STRINGS ACQUIRES STANFORD FOR OLAP

Informix Software Inc has been out on one of its rare shopping trips and returned with an agreement to acquire on-line analytical processing outfit, Stanford Technology Group Inc (STG) for 570,000 newly issued Informix shares, which when last we looked were trading for some \$30 to \$35 a share. The Menlo Park, California-based company, which already had a partnering relationship with STG from the beginning of the year, says it plans to integrate STG's MetaCube decision support software with its own Informix DSA architecture to provide a multidimensional view of relational data. MetaCube is perhaps the most visible product offerings that provide multidimensional views of relational data - others include MicroStrategy, Vienna, Vancouver and Information Advantage, Edina, Minnesota - with the engine running on a NT server connecting to HP, Solaris, Sequent, IBM RS/6000 agents and supporting Oracle, Tandem, DB2, as well as Informix databases. STG, based in San Francisco, California was founded in 1993 by bunch of ex-Oracle people and has fourteen staff. Informix said the company will remain a separate entity, reporting to the Informix board.

### SCO FINANCIALS NOT LOOKING GOOD

My, my, my, my, my. This news will not give the Unix community a warm and cuddily feeling since it's expecting the Santa Cruz Operation to make investments in Unix now that its one of the heirs but it says the results of its fiscal fourth quarter have been delayed until mid November. It figures its income and operating results won't come up to analysts' ~~expectations or its third quarter operating results when it did 4 cents on~~ \$50m in revenue. In fact, it may post an operating loss. It attributed the lower-than-expected results to increased provisions for potential product exchanges, mostly overseas, and a previously announced restructuring charge that will cause a loss. SCO VP of product management Grover Righter, calling in from vacation last week, said not to worry, the budget earmarked for Unix is not impacted though it will present short-term problems likely making money more expensive. Somehow it's cold comfort. SCO was all set to post its numbers, Righter said, when the auditors - he seemed to suggest they were being a tad overscrupulous - started worrying about channels reserves which apparently stem from all the different kinds of contracts SCO has in effect with its European resellers and major accounts who trade off to different products during a long sales cycle. Righter says the auditors aren't concerned about collections.

### OLAP COUNCIL DELIVERS ACCESS API SPEC

The self-styled standards body for on-line analytical processing, the OLAP Council, says it's finished the specifications for its application programming interface (API) for accessing multidimensional data (UX No 531). The specification is meant to provide a single vendor-independent link between front-end access software and OLAP data sources and simplify the incorporation of multidimensional data access and analysis into applications. The initial version of the API will detail the display and navigation of both multidimensional data and supporting meta-data. Future development will address the creation and maintenance of OLAP meta data. The API is meant to enable administrative functionality, such as logging on to OLAP servers and querying for access to metadata - such as dimensions, hierarchies within dimensions and names. It also enables specifications of a sub-cube slice, causing the server to return the specified slice of data, claims Rick Crandall, OLAP spokesperson and chairman of Comshare Inc, Ann Arbor, Michigan. The client is allowed to specify a place in the cube and ask for "drill down," he added, and can ask for a sort, performed on the server, with the results delivered to the client. The first release will enable full-functioned slice-and dice and sorting, and is likely to show up first as a DLL (Dynamic Linking Library) "callable by anything," and later as an OLE object. The API was originally due to be coded and available in the fourth quarter, but has been delayed by an increase in Council membership and their involvement in the API and the council's decision to publish a preliminary document for comment, explains Crandall. The specification is now due to be released by the end of the year, says the Council, with a final API put in the public domain for OLAP vendors to use, later next year. The Council claims its got a bunch of other projects in the pipe, but is remaining mum on details. Meantime, the Council has signed up three new members including Oakbrook Terrace, Illinois-based Platinum Technology Inc as a general member and KPMG Peat Marwick and Toronto, Canada-based Speedware Corp.

### SCO PROS FORM WEB DATA DELIVERY FIRM

Some folks from Santa Cruz Operation are spinning out to form a venture called the Information Refinery in nearby Boulder Creek, California, that aims to address what last week got tagged the "InterGlut." Their focus is two-pronged: sort through the heap of information on the Web for their clients and deliver it to them wherever they are. Apparently they're not that picky about how the data gets sorted - right now they using a sorter of their own but they may go with someone else's by the time they're ready to go to market in the first half. What they figure is the crown jewels is the way they'll get stuff to you, be it wireless, laptop, pager or voice mail. Information Refinery, which has yet to incorporate and has been working on its designs for the last couple of months, aims to be completely cross-platform, delivering to either Unix or, more predominantly, Windows targets. Apparently the SCO refugees, who include president Nick Cassem, who used to be responsible for SCO's DCE and distributed services, and VP, technology Paul Morgan, who used to do DCE architecture, will piggyback on what they learned in SCO systems management.

### DATA GENERAL REPORTS NET PROFIT

Data General Corp has reported a fourth quarter net profit \$1.5m against a loss last time of \$6.2m on turnover that rose 6.9% at \$312.8m; net loss for the year to September 30 was \$46.7m after a \$43m charge for lay-offs and restructuring, offset by a pre-tax gain of \$44.5m on settlement of a software copyright and trade secret lawsuit against Northrop Grumman Corp, down from a loss last time of \$87.7m, which was after a restructuring charge of \$35.0m, on turnover that rose 3.5% at \$1,159.3m.

### NAC UPS PERFORMANCE ANTE WITH SECOND GENERATION NFS MACHINE

Mountain View, California-based Network Appliance Corp (NAC) is upping the ante with a stripped down, boosted performance of its second generation NFS network file system servers - the NetApp F330 - which it claims delivers the industry's fastest NFS access response times, set at ~~1,143 NFS operations at 10msec access times. NetApp F330 comes~~ with a new transport-independent operating system software that combines its high-speed file system with integrated NFS and RAID technology. Software modules include media access, TCP/IP, NFS, the proprietary WAFL (Write Anywhere File Layout) file system, RAID and SCSI disk drivers. The system avoids Unix overheads by having a single file system that grows automatically as new disks are added, up to a maximum of 80Gb. This eliminates the complexities of partitioning disks, says the company, assigning partitions to users. The company gets around the performance problems associated with RAID Level 4 by tightly integrating the WAFL file system, which it says radically reduces search times. Typical RAID 4 systems are strong on reliability, but low on performance due to the parity disk bottleneck. The alternative, RAID 5, eliminates the single hot parity drive, but is hard to administer and scale. The WAFL file system uses its knowledge of the RAID system to write a data pattern that minimises seek times and maximises performance, according to NAC. Hot swappable disks and spares, and redundant cooling and power supplies add to system reliability. Costs are reduced by basing the system on off-the shelf, Intel-based hardware - although the company has been forced by reliability problems to design its own motherboard. The NetApp F330 uses a 90MHz Pentium CPU, a PCI expansion bus and SCSI/SCSI-2 interfaces. Up to eight 10BaseT Ethernet, three 100Mbps Fast Ethernet and two FDDI interfaces are also provided. There is also up to 8Mb of PCI-bus NVRAM for data safety and data reliability. It comes in either tower or rack-mountable packaging. Prices start at \$52,100. The lower-cost, 486-based FAServer systems continue to be available. In the UK distributors include Xanadu Systems (commercial client-server), Radan Computational (CAD) and ABC Workstation Solutions (academic). NAC says it has now shipped over 800 servers to 200 customers worldwide, since it was founded in 1992. Twenty machines at 12 customer sites have been installed in the UK since operations began at the beginning of this year. NAC came onto the market two and a half years ago to challenge established NFS file server vendor Auspex Inc - from where many of the company's technologists originally came from. The company has always concentrated on providing optimised hardware appliances specifically optimised for file serving tasks. Key application areas have been CASE, ECAD and MCAD, followed by Internet, business and financial services organisations, says the company. Sales in 1994 reached \$14.5m, and the company claims this year's figures are now running several times ahead. NAC has plans to go public in the near future. Its product plans include high-end systems, the licensing of its software to other vendors, and networking appliances beyond NFS.

### ROSS LAUNCHES HYPERSPARC CHIPS

Ross Technology Inc put out its anticipated 150MHz HyperSparc chips last week describing them as tightly coupled with 512KB secondary cache. The widget, which had been code named Colorado 3 and also comes with a mighty 1MB of cache, reportedly provides a 33% overall increase in integer performance over its predecessor, the 125MHz/256KB Colorado 2. Ross claimed greater performance in floating pointing and MP configurations. The chip will be available in single- and dual-processor modules on standard MBus daughtercards. With the 512KB cache, Colorado 3 delivers 178 SPECint92 and 210 SPECfp on a production compiler. It claims to beat out a 233MHz Alpha and a 250MHz Mips chips on the SPECmarks. Ross is pleased it is able to field the thing only eight weeks after tapeout despite the size of its L2 cache. In a quad configuration and again with a production compiler, Ross said the chip performed at 12,886 SPECint and 14,334 SPECfp. The chip and its chipset, which includes cache controller, MMU, Tag Unit and Ross SRAMs, both operate at 3.3V, it said. The thing runs Sun software back to SunOS 4.1.4. Ross tells us it can't give us prices because, if it did, then the retail customers would want OEM pricing and other confusion would result because they go out on daughter boards not as chips.

### AUSPEX ADDS TO ITS NS/7000 SERIES

Santa Clara, California-based Auspex Systems Inc will add to its family of Network File System (NFS) NS/7000 servers this week - introducing the entry level 40Mhz Sparc based 150 Series at \$40,000, the 55Mhz HyperSparc 250 Series at \$60,000 and the high-end 650 Series at \$110,000. The NS7000/150 performs from 600 to 1,600 NFSops/sec, with storage 4Gb to 150Gb, claim the company.

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**IBM** says we were wrong in saying they're developing multiprocessor PowerPC desktops with Bull (UX No 560). They're doing them on their own.

At DECUS in early December **DEC** will reportedly have a 96-processor machine on display. Apparently it's an 8x12 Turbo Laser. Meanwhile, there's a figure floating around that says they've gotten 155,000 Alpha systems out to date.

**AT&T** is planning to sell its Paradyne unit which does stuff like modems.

**DEC** is supposed to come up with something it calls the Internet Tunnel that provides encryption and authentication so the Internet can be used as a virtual private network. Initially it's out on Digital Unix with Windows 95 clients and will come from DEC's newly formed Connectivity Software Business Unit.

*Sic transit gloria mundi* -- What was left of **Cray Computer Corp** went to auction last week.

The channel that **Hal Computer Systems Ltd** is putting in place to move its 64-bit Sparc workstations - so far it's got Ingram Micro in the states - is supposed to move Fujitsu-branded product. Hal was unclear whether it would eventually turn into a full-line house or just put the channel in place. **Fujitsu Ltd** does after all make both MicroSparcs and HyperSparcs.

**Hal** is also kinda surprised at the rate its hard-won 64-bit architecture is being accepted. It'd figured it'd take a year or two before that had become a selling point and that in the early days it'd just be speed. However, it's finding that about 10% of its 150-200 justifying apps are immediately taking advantage of the extra space. Its target areas are EDA, financial modeling and trading, mechanical CAD, CAE and high-flown scientific. After giving new meaning to the expression "computerless computer company," Hal is talking about being worth "hundreds of millions of dollars" in a couple of years.

**Rational Software Corp** has lost its executive VP and chief financial officer Ralph Alexander for personal reasons. His resignation is effective December 1 and thereafter remain available as a consultant. Timothy Brennan, corporate controller, has been named interim CFO.

Oakland, California-based **Illustra Information Technologies Inc** has ported its object/relational database to HP-UX.

The **Sparc Technology Business** unit now figures it's only six months behind the high-end 333MHz 21164 Alpha, the best the industry has right now though supplies are thin. So, according to STB president Chet Silvestri, it's within sight of redeeming primacy of place. If our sister publication *ClieNT Server News* is right and Mips boys are two revs away from a final product on the would-be highest-end R 10000, Silvestri says they're six months away from a chip.

Oakland, California-based **Illustra Information Technologies Inc** has ported its object/relational database to HP-UX.

**Computer Associates International Inc** saw second quarter net losses of \$637.2m, after a \$1,300m write-off of purchased research and development from the acquisition of **Legent Corp**, on turnover up 30.3% at \$812.3m; mid-term net losses were \$548.6, against \$44.8m profits last time, which were after a \$249.3m write-off for purchased research and development, on turnover up 26.3% at \$1,389.8m. CA says that revenues from its software for mid-range systems grew 66% and are now 24% of total revenues, up from 18%, and that so far, the assimilation of the Legent operation is progressing "amazingly well;" the operating profits were better than the consensus forecast on Wall Street.

**Digital Equipment Corp**, Maynard, Massachusetts, has released version 1.0 of its Digital authentication server software, which provides network security for Unix users. It uses DES encryption and costs \$9,100 for one server, 10 Unix clients and 20 PC clients.

**Persistence Software Inc**, San Mateo, California, says it's won a US patent on its Persistence 3.0 code generation technology that maps business objects to relational tables.

Portable workstation outfit **RDI Computer Corp**, out of Carlsbad, California, has opened a European headquarters in Ascot, Berkshire, UK. RDI VP Reg Broughton will head up the operation. The company claims it has distributor agreements throughout Europe, with sales and service carried out through RDI offices in Aalen, Germany.

OLAPer Cambridge, Massachusetts-based **Pilot Software Inc** is integrating its LightShip performance planning and software with IBM's DB2, DataGuide and DataJoiner products under IBM's information warehouse solution.

Wilton, Connecticut-based **TSI International** has added extensions for AIX, HP-UX and Stratus R5 RISC platforms to its Mercator object-oriented data mapper. Mercator enables data manipulators to map internal data fields to applications according to ANSI transaction sets. Typical applications used for transforming data include electronic data interchange, the integration of data with core business systems and legacy systems. Prices start at \$18,000.

**Hitachi Data Systems Corp** says it has a number of SR4300 configurations of IBM Corp's SP2 installed internally for testing (UX No 561), and is in discussion with a number of European customers; it hopes to announce first sales in the next few weeks.

According to Ira Goldstein, senior VP and chief scientist of **Open Software Foundation's** Research Institute, the API initiative that some of its sponsors - IBM, HP, Hitachi and DEC - are working on in order to bring their Mach-microkernel initiatives into synch are up and running internally (UX No 549), with a spec due at the beginning of December. A performance and conformance test suite is due in next year.

*Newsweek* says the code name for **Sun Microsystems'** el cheapo stripped-down "network computer" a la Oracle is the "impersonal computer." Think it'll catch on?

**AT&T Corp** has reported third quarter net profits down 75.0% at \$262.0m, after a \$1,200m restructuring charge, on turnover up 5.7% at \$19.7m; nine month net profits fell 16.5% to \$2,815.0m, after the same charge, on turnover up 6.5% at \$57,478.0m. Net earnings per share fell 76.1% to \$0.16 in the quarter, 18.1% to \$1.77 in the three quarters.

**Silicon Graphics Inc** saw first quarter net profits up 29.4% at \$58.4m, on turnover that was up 32.7% to \$595.3m. Net per share rose 26.9% to \$0.33.

Commenting to *Reuters* on its figures and matters arising, **Silicon Graphics Inc** says it expects its revenue growth for the full year to be greater than the 33% growth posted in the quarter just ended: chairman and chief ex-executive Ed McCracken said high-margin workstations helped drive strong sales, adding that the company is not changing its business model, which targets gross margins within the 50.5% to 52.5% range despite higher levels in the quarter.

As we went to press sources were saying not to expect an upgrade until the middle of next year because **DEC**, who as recently as this summer expected to be making an October announcement, now feels it doesn't have to. Turbo Laser appears to be holding its own quite nicely against the Sun 2000E and the HP T520. DEC is indicating the box is performing above expectations and that people are buying it with more bells and whistles than they thought they would. DEC watcher Terry Shannon believes some 700 units have been sold. Next year they'll probably go with a 400MHz EV5 shrink offering, maybe, 500 SPECint and 675 SPECfp, and probably wrestle with the machine's memory-to-processor imbalance by using double density memory.

**Applix Inc** has a definitive agreement to acquire Massachusetts-based Target Systems Corp, a developer of support automation software, for about \$6m cash.

**Mercury Interactive Corp** has a letter of intent to acquire **EBY Semantica Ltd**, an Irish client/server developer, for \$3m cash, with Mercury assuming Semantica's liabilities. It will writeoff duplicative projects. The total transaction is valued between \$6m-\$8m.

**Oracle** senior VP, New Media Division Farzad Dibachi has quit to pursue entrepreneurial interests. Product Division executive VP Dirk Kabcenell will fill in.

According to *Business Week*, **IBM** CEO Lou Gerstner has suddenly got religion and come up with a vision which he could have borrowed from just about anybody 'cause it's "network-centric computing." Sun Microsystems VP Anil Gadre, however, isn't scoffing. He says no amount of advertising can buy that kind of blessing.

We asked **Sun Microsystems Computer Corporation** (SMCC), the company's hardware arm about the whereabouts of a 64-bit operating system for its new 64-bit chip. They shrugged their shoulders and said that SunSoft "won't return our phone calls either."

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper



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The weekly information newsletter for the UNIX™ community worldwide

London, November 6-10 1995

Number 563

## PENTIUM PRO TO STAY ALOOF FROM DESKTOP UNTIL 1997

Intel Corp formally announced the Pentium Pro processor last week, squarely aiming it at the workstation and server markets, with the desktop personal computer market conspicuous by its absence. It is now shipping three versions of the Pentium Pro clocked at 150MHz, 180MHz and 200MHz, all with a 256Kb level two cache. Steve Poole, Intel's European vice-president sales and general manager described the 200MHz Pentium Pro as "the fastest microprocessor on the planet." A 166MHz iteration will be available with a 512Kb cache in the first quarter of next year, with a 200MHz version following in the next quarter. The 150MHz and next year's 166MHz Pentium Pros will be produced at the 0.6 micron Leixlip fab in County Kildare, Ireland. Other versions will be produced on 0.35 micron processes in the US. As most of today's 16-bit application software will not run any faster on the Pentium Pro than the Pentium, and even Windows95 contains a substantial amount of 16-bit code, Intel has been left with the server and workstation markets - tiny compared with the desktop market, even if Windows NT continues to grow at current rates. Poole said it would be 1997 before there are sufficient 32-bit applications for the Pentium Pro to reach the desktop at a realistic price. Meanwhile he described the Pentium - further iterations of which are due next year - as the "best option in the marketplace for 16-bit code." The Pentium name links it to its predecessor, but its architecture is sufficiently different that there will be no Pentium Pro Overdrive upgrade path from the Pentium. The company confirmed that the Pentium Pro will run hotter than the first Pentiums did, though the latter did not have a level two cache on the same chip carrier. Prices start at \$974 for the 150MHz version, rising to \$1,989 for next year's 200MHz chip with a 512Kb cache; both prices are for quantities of 1,000. Intel also launched two PCI chip sets, one for workstations and one for servers, with up to four processors on each.

## SUN TOPS-UP SPARCSTATION 20 LINE WITH 150MHz HYPERSPARCS

In advance of Ultra 1's official debut this week, Sun Microsystems Inc's wringing every last drop out of its existing workstation lines, adding 150MHz HyperSparc-based models to its high-end SparcStation 20 series and cutting tags on others. With the new machines Sun appears to have dropped the HS prefix previously used to distinguish Ross Technology Inc HyperSparc RISC-based units from those using its own SuperSparc II CPU. Significantly there's also no sign of the 85MHz SuperSparc II recently introduced into its commercial server lines making it onto the desktop. The new SparcStation 20 TurboGXModel 151 designed for engineering and design applications is rated at 169 SPECint92 and 208 SPECfp92 and starts at \$19,000 with 32Mb RAM, 1Gb disk and 20" screen. Without the Turbo graphics, but including 2Gb disk, the price is \$17,500. The two-way Model 152MP with 64Mb RAM, 1Gb disk, four Sbus slots and 20" screen starts at \$25,500 - \$28,800 with two 2Gb drives. Server versions of both are available - uniprocessors run Solaris 1.1.2 or 2.4, the SMP units only Solaris 2.4. Sun has cut prices on its 75MHz SuperSparc II-based SparcStation 10 Model 71 with a 20" screen to \$17,000 from \$19,800. The two-way 712MP is down to \$21,500 from \$25,300, the 125MHz HyperSparc-based HS21 is knocked-down by \$2,000 to \$17,000 and the HS22MP is reduced from \$24,500 to \$21,500.

## SUNSOFT ROLLS OUT SOLARIS 2.5 FOR SPARC, INTEL, POWERPC

SunSoft Inc officially unwrapped the 2.5 cut of its 32-bit Solaris Unix last week, claiming the Sparc, Intel iAPX-86 and PowerPC editions represent "the only real competitor to Windows NT." The company says 2.5 will deliver 150% improvement in time-sharing performance, up to 30% faster Network File System performance with NFS 3.0 over Solaris 2.4, as well as support for up to 64 CPUs (from 2.4's 32) and databases up to 1.5Tb in size. Part of the performance improvement's down to the so-called Spring Doors microsecond inter-process communication system brought over from the company's Spring advanced research project (UX No 530). Solaris' AdminTool and AdminSuite have been revamped for enhanced administration and security. Running existing applications under 2.5 on Sun's forthcoming 64-bit Ultra 1 UltraSparc unit without a recompile reportedly garners a six times performance improvement (UX No 562). 2.5 is supposedly significantly faster on a Sparc 20 offering a 25%-30% improvement. The PowerPC release is still in beta and is now expected sometime early next year. But where's a 64-bit Solaris to take full advantage of UltraSparc? SunSoft says it'll implement the forthcoming 64-bit Unix API specs, but doesn't say when that'll happen. HP, IBM, SGI and others have licensed NFS 3.0 - available only as part of a packaged ONC+ bundle; DEC's still on NFS 2.0.

## HP TOUTS PA-8000 SPEC95 PERFORMANCE

Hewlett-Packard Co will introduce its 64-bit PA-8000 RISC in a range of high-end workstations with new graphics subsystems at the beginning of next year designed to go up against the likes of Sun Microsystems Inc's Ultra 1 which comes into play this week (UX No 562). HP's already touting system-level performance at 8.6 SPECint95 and 15 SPECfp95. It puts those numbers up against SPEC95 estimates for rival technologies that it's gleaned from the microprocessor trade books, showing IBM Corp's 167MHz PowerPC 604 at 6.0 and 5.0 respectively, Sun Microsystems Inc's 143MHz UltraSparc I at 5.1 and 7.4, DEC's 300MHz Alpha at 7.3 and 11.6 and Mips' R10000 at 7.4 and 15. Sun says the comparisons are completely misleading and it doesn't have SPEC95 numbers for UltraSparc I in any case. By the time PA-8000 is around next year Sun says it'll be playing with UltraSparc II units, expected to do 8.5 to 10 SPECint95 and 15 to 18 SPECfp95. HP last week turned PA-8000 chips over to its system partners in the Precision RISC Organisation supporters club.

## DEC SMASHES UNIX TPC-C RECORD

DEC hasn't been able to pull that magic 10,000 TPC-C number out of the hat yet (UX No 557), and has instead gone public with a tpmC figure of 9,414 (\$316 per tpm) for a fully-stacked (8Gb RAM) eight-way AlphaServer 8400 (TurboLaser) running Oracle 7.3 on Digital Unix. Idle time was 12%. The result puts DEC some way ahead of the rest of the Unix pack. Next best audited results are the HP 9000 T500/12 running Oracle 7.3 at 5,369 tpmC (\$535 per tpm) and Sun SparcServer 2000E/16 running Sybase SQL Server 11.0. at 4,544 tpmC (\$396 per tpm). DEC's \$316 per tpm also bests the leading cost-per transaction per minute Unix results - Compaq's ProLiant 4500 Model 5/100-1 (4 CPUs) running Sybase SQL Server 10.0.2 comes in at \$319 (1,516 tpmC), whilst the IBM RS/6000 Model J30 running DB2 for AIX version 2.1 achieves \$349 per tpm (3,119 tpmC). Emphasising the importance of Oracle's Very Large Memory option in the result (VLM requires a 64-bit operating system), DEC said a 10-way TurboLaser with 6Gb RAM turned in at 1,000 tpmCs lower. DEC now expects to get a 10,000 number in its Christmas stocking. Meantime, the company confirmed that TurboLaser will get faster CPUs and denser memory parts in the third quarter of next year (UX No 562). DEC says 40% to 50% of TurboLasers have shipped with Oracle VLM (DEC watcher Terry Shannon believes some 700 units have been sold) 60% of them Unix, 40% VMS. The VMS share is expected to rise when the full-blown 64-bit VMS eventually arrives (soon).

### MOTOROLA JOINT VENTURE TO MAKE, SELL POWERPC RISC PC IN CHINA

You might have thought that with China being almost virgin territory for computers, and the enduring value of its name in undeveloped countries where word of its fall from grace has scarcely reached, IBM Corp would be pushing OS/2 and the PowerPC in China for all it's worth, but instead it is Motorola Inc that is trying to push its PowerPC-based RISC PC in China - and Motorola has no particular interest in seeing the machines go out with OS/2 - it is indifferent whether the machines end up running Windows NT, Unix or OS/2 as long as they sell. The plan is for Motorola to create a \$12m joint venture, Nanjing Power Computer Ltd, with Panda Electronics Co, in which it will hold 60% and Panda the rest. Initially, Motorola Computer Group will supply Nanjing with its Atlas PowerPC 603, 603e and 604 motherboards for integration into new multimedia RISC PCs targeting the Chinese market, but ultimately, Nanjing Power will have the potential to develop new RISC PCs for China and other markets in Asia. The first machines are due next year and the facility, in the Jiangning Economic and Technology Development Zone, will be capable of producing more than 100,000 multi-media machines annually, although it is going for a modest 2,000 in the first year. Panda Electronics was founded in 1936 and did \$540m of business last year; these days, its principal products include short wave, satellite and mobile communications systems, and video recorders.

### AT&T LAUNCHES MULTIMEDIA COMMUNICATIONS EXCHANGE SERVER

AT&T Corp's Global Business Communications systems division claims that it will deliver multimedia data over both wide and local area networks with the advent of the MultiMedia Communications Exchange Server. The server, developed with AT&T Bell Laboratories, is said to support multimedia data over switched Ethernet local nets and Asynchronous Transfer Mode networks. The server software runs on a Pentium machine that can be connected to any variant of Unix workstation. McDonald Corp's restaurant designers have been trying out the server and used it for videoconferencing between several colleagues who were able to see and hear each other while working on the same computer-aided design file at the same time. Bay Networks Inc, Cabletron Systems Inc, Cisco Systems Inc, 3Com Corp, Hewlett-Packard Co, Sun Microsystems Inc and Innsoft Inc have announced that they will develop products to work with the server which will ship in the first quarter of 1996 at a starting price of \$35,000. A version using a personal computer for the client side is planned by the end of next year.

#### Upgrade

AT&T said that it would also upgrade its Definity Communication system beyond its current call feature and voice mail functions. The Communication System has been renamed Definity Enterprise Communications Server and will be adapted to become a local network server that will also handle simultaneous voice and data over Asynchronous Mode networks. Definity along with other multimedia network products will be known as BusinessWorks Solutions and will now fall under a newly established division staffed by 650 employees and designed to provide global customer sales and support. The division is planning to open BusinessWorks centres in the US, the UK, Hungary and Singapore.

### CA SHIPS MASTERPIECE/2000 WITH OPEN INGRES

Computer Associates International Inc, Islandia, New York, is shipping CA-Masterpiece/2000 enterprise financial management software with CA-OpenIngres for AIX. CA-Masterpiece/2000 data can be distributed and replicated transparently across local and remote servers. CA-Masterpiece/2000 includes fixed assets, fund accounting, general ledger, inventory control, job cost, labour distribution, order processing, purchasing, collection management, recovery management modules, accounts payable and receivable capabilities. CA also will sell VerSatility software products for CA-OpenIngres. VerSatility, made by vendor NPRI Inc, Fairfax, Virginia, is a series of integrated sales, service and support applications for enterprise-wide telephone call center operations.

### BRIO, NOT READY TO SELL OUT TO SYBASE OR ANYONE, SEEKS TO EXPAND SALES INTO EUROPE VIA PARTNERS, VENTURE CAPITAL

Mountain View, California-based Brio Technology Inc, provider of graphical front end query and report tools for data warehouse users, which claims the pole position in the market in the US, now wants to extend its reach into Europe. It has just launched localised versions of its flagship product, BrioQuery, in German, French and Italian, and has recently signed with consultants Management Decisions Ltd of Isleworth, Middlesex, to give it a distribution channel into the UK. It admits that in dollar terms, in the US, Cognos Inc and Business Objects SA are ahead of it in the general query tools market, although it claims more individual users than the others. But it said that in the growing data warehouse market, BrioQuery is number one. However, Brio Technology and BrioQuery are virtually unheard of in Europe, which contributed only 5% of revenues. The company wants that percentage to grow to 30% in the next two years and to match US sales in time, although it said US sales are growing so rapidly that it would be unrealistic to expect Europe to catch up so quickly. Brio, which is privately held, has also completed its first round of venture capital financing, raising \$4m in the spring from Kleiner Perkins Caufield & Byers and Novus Ventures, almost all of which went on sales and marketing. The company was founded in 1984 and spent the first half of its life providing custom-made decision support tools. At the end of the 1980s, it began developing a graphical query tool, which it launched as Data Prism, and a multidimensional analysis tool, Data Pivot. In 1994 it merged these two to create BrioQuery, which it describes as the first multidimensional query tool. It works on Windows, Mac and Unix operating systems and comes in three configurations: Designer to build data models; Navigator, which constructs queries from Designer data models; and Explorer, which gives direct access to databases and pre-built data models. All work with a variety of databases. BrioQuery is up to version 3.5, which brought it into the Unix world, expanded its data modelling capabilities, and extended local processing. The product ranges in price from \$600 per user for Navigator or Explorer on Windows or Mac; Unix users are \$1,250. Designer costs \$2,500 for Windows or Mac.

#### Agreement

The company has a marketing and development agreement with Prism Solutions Inc. First fruits of this relationship is a dynamic link between Prism Directory Manager 2.0 and BrioQuery, which enables users to launch a BrioQuery query from Prism Directory Manager, a meta data store, by a mouse click, essentially giving users a single view of the warehouse. Recently, it was an attendee in the UK of Sybase Inc's European users meeting, where president and chief executive Yorgen Edholm said "Something very specific is going on with Sybase, and our future relationship could become more and more strategic." While that sounds as if Sybase, with its data warehousing ambitions, is looking to buy Brio, Edholm said that as the data warehouse market has not yet reached its potential, and he plans on making Brio the number one query tool provider in that market, it would be better to sell in a few years time when Brio could command a higher price. Besides, the company is very interested in being pals with all the major database vendors and is a member of Oracle Corp's Warehouse Technology Initiative.

### ROGUE WAVE ADDS STANDARD TEMPLATE LIBRARY TO TOOLS.H++

Rogue Wave Software Inc, Corvallis, Oregon, is offering a new version of its Standard C++ library incorporating STL, the standard template library data structure and algorithm classes, calling the thing Standard Library V1.0. The library will be encapsulated in a new set of classes which are to be included in a new 7.0 release of the company's Tools.h++ object development system. Tools.h++ 7.0 will be layered on top of the STL classes. Standard C++ Library V1.0 costs from \$200. Tools.h++ 7.0 is in beta, and is slated for release next February. Meanwhile, Hewlett Packard Co - which developed the Standard Template Library in the first place - is licensing Standard C++ library and Tools.h++ from Rogue Wave.

## SUN PUTS ULTRA 1 UP AGAINST THE COMPETITION

Final pricing for Sun Microsystems Inc's Ultra 1 was still lacking as we went to press however the company has created some performance comparisons, *see below*. Hewlett-Packard Co has already cried foul as Sun is using its mid-range Visualise 24 graphics subsystem for its purposes and not the high-end Visualise 48 it says blows Ultra away.

### 3 D Graphics Power Workstation Comparison

	Sun Ultra 1 Creator3D Model 170E	HP J210 Visualise 24	SGI Indigo2 High Impact	IBM 3CT GXT1000-2
CPU Performance				
•SPECint92	235	169	176	130
•SPECfp92	330	269	165	267
Graphics				
•3D Vectors/sec	1.4 million	Not published	1.2 million	Not published
•3D Triangles	786,000	670,000	730,000	Not published
•PLBwire93	133	87	Not published	56
•PLBsurf93	185	144	Not published	111
•MPEG2	Yes	No	No	No
Network	100Mb/sec Fast Ethernet	10Mb/sec Ethernet	10Mb/sec Ethernet	10Mb/sec Ethernet
Price(64MB,2GB, 20*,graphics)	@ \$26,700	\$53,350	\$40,000	\$43,345

### 2D Graphics Power Workstation Comparison

	Sun Ultra 1 Creator Model 170E	HP715/100 XC HCRX	SGI Indigo2 XL	IBM 3AT Gt4i
CPU Performance				
•SPECint92	235	132	113	99
•SPECfp92	330	185	289	187
Graphics				
•Xmark93	16.3	12.3	Not published	Not published
•Vectors/sec	2.4million	2.3million	1 million	Not published
•PLBwire93	133	62	Not published	39
•MPEG2	Yes	No	No	No
Network	100Mb/sec Fast Ethernet	10Mb/sec Ethernet	10Mb/sec Ethernet	10Mb/sec Ethernet
Price(64MB,2GB, 20*,graphics)	@25,750	\$26,840	\$31,000	\$36,490

### Entry-level UltraComputing Comparison

	Sun Ultra 1 Model 140	HP715/100 XC HCRX	SGI Power Indigo2 XZ	IBM 3AT GXT150M
CPU Performance				
•SPECint92		132	140	99
•SPECfp92		185	181	187
Price(64MB,2GB, 20*,graphics)	@\$16,500	\$22,240	\$20,500	\$19,500

## SUNSOFT'S ENTERPRISE MANAGER ROADMAP

SunSoft Inc has released the first production version of Enterprise Manager, its multi-user distributed fault and event management system for the Solstice network management system (UX 559). The Mountain View, California company has also unveiled a roadmap for versions 1.2 and 2.0 of Enterprise Manager. Enterprise Manager 1.1.1 includes an enhanced API to configure third party applications into its Viewer interface and mapping technology from Strategic Mapping Inc allowing users to configure geographical maps in layers underneath standard network system maps. Version 1.1.1 now also includes support for Informix as well as Oracle and Sybase. Meantime, SunSoft is gearing up for a February 1996 release of Enterprise Manager 1.2, the final 1.x release. Enhancements will include a Log Manager to receive, processes and stores events as log records. Additionally, the Viewer will be able to be placed in either operational or administrative mode. The operational mode restricts the operator from adding and deleting new topology objects, moving objects or activating templates. There will be new third party applications for Alarm Manager. Both Alarm Manager and Log Manager will be able to activate applications, and users will be able to search the server globally and locally. Finally an API called Dialog Logic will provide Viewer information back to third party applications. Enterprise Manager 2.0, the first end-user release, is slated for release in the second half of 1996. It will include hub and router support, topology backup and restore, request template import and export, and operators will be able to access, rewrite and create access controls for various applications. Version 2.0 will also have object extension API to modify the behaviour of managed objects and customise the management of various devices.

## NOVELL TO SHED WORDPERFECT, BUYER SOUGHT

On the morning of Monday October 30, before the market opened, Novell Inc bit the bullet and announced that it is going to dump Wordperfect, ending its billion-dollar 16-month misadventure into productivity applications, having been roundly beaten by Microsoft Corp. CEO Bob Frankenberg told Wall Street analysts that Novell was already in discussions with two unidentified companies, described only as "suitable industry parties," and that other potential acquirers could come out of the woodwork at the news the unit is up for sale. Novell has given itself until the end of January to unload the property which includes the Borland International Quattro Pro spreadsheet. It will keep the Business Applications Division's Groupwise arm for its e-mail and trim Wordperfect's 1,800-man staff to a number proportionate to its revenues before spinning it off. Some, perhaps a lot, of those people will be canned; others absorbed into Novell which currently has 7,600 people en toto. The move, 10 days after what has been described as a bloody board meeting, puts an end to speculation surrounding what steps, if any, Novell would take since realising the acquisition is seriously dragging its P&L and stock price down. Its stock, in the cellar lately at \$14, rebounded slightly to \$16.375, up \$1.50. However, it remains to be seen whether Novell profits long-term from what is generally seen as a fire sale. It said last week it was uncertain whether it would be taking a one-time charge or registering a gain from the divestiture since it would depend on how the deal was struck. The *Wall Street Journal* said it could probably only get \$300m for the business. It recently forecast that its anticipated earnings of 28 cents in its fourth quarter just closed would be ground down to something like 15 cents-18 cents because of Wordperfect's non-performance. Wordperfect and its companion PerfectOffice were seriously impacted by the advent of Windows 95 which Novell, ostrich-like, has only made worse by not having Win95 code ready even now. It intends to keep on plugging away at producing the stuff through the acquisition talks but admits that its arrival will be further delayed, giving Microsoft more room to increase its market share. Revenues of the pieces up for sale came in at \$126m in the first quarter, \$144m in the second quarter and nosedived to \$88m in the third quarter. Novell said it expects Wordperfect's total revenues for the year, when it posts them the week of December 11, to be under \$400m - analysts say it's likely to be no more than \$391m - indicating another terrible hit in the fourth quarter. The Business Applications Division has been 16% of Novell's total revenues.

### Repair

This is the second time in little more than a month that Frankenberg has attempted to repair by spin-off the destructive acquisition path taken in the waning days of his predecessor Ray Noorda's administration, consumed as it was with an anti-Microsoft fury. In September he dumped Unix, another one of Noorda's costly misadventures, onto the Santa Cruz Operation Inc and Hewlett-Packard Co. It took roughly \$60m in stock from SCO for the entity valued at \$360m when Novell took it over. Oddly enough, however, sources say that the Novell board was willing to wiggle out of the Wordperfect deal at the last minute but a newly arrived Frankenberg, whose staff is now secretly mocking him as "Flunkenberg," opted to go through with it. Frankenberg last week described Wordperfect as a "distraction" from the company's strategy which he has described recently as a return to Novell's networking roots. For all the excitement Novell attempted to generate around this so-called Smart Global Strategy it pretty much sounded like the same old thing from Novell which must now meet the new obstacle known as Windows NT. Novell also said last week that it intends to repurchase at much as 10% of stock over the next 12 months financed by the \$1,300m it has in cash.

## ORACLE UNVEILS ORACLE WEBSYSTEM INTERNET LINE

Oracle Corp's contribution to last week's Internet festivities in Boston is the Oracle WebSystem, a family of products designed to provide Oracle end users and corporations with a seamless way of ~~integrating information from the World Wide Web with existing corporate data and information systems. The new software products~~ comprise Oracle WebServer, WebServer Option, and PowerBrowser embeddable Web browser with relational database. Oracle plans to integrate Sun Microsystems Inc's Java programming language into PowerBrowser, enabling users to access Java-based video or other objects written in the Java language. It also announced plans to integrate the WebSystem family with AT&T's WorldNet Managed Internet service, to provide customers a one-stop shopping option for Internet access and Web server technology. The PowerBrowser is in beta test but it is freely available on the Internet at Oracle's Web site. It is claimed to be compliant with all standards and supports HyperText Mark-up Language 2.0. The production release is due in January. Oracle also said that Silicon Graphics Inc will offer the WebServer software on its Challenge servers and the bundled systems will be available by the end of the year. WebServer 1.0 will be out this month at \$5,000; WebServer Option 1.0 is out now at \$5,000 on Sun's Solaris systems and other versions follow this month.

## IBM COMMITS TO COMBINE NOTES, INTERNET LINES

IBM Corp's Internet plans are much less advanced, and all it could announce last week was what were in effect statements of direction to integrate the Lotus Development Corp unit's Notes with IBM's Internet products and services. The aim is to provide consultancy and professional services to make it easier for customers to connect to and use the Internet for competitive business advantage, while preserving their investment in the private, more secure network that Notes offers. The integrated offerings are being developed under the code name Spike, and will include a new server software package that includes Notes and InterNotes capabilities, IBM's secure Internet server software and IBM's gateway to the World Wide Web, and the package is to be available on a range of hardware, but no dates were given for anything. IBM also announced deals with Open Market Inc and Netscape Communications Corp to provide their software on the IBM Global Network.

## INTERNATIONAL DISCOUNT TELECOMMUNICATIONS USES NET FOR FREE CALLS

Yet another telephony-over-the-Internet service has emerged, but one that has a potentially enormous advantage over its rivals. Rather than limiting callers to other people with an Internet account, users dial up over the Internet using their personal computer, but can connect to any phone user worldwide. The company behind the system is Hackensack, New Jersey-based International Discount Telecommunications Inc, which also pioneered the callback concept for taking advantage of low international phone rates from the US back in 1992. With that system, users dial into the company's switch in the US, hang up before the call is answered, and are then called back with a US dial tone, paying the lower rate charged by the company for the international leg of the call. With the Internet product, subscribers use their personal computer and the Internet to log into one of the company's switches (two are initially planned, one in the US and one in the UK), and that switch then transfers the call over the ordinary public switched telephone network to its destination. Since the international leg of the call is essentially free, the company is able to cut call charges drastically: calls to the US and the UK from around the world will cost from just 10 cents a minute, said the company, with calls to anywhere else in the world charged at "a significantly reduced rate". Although the system - for which it has filed for a patent - gives it the potential to corner the market on voice-over-the-Internet, the company is taking a laid-back approach to its system: it will be offered only to its callback customers and its Internet access customers who are located in 44 US states, as well as France, Italy and South Korea, and it is planning to offer service in Turkey, Italy and Japan "soon". Roll-out of the voice over the Internet service will take place over the next three to six months, said the company. On the potential regulatory implications of its new service, it is taking an aggressive stance, as it did with its initial callback service, when it saw off a complaint to the Federal Communications Commission from AT&T Corp. Callback "was proven as a valid and legal service and this is in the same vein."

## SIEMENS RALLIES ISVs

Siemens Nixdorf Informationssysteme AG continues to round up software to run on its famed RM family of Unix systems. According to Ulrich Riepl, who heads the company's relations with independent software vendors, the search for innovative companies has ended most recently at the doors of Israel's Magic Software Enterprises Ltd. The agreement aims to migrate the Magic 5.7 Rapid Application Development tool to Siemens Nixdorf Sinix. It already runs under MS-DOS, Windows, Solaris, HP-UX, Data General Corp's Unix, Digital Equipment Corp Unix and VAX machines. Siemens Nixdorf, Riepl said, has shifted its focus to picking up programs and developers to enhance its RM line because "time is short and it is easier than going at it alone." Besides, he added, despite being at the other end of the spectrum from C++, Magic is aimed at professional developers. Siemens Nixdorf was also sold on its high degree of interoperability and scalability. Work on the product is concluded and the average cost per user is \$3,500.

## XYRATEX BUYS PEER PROTOCOLS

Xyratex Ltd seems to be doing rather better than the other European factories cut off without a penny by IBM Corp as surplus to requirements and left to sink or swim as best they can. The Swedish castaway has already foundered, but Havant, Hampshire-based Xyratex feels lusty enough to start thinking of eating other companies, and for its first feast has gone for Peer Protocols Inc, a developer of test equipment for SCSI protocol hardware, software and firmware products, based in Newport Beach, California. Xyratex develops and manufactures both off-the-shelf and custom design test systems for the storage industry, as well as making disk drives under contract. Peer Protocols Inc is privately held and terms of the deal were not given.

## ORACLE TEAMS WITH HP ON MEDIA SERVER

Recognising that it can never persuade the whole world to buy the idea of creating a media server by running Oracle Video Server on a massively parallel machine from nCube Corp, Oracle Corp has turned to Hewlett-Packard Co and signed an agreement under which the two will "jointly pursue" multimedia applications in various industries, including telecommunications, retail, consumer packaged goods, financial services and manufacturing, with Oracle Video Server running on the HP 9000 Unix machines and HP NetServer personal computer servers. The combination "will be one of the first scalable, end-to-end solutions to enable integrated multimedia in corporate applications," the companies said. The Oracle Video Server extensions to Oracle7 7.3 running on HP machines are expected to deliver 20 streams of concurrent video on a workgroup server and up to 200 streams on an enterprise server. The products will be available in the first quarter next year.

## SMR: CLIENT/SERVER NEEDS UNCERTAIN

It seems as though vast corporate restructurings have been good for client/server computing, although the near future doesn't look very rosy, according to Sentry Market Research, Westborough, Massachusetts. SMR's study of North American and European computing found that corporate budgets for client/server systems will rise by 28% in 1996, compared to a 30% projected increase in this year over 1994. SMR claims that this stems from continuing corporate restructurings, which are accompanied by client/server computing systems to improve competitiveness. However, SMR also found that 75% of respondents expect to have at least one client/server systems running by the end of the year, up merely 3% from last year. But only 25% of these will have a production level application in operation, up a scant 2% from last year. Complex infrastructures and production application problems have slowed corporate deployment of client/server computing systems, SMR said. Increasingly complex computing infrastructures, with more legacy mainframe and midrange systems, are apparently scaring corporations away from client/server computing, SMR said.

## CRAY TO DEBUT T3E MASSIVELY PARALLEL ALPHA BOX THIS MONTH

With some \$90m orders already booked for the thing, Cray Research Inc later this month unwraps the T3E follow-on to its successful T3D massively-parallel system which currently accommodates up to 128 DEC Alpha RISCs. T3D user Pittsburgh Supercomputing Center will get the first of the T3Es when they ship at the beginning of next year. Cray promises T3Es will support more and faster Alphas and additional memory. It's also supposed to come with a full microkernel implementation of the Unicos operating system, previously a Unix-based hybrid. Last year the company was also promising a version of the ToolTalk messaging system and an implementation of CDE for T3E (UX No 480).

### PLATINUM PRUNES SQL ACCOUNT BRANCH; HYPERION TO PICK UP THE PIECES

As expected financial application house Platinum Software Corp is having to trim itself back after posting a first quarter loss (UX No 560), losing its entire 50-person direct-sales staff. The Irvine, California-based company has also pulled the plug on its high-end SQL Enterprise product which runs on Sybase and will instead concentrate on the SQL NT version for Microsoft SQL Server, and Platinum Windows for DOS. The move takes Platinum out of the big-time accounting software market where it was finding it heavy going against the likes of Oracle, PeopleSoft and SAP. It had estimated that sales fell \$3m in the quarter. Meantime Hyperion Software Corp, which changed its name from IMRS Inc back in February, says it's talking to Platinum about providing a possible upgrade base for existing SQL Enterprise customers to its Hyperion Financials and Enterprise software. Hyperion said it may pick up some additional Sybase development and support expertise but even without a commitment to further development of SQL Enterprise sees it only as a modest transaction. The Stamford, Connecticut-based company's Hyperion Financials 1.0 suite includes general ledger, accounts payable, reporting, administration, purchasing, receivables and asset modules targeted at SQL databases from Sybase Inc with Oracle modules of general ledger and payable in the first quarter of 1996, while receivables, purchasing and fixed assets will be delivered in mid-year. Hyperion also ships data analysis and desktop reporting tools for its financial applications and has extended the drill down capabilities of these stand alone tools to the entire suite. Hyperion has thirteen customers for the four-month-old Financials suite to which it'll add an accounts payable module. Financials starts at \$100,000 per module.

### X/OPEN SQL ACCESS GROUP PUBLISHES INTERFACE

The X/Open SQL Access Group, formed from the ashes of the original SQL Access Group which ended in a rag bag of fragmentation and disagreement (UX NO 517), has published version 1.0 of its ISO-ratified Call Level Interface (CLI) third generation language application programming interface. CLI for C and Cobol defines calls for applications to interface with SQL. The original specification was delivered way back in 1993 (UX NO 467). Meantime Microsoft said its impending ODBC 3.0 release will include all the X/Open CLI additions. The Group, which includes AT&T, Borland, Computer Associates, Hitachi, IBM, Information Builders amongst others says it has ongoing work and will continue to enhance and refine both the SQL and CLI including stored routines, asynchronous calling mode, array fetch and extended data types.

### PLATINUM'S POEMS TAKES SHAPE WITH OEE REPOSITORY...

Through its acquisition frenzy, Platinum Technology Inc has been busy building its Platinum Open Enterprise Management System (POEMS) into a recognisable solution and reckons that with the client/server edition of its mainframe data repository, Platinum Repository/Open Enterprise Edition (PR/OEE) (UX No 560), a critical part of the structure that makes up POEMS is now in place. The PR/OEE toolset, son of its Brownstone Data Dictionary/Solution and RelTech Group Inc DB/Excel acquisitions (UX No 538), comes in where CA-Unicenter and Tivoli TME cannot play, the company claims, providing a repository for data warehousing and systems management. Warehousing and systems management require data management and access and a repository to store components. What makes PR/OEE different from other offerings, the company claims, are tools which can access and manipulate data, as well as storing it like most other repositories. Add-on tools such as InfoRefiner extract sequential data from legacy systems and convert it into relational database formats. PR/OEE is available for use with all POEMS elements, which include other application development and database tools too. The repository kicks in at \$50,000 and is up on AIX, HP-UX and Solaris running Oracle and Sybase SQL Server 10. It will be available in the first quarter of 1996. With PR/OEE data repository in place, the company says it's winning the battle to integrate its myriad acquisitions - some fourteen over the last year. It plans to integrate the fifteen products it has via a common messaging layer called Oasis supporting RPCs, TCP/IP and SmartSockets, a WinSock-type protocol to connect Unix, MVS, VMS, AS/400, NetWare and NT, as well as a series of event managers components due in the first quarter of next year. Platinum's also working on support for Informix DSA.

### ...DELIVERS INFOSESSION 2.0

Meantime Platinum Technology Inc is shipping Version 2.0 of InfoSession, its middleware that enables mainframe code to be incorporated into Unix, OS/2 and Windows applications supposedly without programming or reengineering. InfoSession 2.0 provides SQL access to ~~legacy data on one or multiple connected systems enabling the synchronising of distributed database updates with a main legacy repository~~, modernising legacy end-user interfaces and integrating multiple applications into a single, consistent end-user interface. As well as Unix integration InfoSession includes ODBC support, SNA and TCP/IP connectivity, a test drive application which takes users through prototyping and testing SQL statements and a help desk to monitor workstations connected to InfoSession applications. InfoSession prices go from \$52,700 and requires MVS on the mainframe, and runs on most Unix platforms.

### SUN WINS AGAIN WITH BUNDESBANK

The German Central Bank has chosen Sun Microsystems Inc as its Unix partner. The Deutsche Bundesbank, which is secretive about its Unix strategy and plans, said it will implement SAP AG's R/3 on Sun Sparcsystems running Solaris 2. No other details were given. The choice is a welcome one for Sun, which the Bundesbank has already chosen as the hardware supplier for its shares and currency trading activities. The installation went on line at the start of the year and is based on more than 30 Sparc workstations and servers.

### ICL HANDS US SALES TO XSCRIBE

The US alliance between Xscribe Corp and ICL Plc has been expanded, and the two will now combine reseller activities for groupware products in North America, effective immediately. The new co-operative activity will be managed by Bruce Myers, chief financial and chief operating officer of San Diego-based Xscribe. ICL will also provide funds and personnel valued up to \$3m between now and April 1997 and invest in the joint operations at least at the current levels.

### NEC ALLIES WITH HP VIA CONVEX

NEC Corp, which is taking Hewlett-Packard Co's HP 9000 servers OEM for the Japanese market, and designing future Precision Architecture RISC servers with Hewlett, has also extended its alliance with Convex Computer Corp - soon to be a Hewlett-Packard subsidiary. Under the expanded agreement, Convex will resell NEC's high-end SX-4 series supercomputers in Europe, and NEC will resell Convex's Precision RISC-based Exemplar SPP1200 scalable parallel processors in Japan. NEC has marketed Convex's C-series minisupercomputers since 1991.

### DEC: COMPUTERS "CLOSE" TO PROFIT

Digital Equipment Corp chief financial officer Vincent Mullarkey says the computer systems division, which represents the bulk of its product revenue, is not yet profitable, but is close - and the personal computer business also was unprofitable, although revenue rose year-over-year. Mullarkey said that over the next few weeks DEC will hire a new head for the personal computer business unit to replace the departed Bernhard Auer. Personal computer system sales make up 30% of total product sales, while Alpha system sales make up 34%. Alpha system sales rose 40% year on year, and Unix on Alpha systems saw a 50% sales rise year-on-year, while Alphas running Windows NT were up 250% with revenues topping \$200m. As total product sales in the quarter were \$1,810m that all implies that Alpha sales were \$615m; Unix on Alpha about \$410m and personal computers \$540m; Mullarkey expects the personal computer unit to be profitable in the second half of fiscal 1996 to June.

### ORACLE PORTS PARALLEL SERVER TO COMPAQ CLUSTERS, UNIXWARE

Oracle Corp, Redwood Shores, California, has worked with Intel, Compaq, SCO, and Novell to put its Oracle7 release 7.2 Parallel Server clustered database up on a four-node cluster of Compaq ProLiant Pentium Pro 4-Processor SMP servers connected to a disk array by shared array and to each other by private Ethernet. The UnixWare implementation will be generally available by the middle of next year. Oracle claims it's the first such clustering implementation for standard Intel servers running shrink-wrapped Unix and says it's now in discussions with two other Unix vendors. Oracle's forthcoming Battlestar distributed management technology and Failsafe software will ship next month as a part of Oracle 7.2.

# unigram·x

The weekly information newsletter for the UNIX™ community worldwide

Richard Guarino, acting chairman and chief executive at **Taligent Inc** in the wake of Joe Guglielmi's defection to Motorola Inc, has died of a massive coronary attack while jogging. Vice-president of product development Doug Brent has had to step in as acting chief executive. Richard Guarino had been general manager of IBM's software development and personal systems business segment's Power Systems Division when he was asked to take the helm at Taligent pending a permanent appointment being made.

And it only took 20 years: back in 1975, **Thinking Machines Corp** founder and genius Danny Hillis predicted in a speech at the New York City Hilton that computers would be so cheap that they would be everywhere - in numbers exceeding the world's population, only to be heckled with "What are you going to do with all those computers? It's not as if you want one in every doorknob..." what did the smart guy know? Back at the Massachusetts Institute of Technology Media Lab after his Thinking Machines odyssey, Hillis returned to the hotel the other day and noticed the new keyless room entry systems, and "hey, know what?" he says - "There is a computer in every doorknob."

**Compagnie des Machines Bull SA's Zenith Data System** unit has a letter of intent to acquire 51% of IPC Corp Ltd's IPC Corp (France) SA unit. The Singapore company is one of the new investors in Bull, and the move is part of an exercise by IPC France to raise \$30m to finance business development and growth. The new shares will be subscribed for by IPC, Champel Investment SA as well as Zenith; Champel will then hold 30%. IPC will get a 1% royalty on the value of all France sales for eight years.

**Quarterdeck Corp** and **Spyglass Inc** agreed a technology-sharing pact in which Quarterdeck will license Spyglass's World Wide Web technologies for use in its Internet products and Spyglass will license technology from Quarterdeck for inclusion in future Spyglass products; Quarterdeck also released the InternetSuite 2.0 upgrade to its integrated Internet applications suite, featuring significant enhancements to the Quarterdeck Mosaic Web browser.

**IBM Corp** has called in **Motorola Inc** to help it to improve its CMOS process, and both companies intend to use the results to fabricate future generations of the most advanced PowerPC chips. Although the focus of the effort will be PowerPC microprocessors, the new high-performance process will be used to fabricate chips for the computer, consumer and communications markets.

There's talk that with a new boy in charge over at **Hewlett-Packard Co** - and acknowledged by CEO Lew Platt as his heir presumptive - that it might be trying to ease out long-time systems chief Wim Roelandts so Richard Belluzzo can run his own show. There's still more talk it might offer Roelandts a cushy "retirement" over at the Open Software Foundation replacing fellow HPer Jim Bell who's only there holding down the fort on a pro tem basis anyway. Roelandts hadn't gotten back to us by press time to say whether he's interested. Reportedly the job was offered to retired RS/6000 chief Bill Filip but he said no.

David Flack, editor-in-chief of *Open Computing*, has resigned effective November 10 after nine years. He assures us it's not because the book's been looking anorexic lately, merely that he wants a change of scene.

**Hummingbird Communication Ltd** pulled off a little coup and got Bell Canada president and chief executive John McLennan on its board.

We made this teensy-weensy little mistake and said **Platinum Technology Inc** has put its Xfer 2.4 technology up on VMS (UX No 557). It's MVS. Sorry.

Gideon Gartner, who's putting together a market research empire, has named Rick Smith senior VP, sales and marketing at **Giga Information Group**. He had been chief executive office at Infovision, an IDG division. He had been 15 years at the Gartner Group with Gideon, lastly as senior VP.

Don McGovern, VP Operating Systems Division at **Novell Inc** and a legacy from the old USL, is going to become site operations manager for **Hewlett-Packard Co's** New Jersey-based Unix research and development unit once that kicks in. He was one of the negotiators that put the HP-Santa Cruz Operation Inc deal together. Now it just remains to be seen how long it remains an HP-SCO deal. Unix OEMs are making book that it'll only take about 18 months for SCO to become irrelevant and for HP to walk off with the prize.

**Sun Microsystems Inc** CEO Scott McNealy is now only days away from meeting his son and heir for the first time. The baby, Scott's first, is due around Thanksgiving.

The 2.5V PowerPC 604e (nee 604+) achieves 225 SPECint92 at 166MHz but as **IBM Corp** and **Motorola Inc** are phasing out SPEC92 speed measurements, the chip is expected to be capable of between 5.0 and 6.0 SPECint95.

**Motorola Inc** has decided to take the PReP specification seriously and has gone to Tempe Arizona-based FirmWorks, for an implementation of the Open Firmware boot code. The PReP specification demands that from this summer any machine that wants to call itself PReP compliant has to support Open Firmware. This left both IBM and Motorola in the ironic position of having PowerPC-based boxes that don't comply with their own standard. While IBM apparently plans to stick with its proprietary boot code until its CHRP machines appear, Motorola will take Firmworks software for use in its Power-Stack PCs and OEM motherboards. So Motorola's first 'PReP compliant' machines are now scheduled to appear in January. Firmworks says that Motorola will eventually implement the software across its whole line of single board computers and Power-Stack servers.

**Red Brick Systems Inc** has lost its VP marketing AJ Brown who's "taking a break" from IT, but expects to resurface sometime in the New Year.

**Expersoft Corp** is growing its executive team, adding Wayne Suerth as CFO and one-time Taligent Inc VP Richard Berzle as VP marketing.

**Transarc Corp**, Pittsburgh, Pennsylvania, is now shipping a new version of DCE for Solaris based on the OSF DCE 1.1 source code release. The incarnation includes a consolidated user interface, enhanced monitoring features, and a new version of Transarc's distributed file service for DCE, DFS 1.1 for Solaris. It starts at \$6,300.

**Hewlett Packard Co** is shipping HP OpenView Network Node Manager 4.0 (UX 541).

**Novell Inc's** offering version 6.1 of its Tuxedo OLTP monitor with a new interface for configuring and managing applications, a publish-and-subscribe-based Event Broker communications system to create event-based triggers for applications and enhanced security via user- and group-level access control lists. Developer prices go from \$2,400. It's also offering a Tuxedo subset called NetWare Transactionlink integrated with NetWare Directory Services allowing NetWare users to access Tuxedo servers over TCP/IP or IPX/SPX. Prices go from \$1,300.

We hear Robert Youngjohns, general manager of AIX Systems **IBM Europe**, has jumped ship for Sun Microsystems Inc where he'll be VP of Europe and the Nordic regions.

**OpenVision Technologies Inc**, Pleasanton, California, has released version 2 of its OpenVNet-Backup backup, restore and archive suite for Unix and Windows NT. The software can do local and network backups and on-line database backup for Oracle, Informix, and Sybase. OpenVNetBackup 2.0 is from \$5,500 with clients from \$150. It ships next month.

Menlo Park, California-based **Versant Object Technology Corp** has opened European headquarters in Munich, Germany. The operation is being run by Bernhard Woebker, previously VP Europe for NeXT Computer.

Paris, France-based **Ilog SA** is shipping Views 2.2 (UX No 558), its C++ library and GUI builder, priced from £7,500 on Unix or £5,000 on PCs. It will be available in the US in January next year.

Real-time operating system and embedded design company **Integrated Systems Inc**, Santa Clara, California, has snapped-up Austrian C++ house TakeFive Software GmbH, Salzburg, and will run it as a wholly-owned subsidiary. Integrated Systems has exchanged 5% of its stock for all of TakeFive's stock: TakeFive claims revenues of \$4m. TakeFive's Sniff+ C/C++ development environment was used by Taligent Inc to create the CommonPoint application framework.

The **Metadata Coalition** is gathering momentum: now EDS, Information Advantage, Informix, Peoplesoft, Prism R&O and Sybase all say they'll join.

**Sun Microsystems Inc** stock seems to have finally shaken its bad karma. It's been holding in the high 70s since it put out its blistering quarter a couple of weeks ago. In fact the karma's so good it's going to split the stock two for one.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

London, November 13-17 1995

Number 564

## SUN BACK ON THE ATTACK - ULTRAS SET NEW PRICE/PERFORMANCE MARKS

Sun Microsystems Inc last week blew a new hole in the industry's pricing model by setting tags for its 64-bit UltraSparc-driven Ultra 1 systems starting at \$16,500 - \$12,000 for volume deliveries - whilst retaining binary compatibility with its existing lines (UX No 562). SMCC president Ed Zander, assuming roll-out duties for Sun boss Scott McNealy (*see page 6*) declared Ultra's floating-point and 3D graphics power plus price/performance would seize back the workstation initiative for the company. The loss of a couple of percentage points from Sun's (still) leading workstation market share has been attributed in part to SuperSparc's weak performance. Zander expects Ultra to win back business - especially in the oil and gas, mechanical CAD and visualisation industries - and bring waverers back into the fold. He says HP has no chance of meeting computer systems group VP and general manager Bernard Guidon's promise to overhaul Sun in the workstation market by early 1997 (UX No 554). As well as the three uniprocessor Ultra 1 models - *see below* - the company is also bragging about its first SMP UltraSparc machine, the Ultra 2 Model 2200 with two 200MHz CPUs, tweaked to perform at 332 SPECint92 and 505 SPECfp92, or a couple of points ahead of DEC's highest-performing desktop, 300MHz Alpha 21164-based 600 5/300 ZLXp-L2 (albeit a uniprocessor) rated at 503 SPECfp92 and 338 SPECint92. Sun (which also has a 182MHz UltraSparc in hand) says it'll sample 200MHz microprocessors by year-end performing at 322 SPECint92 and 462 SPECfp92. Ultra 2 systems won't ship in quantity until the second quarter of 1996, though limited deliveries are due sooner. It's priced at \$60,000 with 256Mb RAM, 4Gb disk, 20" screen and 3D graphics against a similarly-configured DEC 5/300 at \$67,000. Though HP and Silicon Graphics Inc will have high-performance PA-8000 and R10000 systems out later in 1996, Sun expects to have 250MHz UltraSparc II systems in the shoot by that time. Indeed Sun guru Bill Joy says that over the next year Ultra will scale from workstations under \$10,000 to clustered parallel servers. UltraSparc-based commercial/database SMP servers are expected from next summer. The 140MHz Ultra 1 Model 140 with 32Mb main memory, 1Gb disk, TurboGX and a 17" colour monitor is rated at 215 SPECint92 and 302 SPECfp92 and costs from \$16,500. The 167MHz Ultra 1 Model 170 is \$23,000 with 64Mb RAM, 2Gb disk, TurboGX graphics and 20" screen. The Ultra 1 Creator3D Model 170E with 167MHz UltraSparc, 64Mb, 2Gb disk, 20" colour display and Creator3D graphics performs at 252 SPECint92 and 351 SPECfp92 and is priced at from \$28,000. Sparcstation 20 users can upgrade by replacing the CPU enclosure, retaining their existing memory, disks and peripherals from \$10,000.

## THINKING MACHINES FORESHADOWS ULTRA 1 PARALLEL BOX IN REORGANISATION

Despite having abandoned manufacture of its massively parallel systems, Thinking Machines Corp, now in Bedford, Massachusetts, believes it can build a new business from the ashes of the old, and has filed a reorganisation plan that it says is supported by its creditors, which would enable it to emerge from Chapter 11 bankruptcy protection in 60 to 90 days if the court approves it. It admits that it will be a vastly different company, planning to sell commercial software for computers made by others, and the first product, to be available at the end of the first quarter of 1996, will be a parallel processing server using Sun Microsystems Inc's UltraServer 1s (*see page 1 and 7*). Up to nine of the uniprocessor models will be clustered together with a Fibre Channel (and subsequently ATM) interconnect in a Thinking Machine rack. The company has ported its parallel development, conversion and visualisation tools, programming libraries, languages and compilers to Solaris. Pricing will be under \$1m. Sun will help market the systems but won't price list or put salespeople on them. The systems - designed originally to house HyperSparc boxes - will be on show at the forthcoming Supercomputing '95 show in San Diego. A distributed version of the Thinking Machines software will follow with additional technologies licenced from specialised software shops. The initial units will be followed by clustered SMP Ultra 2s and servers thereafter. The rack systems are to debut as part of a long-brewing deal Thinking Machines has under wraps with Sun which will be announced next week (UX No 509). Sun will leverage them as a high-end solution until its own parallel endeavours - developed in part by Thinking Machines refugees hired by Sun - emerge a year or so from now. Thinking Machines says it has other high-end workstation and SMP vendors already lined-up for its software and interconnect but wants the Sun deal and an approved reorganisation plan under its belt before it moves on those. Ideally it'd like to see Hewlett-Packard Co, Silicon Graphics Inc and others using its work. Thinking Machines now has 180 staff, down from 425 at peak, and it says it has been profitable at the operating level for the past four quarters, but sales will be about \$30m, down from \$90m in 1991. The reorganisation plan calls for creditors to receive \$33m of the \$40m, and to raise the money, Thinking Machines plans to form a company to hold its patents, which will be owned by the creditors until they are paid off through licensing fees, expected to take three or four years. The former shareholders then get 80% of the patent company, Thinking Machines the rest. Once it is out of the hands of the court, it will raise \$10m of new money from equity owners and new investors who will then own 75%; creditors will own 17.5% stake, leaving just 7.5% for existing shareholders. It's taken until now to amend an initial plan filed back in February in the light of the additional \$10m funding (UX No 524).

## HP TWEAKS HIGH-END UNIPROCESSOR DESKTOPS

As Sun pitches a return to workstation form - *see opposite* - Hewlett-Packard Co is raising its own technical compute bar with new Power Desktop C-Class workstations plus Enterprise Parallel Server clustering for its K-Class servers (*see page 7*). Both lines use the PA-7200 RISC. At 167 SPECint92, 269 SPECfp92 and 4.4 SPECint\_base95, 7.45 SPECfp\_base95, the Model C110 starts at \$25,700 with 32Mb RAM and 1Gb disk. The addition of a Visualize-48 3D graphics subsystem raises the price to \$44,500 - \$16,000 more than Sun's 170E Creator - though it performs 236 PLBsurf93 against the Sun unit's 185 PLBsurf93. HP claims C110 outguns SGI's Power Indigo2/Maximum Impact by 70% on 3D graphics at \$15,500 less cost. The C-100, with a 100MHz CPU, is \$19,700 with 32Mb RAM and 1Gb disk. With Visualize-24 graphics rated at 200 PLBsurf93, the price rises to \$29,500. The C-Class systems - which run HP-UX 9.05, 9.07 (for Visualize support) or 10.0 - obsolete the Model 735/125, and come in below the SMP J-Class. MPEG-2 decompression and multimedia functions a la UltraSparc, though HP says both the 7300LC and 8000 that'll be used in new low- and high-end systems have it all.

## UNISYS READIES HYBRID MAINFRAME/UNIX SERVER

Unisys Corp is about to send into beta a hybrid SMP server that will run Unix, NT and its Series A and 2200 mainframe operating systems, connecting mainframe data via a hardware and software solution to open systems. The server, a "completely new architecture," sports Pentium Pros to run Unix and NT, and a new cross-platform mainframe chipset claimed to integrate legacy applications with open systems front ends. The unnamed eight-way machine will be targeted at the sizeable Unisys mainframe customer base and ISVs seeking to modernise applications. It's due next spring from the Enterprise System Division. Admitting it "should have done this years ago" to leverage the base it inherited from Sperry and Burroughs, Unisys says the technology gives customers a path from legacy systems. The design puts two machines inside one box tightly integrated with a high-speed interconnect and its Usoft subsidiary's Tuxedo-based Online software with hooks for Unix, NT, IBM and Unisys legacy systems. Online will allow users to transparently access data anywhere on the machine; a Unix or NT interface can access mainframe applications and databases. Eventually all the data can move to the client/server side. The mainframe side is brought to life by a new 0.5 micron CMOS chipset designed by Unisys and fabricated by IBM that supposedly solves the problem of integrating Unisys' divergent A Series and 2200 Series.

### SHANNON HAS POWERTECH POWERPC/AIX BOX

Shannon Computers Inc, the New Hampshire house with the Platform 2000 motherboard that various CPU modules can be slotted into (UX No 494), is selling a complete AIX 4.1.3 box called Powertech with a 100MHz PowerPC 601 for \$4,000. It includes 16Mb inside, a 1Gb drive, 4x CD-ROM, 2MB video display card, 17-inch monitor, keyboard and mouse. With 32Mb and 2Gb, it goes for \$5,000. In quantity-five the junior model goes for \$3,000. Shannon initially only figured to sell barebones systems but subsequently things have changed. Under Shannon's license with IBM, it's the only way it can provide its technology with AIX. The boxes, which used the IBM North and South Dakota chipset, are upgradeable to 604s and 620s and Shannon would do a 604 if it could get chips.

### PAGEAHEAD, NOW SIMBA, RELEASES SIMBAEXPRESS

PageAhead Software Corp, Seattle, Washington, has changed its name to Simba Technologies Inc and has finally released beta shipments of SimbaExpress, new ODBC middleware for desktop access to multiple SQL and non-SQL databases. The company was supposed to launch SimbaExpress in March (UX 529), but decided to wait until it was capable of both SQL and non-SQL integration, an official explained. SimbaExpress connects ODBC-enabled applications to server-based databases via a single Windows client, providing direct access Oracle, Sybase, and standard SQL data from PCs or Macs. MIS managers or database administrators can access multiple SQL databases concurrently using a single ODBC driver and one data communications driver. Client software installation and maintenance is controlled from the server. Simba has three toolkits in its tools product line. SimbaEngine is an SDK for building ODBC drivers for any non-SQL data source. SimbaEngine Client/Server is for Unix and NT developers to build interfaces from server-based non-relational databases to ODBC enabled desktop applications. SimbaLib is for building ODBC drivers for SQL-enabled applications. SimbaExpress and SimbaEngine Client/Server run on SCO, Sun Solaris, AIX, HP-UX, OpenVMS, and Windows NT. Simba is planning to port to other platforms, but the official would not say which ones. Simba is presently establishing reseller channels in North America and Western Europe, through which it will sell SimbaExpress. It will sell its toolkits directly. Simba is also introducing a three-phase programme called Data Liberation, for employing three-tier architectures to support business intelligence environments based on ODBC. It will involve moving legacy data into ODBC application access. No further information was forthcoming. SimbaExpress sells for \$150.

### VMARK RELEASES DATA ACCESS MIDDLEWARE

VMark Software Inc, Westborough, Massachusetts, has released data access middleware for accessing corporate data, and calls it HyperStar 3.0. It uses object messaging technology to access Microsoft Excel, Lotus 1-2-3, Visual Basic and other ODBC-compliant software to access Oracle, Sybase, Informix, uniVerse, DB2 and Cobol files. It has an API for access to Unix, Windows and Macintosh clients. Release 3.0 adds support for access to data stored on IBM's DB2 database management system on the MVS mainframe operating system and expands HyperStar's support for DB2 on RS/6000. It also includes an enhanced version of the ODBC client which has greater compliance with Microsoft's ODBC 2.0 specification. Release 3.0 includes the HyperStar Server for Micro Focus Cobol files, a server for full desktop read/write access to remote Cobol data through APIs. This access is via ODBC-compliant tools such as Visual Basic programs and Cognos Impromptu, which can be done without writing custom Cobol programmes. VMark has also released the HyperStar Server for DB2 on MVS. This is being beta testing this quarter and will be available in the first quarter of 1996. HyperStar 3.0 will be available from December 1, and costs from \$2,500 in most Unix environments to \$25,000 for MVS environments. Charges for concurrent users in Unix begin at \$400, and for MVS at \$1,500. Data General Corp, Westborough, Massachusetts, will resell the Micro Focus Cobol version of HyperStar 3.0.

### TI RESTRUCTURES SOFTWARE DIVISIONS; TRIMS 7% OF STAFF

Texas Instruments Inc's Software Business unit, Plano, Texas - which includes its Unix organisation - is reorganising itself into three strategic sales units to market its Composer client-server application development tool, Arranger toolsets and other products worldwide. Previously, TI sold everything via regional geographical units: the Americas, including the US, Canada and Latin America; Europe; the UK; the Asia/Pacific Rim; and Federal, including sales to the US and Canadian governments. TI has entitled its new marketing and sales units Enterprise, Governmental and Departmental Solutions. The Enterprise Business Unit will market and sell Composer product lines for Unix, OS/2, Oracle, Open VMS, MVS, DB2, and Windows NT, 3.1 and 95. It will focus more on Composer than Arranger. The Departmental Business Unit will market and sell Arranger and low-end tools, including midrange products and services, to third party channels, and will not focus directly on Composer. The Governmental Business Unit will sell products directly to government users worldwide. Sources were unsure how repository work, once completed, will be marketed (UX 532). Product development will remain in the Central Development Organisation. TI Software's two main offices will remain in Plano and in the UK. The company was unsure how relationships with Microsoft, Hewlett-Packard, IBM, Sun and DEC would play out in the new structure, and could only speculate that sales would go through the Departmental Solutions unit. The restructuring has led to the resignation of Ed Ossie, head of the Americas operations, and VP Ron Brittan who worked with TI's customer base and reported directly to TI Software Business president JR (Bob) McLendon. Furthermore, an estimated 7% of TI Software's worldwide workforce of 1,360 will be made redundant. The company will try to place as many as possible within TI's parent company, Texas Instruments. Sources were unsure of the financial consequences of the reorganisation at press time.

### EMC RELEASES ENTERPRISE STORAGE PLATFORMS

EMC Corp, Hopkinton, Massachusetts, has released the 5000 family of Symmetrix Enterprise Storage Platforms (Symmetrix ESP). The new offering can store mainframe and open systems data from Unix, AS/400 and PCs on the same Symmetrix 5000 Integrated Cache Disk Array (ICDA) storage system. It stores data from mainframe and open systems in the same cache, and can function as a single storage platform for customers migrating from mainframes to open systems. Its cache memory services CPU and I/O requests using algorithms which predict what data is likely to be accessed on the basis of past sequential requests. Symmetrix loads data into the cache on a continuous real-time basis. It has a remote data facility enabling users to mirror data between two Symmetrix arrays on data centers miles apart. The ESP 5000 family can store from 34Gb to 544Gb data, with the ESP 5500 capable of storing 1Tb in remote environments. The Symmetrix ESP 5000 family includes support for all IBM and IBM-compatible mainframes through both ESCON and parallel channel connections, and support for all major open RISC, PC LAN and AS/400 servers through Fast/Wide SCSI interfaces. Software costs from \$5,000-15,000 for ESP users. Parallel mainframe connections and eight SCSI connections costs from \$504,000, and the ESP 5500 with the same costs around \$3.6m. Hewlett-Packard Co and AT&T Global Information Systems will each market and sell EMC's Symmetrix 3000 for their Unix servers. AT&T GIS will sell them on an OEM basis as the AT&T GIS 6272 and 6275 storage systems for its WorldMark enterprise server systems.

### CA LICENSES DATAWARE TOTAL RECALL API

Computer Associates International Inc, Islandia, New York, has licensed Dataware Technologies Inc's Total Recall API for BRS/Search and OpenIngres. It runs on most Unix systems and Digital VMS servers and most Unix clients, as well as Windows 3.1, NeXTstep and Macintosh System 7. Total Recall links databases and 4GL to the BRS/Search full text management system. It links Oracle, Sybase, Informix, Ingres, SQL Server and any other ODBC compliant database. It supports PowerBuilder, Visual Basic, SQL Windows, HyperScript and any 4GL with DLL support. Dataware Technologies is working on selling agreements with the other major RDBMS companies, but an official declined to name who. Total Recall sells directly for about 30% of the cost of BRS/Search installations, which usually starts from \$8,400.



### CA ADDS LEGENT AGENTWORKS TO UNICENTER; SLASHES PRICES

Based on its successful price-cutting experiment earlier this summer, Computer Associates Inc has slashed the entry-level pricing model for its CA-Unicenter systems management suite by as much as 43% on all LAN and Unix platforms, including SCO OpenServer, NetWare and NT. It's also integrating its Legent Corp unit's AgentWorks SNMP manager, GUI and toolkits into the suite, and offering new single sign-on and system alert modules. CA president and COO Sanjay Kumar offered *Unigram* a blunt appraisal of the measures: "slash prices to gain market share.. and freeze out the competition." CA-Unicenter licencees will get the additional software at no extra charge and the company's also introducing a mainframe-style maintenance program for CA-Unicenter under which it will provide bug fixes, support and upgrades to future releases. AgentWorks Manager includes an AgentWorks domain manager (Agent 99) and the AgentWorks kernel (Agent 86) to create multi-level managers and agents for enterprise, domain and desktop levels. Each consolidates information from the level below, providing management for groups of SNMP-based systems, networks, applications and databases. CA is utilising Legent's Extended Processing Environment (XPE) to deploy AgentWorks on CA-Unicenter. CA, which is also adding an AgentWorks GUI to CA-Unicenter, says the integration will be complete by year-end. Using Legent-derived technology CA has built an AgentFactory application allowing developers to build and deploy custom agents for AgentWorks. It will be licensed on a per-server basis bundled with AgentWorks or sold separately at from \$140,000 ?? AgentFactory and AgentWorks are not initially available for other CA-Unicenter options such as the SunNet Manager or HP OpenView packages. CA has also created a single sign-on manager for CA-Unicenter allowing Windows-based consoles to access Unix, mainframe and Windows applications, whilst a new system alert agent provides automatic detection, isolation, identification and correction of system problems. CA is integrating Legent's Paradigm helpdesk functions with CA-Unicenter and will sell Paradigm separately at from 30-40% of the basic CA-Unicenter price. A home-grown hierarchical storage management package will also be available. More details on the new modules, plus a promised toolkit for "end-to-end enterprise management" are due in the next few weeks. CA will offer a package comprising CA-Unicenter manager, Unicenter 325 Agent, AgentWorks domain manager (Agent 86), AgentWorks kernel (Agent 99), single sign-on manager and system alert agent until the end of the year priced according to the company's new Power Unit tiers (see below). Thereafter single sign-on manager will be unbundled at from \$100. Meantime, CA has unbundled its Database Alert Server for Oracle, Sybase and Ingres with CA-Unicenter. An Informix version will be ready soon. CA is cutting the price of the CA-Unicenter suite to \$400 per power unit at the entry-level (a measure of CPU/system power) down from the \$700 it currently charges. CA-Unicenter on a midrange HP server will now cost from \$48,000; \$7,200 on a Pentium server; \$52,000 on an RS/6000 36T; \$28,000 on the 25T; \$40,000 on a SparcServer 1000 and \$66,000 on a SparcCenter 2000. Customers must buy an AgentPack for Workstations to enable Agent 86 kernel, single sign on and the software delivery manager on their systems. Kumar said HP-UX, Solaris and AIX have been the leading CA-Unicenter platforms over the last six months. Sales of the company's OS/2 product have been "dropping like a rock," whilst NT sales are "very strong." Kumar expects CA-Unicenter sales to be "a race between Unix and NT in 1996."

### DATA GENERAL PRO'S GO LIKE A DREAM

At Intel's P6-as-server do last week in New York, OEMs were reflecting on Intel's 200MHz Pentium Pro announcement which caught them off-guard. They were expecting 133MHz and 150MHz and Intel turned up with 166MHz and 200MHz, apparently to stick it to the RISC guys. The 200s were doled out sparingly and in Data General's case at any rate its two only arrive the night before its machines were to be demo'd to a full house. DG said they popped them in and they ran like a dream. DG simply isn't used to nice surprises. All the surprises it got from Motorola, its old chip supplier, were "going in the other direction," it said. Data General came close to betting the company on the PowerPC 620 but opted to go with the Intel chip instead after a two-week meeting, even though DG decision makers were 60-40 in favour of the RISC chip at the start. It was processor economics that persuaded them. DG will offer a complete family of AViiON servers based on Intel Corp's Pentium Pro processors beginning early in 1996, releasing four-way 166MHz and 200MHz machines with up to 3GB memory and 5 terabytes of CLARiiON storage. It insists that they will complement the current AViiON servers, running either DG/UX Unix or Windows NT Server, and will support all 15,000 existing Motorola Inc 88000-based AViiON applications. There will also be deskside AViiON servers with single or dual P6 chips. (*Pentium Pro partners, see p4*).

### DOLPHIN SNAPS-UP KENDALL REMAINS; TARGETS SEQUENT WITH NEW SCI SOLUTIONS

Aspiring interconnect specialist Dolphin Interconnect Solutions A/S has bought non-exclusive rights to designs, patents and other work of massively parallel processing outfit Kendall Square Research Inc, which sought Chapter 11 protection just over a year ago (UX No 506). Dolphin says it'll integrate Kendall's Pentium Pro work with its own Scalable Coherent Interface chip to deliver on an adaptor card which it claims will be able to drive systems much bigger than anything its interconnect rival Sequent Computer Systems Inc can muster (UX No 560). In the first instance it says its looking to sell the adaptor cards complete, but says it will sell the chips independently to selected OEM's. The company has already won Novell Inc round to the technology, and is working with the Orem, Utah-based company to deliver what Dolphin is describing as a "full-up" Network operating system. Novell has issued a non-disclosure on the exact details, but Dolphin reckons a system will be ready by the start of 1997. Dolphin has also picked-up eleven KSR engineers who will work out of a yet-to-be acquired site in Waltham, Massachusetts. First versions of the chipset are scheduled for next spring, with adaptor boards expected to beta in the summer. The Oslo, Norway-headquartered Dolphin says the boards will be ready by the end of next year. Before it filed for Chapter 11 KSR was developing an interface chip and suite of middleware for creating single system image machines. The idea was to tie distributed Unix, NT or NetWare systems together using the hardware/software combine, shielding applications from underlying architecture. Dolphin says it bought KSR for its high-level applications knowledge, paying a "lot less" than the "millions" the court was asking for the KSR assets. It says its got a whole bunch of hardware and software names in hand.

### POWERPC ALLIANCE: CONCURRENT IS TO ACQUIRE HARRIS COMPUTER

After six months of jockeying for position and calling each other names, Concurrent Computer Corp, Oceanport, New Jersey is to acquire Harris Computer Systems Corp, Fort Lauderdale, Florida - and is moving to the PowerPC RISC from the Mips Computer Systems Inc R-series it uses in its Maxion real-time Unix multiprocessors. Until now, the only offer that had been made public was an offer from Harris of one of its own shares for every Concurrent out, back in March (UX No 528) - now Concurrent holders will get a rather larger piece of the combined pie, for it is paying 9.56 Concurrent common shares for each Harris share, resulting in Concurrent shareholders holding 61% of the combined companies. Both companies are old-time real-time mini manufacturers, and both have seen much better days: Harris last week reported a loss for the year to September 30 of \$11m on sales down 22% at \$45m. Concurrent reported a \$1.9m first quarter loss on sales that plunged 36% to \$26.5m. Harris is already moving to PowerPC from 88000 in its Night Hawk and Power Hawk real-time Unix multiprocessors. Corky Siegel, who holds all the top three posts at Harris is to be president and chief executive of the combined company, which will be called Concurrent but headquartered in Fort Lauderdale with the legal and financial departments. Concurrent president and CEO John Stihl gets the chairman's job. The two are investigating a name change for the long-term. Siegel reckons savings in overhead, research and development and sales mean the new company will be "profitable in the first quarter." Concurrent has some 750 employees, with development teams in Oceanport; Westborough, Massachusetts; and Slough, Berkshire. Harris has 430-odd staff. The two say they'll eliminate overlap but declined to specify areas where cuts will be made. Concurrent is best known for its real-time and fault-tolerant simulation, weather, multimedia and gaming systems; Harris for its real-time secure technology. The new company says it'll move to a single line of PowerPC systems running a Unix operating system blended from Concurrent's RTU Real-Time Unix and Harris' Secure/Power Unix. Concurrent, which had planned to debut PowerPC Maxion successors in 1996, says its customer contracts call for it to continue to support the Mips-based line for at least 20 years. Harris says the combined company will maintain the arrangement under which it resells Compagnie des Machines Bull SA SMP Escalas fitted with Secure/Power. The two claim their biggest competitors are not other real-time folk such as Encore Computer Corp but the likes of IBM Corp, DEC, and more recently Silicon Graphics Inc, which Concurrent notes is making in-roads into the real-time market without a dedicated real-time offering of its own.

## PENTIUM PRO - PARTNERS, BUT NOT ALL ABOARD

ICL Plc, which describes itself as Intel Corp's only European P6 definition partner, was one of a slew of vendors touting shiny new Pentium Pro boxes at the chip-maker's partner event in New York last week. One of the ways in which the various solutions can be distinguished is by their use - or not as we learned in the majority of cases - of Intel's own Standard High Volume (SHV) motherboards which can accommodate up to four P6 processors, plus memory, cache and I/O. Whilst Intel, iAXP-86 vendors, Wall Street, the press and chip-watchers in general have made much of the company's new board-level strategy, a tour of vendors at Intel's P6 partner event in New York last week suggests that there's more hot air to the strategy than hot tin. In the Unix space for example, ICL, DEC and Sequent each use two-way home-grown P6 boards. Data General Corp takes the Intel board. Whilst the Intel design lacks the kind of RAM capacity (it's restricted to 16Mbit DRAM) and expansion options some vendors said they require, like 1Gb main memory, the unspoken word had it that vendors simply don't want Intel all over the inside of their machines. Even Intel senior VP Dave House downplayed the lack of support for the SHVs, saying the

### SuperServer

ICL last week debuted the Fujitsu ICL SuperServer J600 i-series with up to four Pentium Pro at 200MHz on two boards, with up to 2Gb main memory, 240Gb disk with RAID and Hot Pull, and forecasts performance gains of over 60% over 133MHz Pentium servers. Operating system options are SCO Unix, UnixWare 2, NT and NetWare. They're seen as the ideal NT vehicles. Prices go from £15,000 to £100,000 depending on configuration. ICL's TeamServer and SuperServer ranges now start with the 5-to-50 user TeamServer Ci with a single 75MHz or 100MHz Pentium. It can run OS/2 in addition to the other operating systems which run across all of the company's Intel boxes. The three 8-to-50 user TeamServer E models come with a single 40MHz, 50MHz or 60MHz SuperSparc IIs and run ICL's own NX V7 MPlus Unix. The TeamServer Fi is available with a single 75MHz or 100MHz Pentium and is designed to support from 25-to-125 users. Supporting a similar number of users, the TeamServer Hi boxes come with one or two 100MHz Pentiums. The H-type SuperSparc II-based TeamServers, again for 25-to-125, users comes in six models with one or two 50MHz, 60MHz or 75MHz processors. The Ji SuperServers for 25-to-200 users is available with two or four 100MHz or 133MHz Pentiums. Ks SuperServers are available in 12 models with from one-to-four 50MHz, 60MHz or 75MHz SuperSparcs. ICL is readying Ross Technology HyperSparc-based systems for early next year (UX No 558) and says its UnixWare 2.0-on-Sparc port will be ready within days. Thereafter its own NX V7 MPlus Unix will shrivel away gradually. Beyond the 32-bit Sparcs, ICL says it can't even tell us whether it's made a decision to go with its Fujitsu Ltd parent's Hal Computer Ltd Sparc64 processor or Sun Microsystems Inc's UltraSparc. But it swears its decision will be its own price/performance consideration and not handed down from above (UX No 555).

### RISC-to-CISC

In line with its planned switch back to CISC from RISC, Data General Corp now says that it will offer a complete family of AViiON servers based on Intel Corp's Pentium Pro processors beginning early in 1996. However it insists that they will complement the current AViiON servers, running either DG/UX Unix or Windows NT Server, and will support all 15,000 existing Motorola In 88000-based AViiON applications. The building blocks will be Intel's SHV server boards with up to four Pentium Pros on each. There will also be deskside AViiON servers with single or dual Pentium Pro processor chips.

### Mix-and-match

Unisys Corp was showing off its 10-way U6000/500 SMP server running 150MHz Pentium Pros (UX No 557). The box - so far nameless, although Unisys says it has one figured out - is due in the first quarter of next year in a 166 MHz Pentium Pro version with 10-way 200MHz units to follow. Product marketing manager Bob Sprowls says the servers are designed for up to 233 MHz P6s. The server uses Unisys' Synchronous Coherent Memory (SCM) bus, which allows users to mix Pentium and P6 chips. The machines will initially have 512K cache, 8GB system memory with seven PCI and five EISA slots, six internal hot removable drives and internal and external RAID options capable of holding 4.6 terabytes of data. The fault-resilient machine will offer N+1 power systems. The Blue Bell, Pennsylvania company says it will deliver Pentium Pro versions of its SMP 5400 series in the second quarter.

DEC's Prioris server family will be the first home for the P6 at DEC, with a 200MHz SMP server due in the second quarter. The machine will scale from one to four processors and will ship with ECC memory using standard parity SIMMS and close to a gigabyte of memory, more PCI and EISA slots than the Pentium machines, hot-swappable disk drives, redundant power and cooling, Fast/Wide SCSI and multichannel RAID. Digital is also looking at lower-end servers, but said Intel's late announcement of the 200 MHz chips has put 166 Mhz plans in disarray.

Ing C Olivetti & Co SpA Personal Computers debuted two Pentium Pro machines, a 166 Mhz multiprocessor SNX 460 Systema server and a 150 MHz Suprema workstation. The SNX server will take off from the high end of Olivetti's PC server line and is scalable up to four processors, with 2GB of RAM and half a gigabyte of cache. It will sell for £8,000. The Suprema M6-950 workstation will sell for £3,099. Both lines will go up to 200 MHz when the chips go commercial in second quarter.

Compaq has yet to announce a P6 server, but unofficially it says it's working on some machines for mid-1996 based on its Proliant 1500 and 4500 server classes; it says a name change may be in the works.

## TIVOLI ADDS NT CAPABILITY, INVENTORY SYSTEM FOR CONFIGURATION TRACKING

Until now the Tivoli Management Environment (TME) has only been available on Unix. Tivoli Systems Inc, Austin, Texas, now expects to have the first piece of its distributed systems management environment ready for release on Windows NT by the end of the year. Although Tivoli has been edging into the NT market for more than a year, first by managing NT computers on a heterogeneous network and then by controlling TME from NT Workstation, TME itself couldn't run on NT and required a Unix server. With the new release, TME on NT will be able to manage NT, Windows 95-, Unix- and NetWare-based clients and servers on the same network. The software being readied for market in December is Tivoli/Sentry, the distributed availability management application in the TME suite. Tivoli/Inventory and Tivoli/Courier, the TME suite full-cycle deployment management programs, will follow Sentry into the NT world in the first quarter. The Inventory program is new to Unix as well as NT and is used to discover and track both Windows and Unix hardware and software configurations across an enterprise. It's derived from discovery agent and technology licensed from Intel Corp's LANDesk software suite under the two's year-old alliance (UX No 559). A second piece of Intel know-how was used in the TME code to automate the installation of shrinkwrapped software on Windows clients and servers. As well as helping support Tivoli's NT effort, Intel helped Tivoli adopt the Desktop Management Task Force's Desktop Management Interface (DMTF DMI). Intel will help market the product. In the second quarter Tivoli will finish off the suite with NT versions of Tivoli Admin for user access control management and Tivoli/Enterprise Console, the TME integration and automation module. TME for NT will cost \$500 to \$1,700 per server and \$225 per client, depending on software options and the number of users.

## BANYAN RESTRUCTURES TO FOCUS ON INTERNET; SHEDS 10% OF WORKFORCE

Following the flock, Banyan Systems Inc, Westborough, Massachusetts, has reorganised into two divisions to focus on its Redwood product line and the Internet (UX 540). The new Internet Business Division will concentrate on providing BeyondMail messaging and the Internet Business Directory to Internet users, and the Enterprise Networking Division will focus on developing and marketing the Vines network operating system, ENS, and BeyondMail messaging worldwide. Banyan director of finance and treasurer Richard Spaulding said that the restructuring was driven by customer demand that Banyan will focus its efforts on developing Internet access for the Vines and ENS. ENS is Banyan's largest investment, and the company will continue to add functionality, such as greater messaging offerings, Spaulding promised. Banyan will push for further development and expansion of the StreetTalk global directory, designed to include extended enterprise network components. Some 10% of Banyan's workforce, primarily within the 800-strong Enterprise Networking division, will be laid off. The company will take a one-time restructuring charge of \$5 to \$7.5m against its fourth quarter balance sheet as a result. Banyan will also redouble its efforts on porting ENS to Windows NT, with release scheduled for the first half of 1996, Spaulding said. He also confirmed that Banyan has frozen development of ENS for SCO Unix, but declined to comment further.

### SUN ULTRAS; ALSO IN WORKGROUP, LAN SERVER FLAVOURS...

Sun Microsystems Inc will also offer the Ultra 1 Models 140, 170 and 170E - see front page - in monitor-less UltraServer 1 configurations for workgroup and LAN serving, which come in above the SparcServer 20 line and below the SparcServer 1000 and SparcCenter 2000 commercial database engines. It's a segment worth perhaps something less than half the high-end server market and one into which Sun says it ships a significant number of units (when compared to 1000 and 2000 populations), though they account for only a small amount of revenue compared to their high-end cousins. With 32Mb RAM, 2Gb disk, 3 Sbus slots and Solaris 2.5 server edition, the 143MHz Model 140 comes in at \$15,500. It's rated at 215 SPECint92, 303 SPECfp92, 4,267 SPECrate\_base\_int92 and 6,428 SPECrate\_base\_fp92. It includes 10Mbps SCSI and 10Mbps Ethernet. With 64Mb RAM, 2Gb disk and 3 SBus slots, the 167MHz Model 170 is \$20,500. It performs at 4,893 SPECrate\_base\_int92 and SPECrate\_base\_fp92 7,403. With 2 SBus slots and one UltraSparc Port Architecture slot, the 167MHz Model 170E is rated at 252 SPECint92, 351 SPECfp92 and the same SPECrates as the 170. It costs from \$24,000 with 64Mb RAM and 4Gb disk. The 167MHz units come with 20Mbps SCSI and 10 or 100Mbps Ethernet, optional ATM or Token Ring. We should expect tailored server packages such as an UltraSparc-based Netra internet server down the line.

#### Enhanced SparcServer, SparcCenter software

Meantime, in an effort to keep high-end server sales from waning in the nine months or so it's going to take the company to get SMP UltraSparc servers out of the door, Sun's promising further software enhancements for the SparcServer 1000 and SparcCenter 2000 lines (their SuperSparc II CPUs have reached the end of the road at 85MHz), plus support for Solaris 2.6, 2.7 and future operating system releases. In addition it'll soon detail a lease plan allowing customers to take 1000 and 2000s to fulfil immediate requirements and upgrade to SMP UltraSparc servers as soon as they arrive. The plan will be effective in the US and a handful of other countries.

### ...REVAMPS RAID STORAGE SOLUTIONS

This week Sun also plans to add 110MHz microSparc II controller boards to its Model 100 and 200 SparcStorage Array RAID subsystems, providing, it says, 25% better I/O performance over the current models which use the 40MHz microSparc I. The subsystems now also accommodate up to 16Mb NVRAM cache, a 22MHz Sbus and are claimed to deliver 90Mbps transfer speed on sequential applications, up from 16Mbps now. A Model 112 with 12.6Gb starts at \$23,600. \$39,400 buys a 37.8Gb unit whilst \$55,20 commands a fully-configured 63Gb subsystem. The Model 210 controller starts at \$13,000 and weighs in a \$170,500 for 324Gb. Upgrades start at \$7,000. The RAID lines can carry from 10Gb to 5Tb disk and are said to offer storage at 53 cents per Mb. Sun claims to have shipped 12,000 of the subsystems in the 18 months since they began shipping against the 10,000-odd CLARiiON RAID subsystems Data General Corp shipped up to July this year. SparcStorage works only in conjunction with SparcServer, SparcCentre and SparcClusters systems of course, though the fact that Sun has created a separate storage P&L as part of its recent re-org is a likely indicator of the way forward for the business.

### INFORMATION ADVANTAGE OFFERS DATA ACCESS AND OLAP TOOLKIT

Information Advantage Inc, Minneapolis, Minnesota, is shipping DecisionSuite 3.0, a database access and run-time analysis toolkit for Unix systems. The company is touting the software for tracking statistical information on product sales and inventories on-line. DecisionSuite is built on its own Axsys 5.0 development toolkit, OLAP analysis and agent technology and has four core applications. Info Alert receives alerts and reports generated by agents. NewsLine modifies reports via customised applications. Analysis can be programmed to be activated by triggers, agents and alerts within an executive's OLAP tool or an administrators Workbench. DecisionSuite agents monitor data warehouses and issues customised alerts. It comes with email messaging, graphing software from Pinnacle, and geographical mapping of sales areas using Object/FX's SpatialWorks software. DecisionSuite can access Informix, DB2/6000, Oracle, Red Brick, and Sybase databases and runs on most Unix servers, with the exception of DEC. A Windows NT version is due sometime next year. Server prices go from \$30,000; Workbench is \$3,000, Analysis is \$900, NewsLine is \$150 and Info Alert costs \$45.

### PROGRESS DEBUTS VERSION 8.0

As anticipated (UX 544), Progress Software Corp, Bedford, Massachusetts, introduces Version 8.0 of its Application Development Environment this week. ADE enables developers to build client/server applications and deploy them against Oracle, Sybase, DB2/400, NT SQL Server and other databases. Enhancements to 8.0 include access to VBX components that can be included in Windows applications; full graphical tools support is provided for assembling applications containing VBXs. ADE also has an OLE container and a starter set of VBXs from Progress's Crescent Division. This starter set includes a spin button, enhanced combo box, and an event timer. SmartObjects is a collection of business objects that Progress says can be assembled into custom fully-functional applications without writing any code. Developers can make new applications with their own or Progress' SmartObjects by point-and-click. Version 8.0 includes new SmartObjects reusable application components within an Application Component Environment framework. This framework includes an Advisor and a Wizard that guides developers through visual assembly. These generate message links between objects and the transaction processing and data management code. This occurs within a new User Interface Builder, which contains new SmartObjects. New SmartObjects include SmartView, SmartBrowse, Query, Frame, Window, Dialog, Panel and Folder objects. Developers can use these within Version 8.0's Application Component Environment to fabricate, assemble and deliver application components for complex enterprise-level applications. Developers can use pre-packaged SmartObjects or build new SmartObject using Progress' new User Interface Builder and 4GL. The User Interface Builder is the visual graphical environment for building applications. It has APIs for adding custom extensions, object coding and business processes. Version 8.0 also includes an API for using third party software configuration management products, and a Report Builder that integrates reports into 4GL applications, enables cross database reporting, and allows users to design a variety of formats and templates. It allows PC users to run large reports on alternate servers while performing other tasks.

#### 32-bit Microsoft support

Progress is selling Version 8.0 in two ADE packages, Progress ProVision and Enterprise ProVision. Progress ProVision includes the 4GL, the User Builder Interface, the Report Builder, an application debugger and end-user query and reporting tool. It is priced at \$3,600 per developer. Enterprise ProVision includes the above plus team development and configuration management support for the ADE by StarBase Corp's Roundtable Total Software Management System. Enterprise ProVision costs \$4,400 for a single developer. Version 8.0 will be available for 16-bit Windows 3.1 this week, with the eagerly-awaited 32-bit versions for Windows NT and Windows 95 due in the first quarter of next year. Support for most Unix platforms is slated for the second quarter of 1996. Progress prices its product lines including the Application Development Environment, DataServers and RDBMS, according to the number of concurrent users, regardless of platform or operating system. Additionally, it has recast its database offerings into three products: Enterprise Database Server, for SMP systems with more than 1,000 users. A Workgroup Data Server, is geared for or moderate transaction processing for workgroups. The third is Personal Database for single PC users running stand-alone applications, client based static or temporary data.

### ODI EYES MAINSTREAM DATABASE MARKET WITH DBCONNECT

Eyeing the lucrative the mainstream database market, Object Design Inc, Burlington, Massachusetts, has released its DBConnect object-relational connectivity tool, a component of its ObjectStore Component Architecture (UX No 519). Originally called Gateway - until the marketing folks changed their minds - DBConnect enables ODI's ObjectStore database to interoperate with relational databases, and works with IBM's DataJoiner for access to IMS and IBM mainframes. DBConnect uses a mapping schema developed with IBM which translates C++ object schema into relational schema and vice versa. DBConnect goes from \$30,000. ODI expects there will be two major point releases of its object-oriented ObjectStore database next year with improved concurrency, scalability, failover and notification. Meanwhile the company has completed its reorganisation which resulted in the shedding of its SmallTalk development team and loss of thirty of its sales, marketing and administration folk (UX No 552). It says it's re-aligned along product lines and has split its marketing and sales efforts into Asia Pacific, Europe and North America geographies. International sales account for a third of its revenue. Its SQL client, which provides access to ObjectStore C++ data from SQL-based tools and applications has been pushed back to next quarter from last September. ODI says it'll have a new CEO by the end of the month; acting CEO Phyllis Swverski has left the company.

### McNEALY'S ULTRA 1, MAVERICK PRODUCT LINE DELIVERED SIMULTANEOUSLY

On Tuesday morning November 7 in time for lunch Scott McNealy's son was born - a few weeks early - but weighing in at 6 lbs 4 oz and 21-inches long. Now, we haven't met this kid yet but we like him already for the simple reason he's got troublemaker written all over him. His first move was to throw a happy moneywrench into his daddy's victorious Ultra 1 launch which went off, sans Sun's CEO, simultaneously. It's Scott's young wife Susan, however, who's the real trooper. She was in labour 12 days - count 'em, ladies, 12 DAYS - and - to make sure Scott didn't miss anything she spent the time at Sun while Scott briefed the press on Ultra 1 - which just goes to prove what we've always suspected that exposure to repeated product briefings brings on contractions. Well, with them coming four minutes apart, she went to the employees' launch Monday night and only then repaired to the hospital. Pshew! Susan and Scott have named the little rascal Maverick. Scott, hoping his son will be a nonconformist, says the word came into the English language when a Texas rancher by that name refused to brand his livestock, a particularly hideous practice anyway. Something tells us if Maverick hangs around with his old man any length of time he'll have no problem living up to his name. Scott, by the way, gets to celebrate his own birthday this week. 41, isn't it, Scott? Happy returns of the day.

### BORLAND LICENSES JAVA; PROMISES TO ADD VALUE

Sun Microsystems Inc's Java Internet programming language is beginning to look like a runaway winner, and Borland International Inc, Scotts Valley now says it will license the language and provide software development tools for it. Borland plans to offer a high performance visual rapid application development system for creating Java applications, and says the product, code-named Latte, will be developed in Java and will radically increase the speed of developing Java applications, Borland said. Borland will deliver Latte technology in several stages with the first commercial release set to ship in the first half of 1996; its features will include Internet and Web application enablers, object-oriented component-based programming, high performance compilers and advanced database connection.

### MICROSOFT BUYS NETWISE TO ENHANCE NT

Microsoft Corp says it has already completed the acquisition of Netwise Inc, Boulder, Colorado developer of middleware for integrating mainframe and client-server environments. Terms of the deal were not disclosed. Microsoft wants the company's technology to help customers that want to deploy Windows NT in BackOffice servers while maintaining interoperability with their mainframe databases. It says it plans to integrate Netwise TransAccess with its SQL Server database management system, Visual Tools and Object Linking & Embedding lines.

### NEC TO SAMPLE VR10000 RISC AT \$5,000 IN JANUARY

NEC Corp makes some dramatically cheap MIPS Technologies Inc R-series microprocessors, but the next one from the company will be the dramatically expensive VR10000 version of the R10000, which will cost a daunting \$5,000 in sample quantities. NEC is planning to start making the superscalar part in volume in January and rates it at 300 SPECint and 600 SPECfp at 200 MHz on the old and discredited measure - you should be use the Spec95 marks rather than the Spec92 now, and it's easy to tell the difference because the Spec92s take the VAX-11/780 as the unit, the Spec95s use the SparcStation-10 as one. NEC is making the part in its current 0.35 micron four layer metal CMOS logic process, which it uses for the MIPS VR4400. It plans to make 10,000 a month.

### SEQUENT BUYS OPEN TOOL TO PLUNDER BULL'S DPS BASE

Sequent Computer Systems Inc, Beaverton, Oregon has decided to go to war on all Compagnie des Machines Bull SA's proprietary mainframe and minicomputer bases, and to that end has acquired Open Tool International BV, a Dutch software company described as the sole commercial provider of a complete set of mainframe- or mini-to-Unix migration tools for DPS 4000, DPS 6000, DPS 7000 and DPS 8000 and 9000, including an interface from the IDS2 database management system to Oracle and Informix relational databases. The company reckons that plundering the Bull base could be worth as much as \$100m in Europe alone. Terms of the acquisition agreement and financial details of Open Tool have not been disclosed.

### LEGATO READIES ONLINE BACKUP FOR ORACLE7

Legato Systems Inc, Palo Alto, California, is readying NetWorker Database Module backup software for Oracle7 running on Unix next month. Oracle7 provides a common API to the software called Enterprise Backup. Database Module backs-up databases on-line at tape storage speeds ranging from 17-27Gb per hour. Changes to the database are logged and pass through the API to backup software which logs them onto a disk/tape system. The Database Module is integrated with NetWorker media tracking and database configuration tracking. The Database Module can schedule partial or full backups on a regular or rotating basis. NetWorker also offers support for optical and tape devices, including autochangers. Legato is talking with Informix, Sybase and SQL to provide similar backup software for these databases. Legato is currently integrating NetWorker with the Tivoli/Plus management environment, which, slated for delivery by year-end, will be sold and supported by Tivoli. Database Module for Oracle ships next month from \$9,000 per NetWorker server. It runs on Solaris 2.3 or higher; IBM AIX 3.2.3 and Hewlett-Packard HP-UX 9.0 versions are due.

### ACORN READY WITH \$300 ARM-BASED NETSURFER BOX

In the wake of both Larry Ellison and Scott McNealy's seductive proclamations that Oracle Corp and Sun Microsystems Inc will manufacture Internet access network computers that can carry out the basic functions of a personal computer but cost under \$500, Acorn Computer Group Plc's Applied RISC Technologies division appears to be first to the post with a product. Acorn has announced NetSurfer, an ARM RISC-based box that doesn't have a hard or floppy drive but relies on a 14.4Kbps internal modem to download software from the Internet. The machine has 4Mb of ROM in which Acorn's proprietary windowing operating system runs. The Web browser runs in 2Mb of RAM. Acorn is targeting the machine at the fireside market. Users plug one cable into their television set, which then doubles as a computer screen and another into the telephone jack. The company said that it is looking at a number of licensing deals for the technology as well as a US partner to launch the product across the pond next year. The next generation of products will run Sun's HotJava Web browser so users will be able to download applets written in Java. It will also have an infra-red keyboard so that users won't have to ruin their eyes sitting right up close to the television screen, said Peter Bondar, managing director of Applied RISC Technologies Ltd. It will also hook up to a set-top box for video-on-demand applications, he added. NetSurfer will ship in the UK next year for \$300.

### MICRO FOCUS TURNS INTO ENTERPRISE WEB FIRM

Cobol Schmobil: HyperText Mark-up Language is where the future lies appears to be the watchword from Micro Focus Plc. The company has decided to turn itself into a World Wide Web-based company, and is building all its mainframe-offloading products and the client-server target systems on Web technologies. And it will use the results in its own business as well as pushing it to customers. It calls its internal Web-based systems Enterprise Webs and says it has already begun to use some case study applications, aims to deploy them fully over the next few months and take them to market shortly thereafter as companions to its new generation of rapid application development tools, which will support programming in HTML and SQL as well as Cobol, with video and audio conferencing added.

### ORACLE TO LICENSE NEWTON OS?

Oracle Corp's \$300 Internet access terminal or WebStation could be built around the Advanced RISC Machines Ltd ARM RISC if the *Wall Street Journal* has it right. The paper hears that Oracle is in talks to license the operating system for Apple Computer Inc's Newton handheld computer and plans to use it in future Internet terminals - which may indeed use the entire Acorn Computer Group Plc technology. The Journal, citing people close to the talks, said terms of any deal were still unclear but as of last week Oracle had been talking with Apple about buying the entire Newton division, hardware and software. Apple has indicated that it wants to shed ancillaries and slim to its core business.

### INTEGRATED MICRO WINS FUJITSU AS OEM FOR FT-SPARC

Integrated Micro Products Plc, Consett, County Durham has won Fujitsu Network Switching of America Inc as a customer for its ft-SPARC fault-tolerant Unix systems for deployment with its FETEX-150 ESP Series Central Office Asynchronous Transfer Mode Switching System. Fujitsu is installing six systems and plans to buy more.

## HP CLUSTERS TECHNICAL SERVERS AS EPS20

Meantime, HP has put together a packaged clustering solution based around its K-Class technical servers and 100Mbps FDDI (soon-to-be Fibre Channel) interconnect (UX No 557), which can accommodate up to eight nodes, each with up to four 120MHz PA-7200s. It's aimed at the mechanical CAE batch analysis and EDA analysis markets, ~~reckoned to be a small percentage of customers requiring the kind of~~ compute power not provided by its standard SMP server lines. Dubbed the Model EPS20 Server - Enterprise Parallel Server - the configuration starts with a two-way K410 Base Module, 128Mb RAM, 1Gb disk, 17" screen, FDDI interconnect and MCSE single system environment software for central monitoring, administration, job scheduling, load balancing and parallel development tools at \$120,100. K210 and K410 can be added from around \$15,000 to \$20,000 per CPU. The line will be enhanced with PA-8000 processors, support for 16 nodes, Fibre Channel and new mass storage and high-availability software later next year. Beyond there HP plans single system view software, faster, lower-latency Fibre Channel and faster 8000s. HP puts a \$456,000, 4GFLOPS, 16-way EPS20 with a K410 and dual-processor K210 add-ons, with FDDI and 128Mb RAM on each node against a \$1.2m, 4.2GFLOPS, 16-way IBM Corp RS/6000 SP Model 404 with four wide nodes, 128Mb RAM on each node and the Vulcan switch. The shared-nothing EPS line comes in below the shared-everything Convex Computer Corp SPP-1200 (the former minisuper outfit which HP is in the process of acquiring) accommodating up to 128 PA processors and runs HP-UX applications which is aimed at structural analysis, crash testing and fluid dynamics. The company it doesn't plan to provide pre-packaged EPS versions of its T500/520 servers but will custom-install clustering on the commercial servers where required.

## ANDYNE REVS GQL TO SNARE DATA WAREHOUSERS

Kingston, Ontario-based decision support house Andyne Computing Ltd is hoping to cash-in on the rush to data warehousing with GQL (Graphical Query Language), an ad-hoc query tool for accessing transaction-level data on relational SQL databases. It comes with a Managed Query Environment which the company claims synchronises information systems expertise and end-user requirements to deliver analysis and reporting capabilities. Its latest rev of GQL, Version 3.3.2, includes automatic resolution of interdependent calculations within reports, a timer facility to prevent overlong queries and modules for Charting and Cross Tab reporting. Andyne divvies GQL into four offerings; GQL/Design, GQL/Admin, GQL/User and GQL/Update, pitching the first two modules as data creation models for manipulation in the latter two offerings. Update is a superset of User providing insert, update and delete facilities. At the core of GQL's graphical user interface is a data model that has icons for what it calls data objects, actually tables with columns, and relationships. GQL/Design and GQL/Admin create data objects, their columns and relationships. GQL/Design creates tables on the DBMS server, while Admin imports table definitions from the DBMS catalog. And because the data model understands about the relationships between tables, joins do not need to be specified unless a column name in a query appears in two related tables. Data models can also link queries, and link them to command buttons to enable frequently asked questions more easily. GQL/Design enables the administrator to build Executive Information System interfaces with graphic objects such as maps, picture buttons and drill-down queries. Named prompts can appear in queries in place of a hard coded values, display down pick lists and pick lists can obtain items by running another query. It is also possible to copy data models across platforms and use them without modification, the company claims. GQL can access Sybase, MS SQL Server, Oracle, CA-Ingres, Teradata and can use ODBC, TechGnosis' Sequelink middleware and Information Builders EDA/SQL to access additional data sources. GQL 3.3.2 is up on Unix/Motif platforms including Sun, HP-UX, SGI and RS/6000 as well as Windows and Macintosh. prices start at \$500. Pablo is Andyne's OLAP (on-line analytical processing) desktop data access and reporting tool for multidimensional data and comes with a document-based interface for integrating text, graphics, tables and charts. Pablo's OLAP hypercube technique draws data into dimensions or categories, which bypasses data access languages such as SQL. Each hypercube dimension contains a set of members that define the data for it, or they can be organised in hierarchies for drill-down access. Pablo goes from \$700. The company will introduce a Standard Generalised Markup Language-based (SGML) Rosetta document exchange, manipulation and search engine in February which it got as part of its \$2.25m acquisition of Ottawa-based ActiveSystems Inc.

## ULTRA CREATOR 3D GRAPHICS, NETWORKING

Sun Microsystems Inc styles its Ultra Port Architecture, which replaces the existing memory bus, the lynchpin of the UltraSparc design - *see front page* - describing it as a switch-based interconnect of the kind usually found in supercomputers, linking processor, input-output, graphics, memory and networking. ~~It transfers data at up to~~ 1.3Mbps. A Visual Instruction Set is built on the motherboard to give up to five times graphics and multimedia performance improvements over other systems without add-in boards. The Creator Graphics graphics engine, said to perform at 133 PLBwire93 and 185 PLB-surf93, includes 3D-RAM, frame-buffer memory architecture developed with Mitsubishi Electric Corp and claimed to combine the best of video RAM, dynamic RAM and static RAM and to improve complex graphics performance by as much as 10 times. Creator Graphics comes as Creator and Creator3D; both provide 24-bit colour, 1,280 by 1,024 resolution and accelerated image and video processing, windowing and two-dimensional animation. Creator3D adds double-buffering support for complex three-dimensional graphics. Market researcher DH Brown Associates Inc says Creator leads other rasterisation cards in performance, such as DEC's ZLX-L2, but lags behind accelerators that are designed to stress floating-point operations such as IBM Corp's GXT1000-2 and HP's Visualize-48. It's ahead of them on price/performance. Creator's wireframe performance is bested only by HP Visualize-48 and EDC's ZLX-E2/3 - and beaten on price/performance by DEC's ZLX-E2. Although Sun is one of a number of recent OpenGL graphics library converts, it doesn't provide OPC Viewperf numbers and is unlikely to until it releases a native, tuned version of OpenGL, DH Brown observes; "perhaps confirming criticism that the 3DRAM architecture will not directly support all of the OpenGL per-fragment operations." 10/100 Mbps FastEthernet and fast/wide SCSI support is built onto the 170E Creator motherboard or is available from next month as a \$1,100 SunSwift single-wide SBus adapter. Version 2.0 of the SunFastEthernet 10/100 SBus adapter is \$800 from January. Its third-generation 155Mbps ATM Adapter 2.0 (including support for ATM Forum's LAN Emulation 1.0 spec) is \$1,000 (twisted-pair) or \$1,300 (fibre-optic). There's also new 4.0 versions of the SunFDDI Adapter - \$2,500 for single-attach, \$3,800 for dual-attach.

## GRADIENT ADDS WEB EXTENSIONS TO DCE

DCE provider Gradient Technologies Inc, Marlborough, Massachusetts, is introducing Web extensions to its DCE (Distributed Computing Environment) implementation, allowing customers using Web browsers internally to implement a full set of security services from browser to database. The Web client/server DCE solution works with standard browsers such as NetScape, with the DCE component sliding under the browser on the client. It was demoed recently at Fall Internet World 95 in Boston, where a PeopleSoft human resources client/server database application was front-ended with a Web browser, providing full authorization, privacy and data integrity across the network. An increasing number of companies are using Web technologies as a cheap and convenient way of connecting users up to internal databases and applications - in effect a re-invention of the dumb terminal. Customers who already have Gradient's DCE products will have early access to the Web DCE extensions for Windows, Windows95, NT and Unix platforms within 60 days, says Gradient, with volume distribution targeted for early next year. AT&T GIS says it will be one of the first companies to pilot the technology, but Gradient says it is also working with IBM, HP, Spyglass, EDS, Open Horizon, Frontier Technologies, Open Market, DynaSoft and Penn State University. Meanwhile, Gradient has announced it is working with Sequent Computer Systems to develop DCE products for Sequent's Dynix/ptx operating system software: it's porting the core DCE services to Dynix/ptx v4.1, which will be ready early next year.

## PLATINUM LICENSES BINDVIEW FOR SOFTWARE DISTRIBUTION

Oakbrook Terrace, Illinois-based Platinum Technology Inc has licensed Houston, Texas-based BindView Development Corp's network inventory technology, BindView NCS, and will integrate it with its own Xfer software distribution tool. Bindview NCS provides network control facilities over NetWare, Vines or LAN Manager networks. Platinum claims the integrated solution will enable Xfer to find out what hardware, software and files exist on each desktop and then distribute software and administrative commands based on the inventory profile. Platinum says Xfer will collect data from servers and desktops and will tie-in with asset tracking and help-desks. First integrated versions of Xfer are scheduled for the first quarter of 1996.

# unigram·x

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**Ross Technology Inc**, Austin, Texas Sparc designer got its initial public offering of 3.5m shares, all new, away at \$14 per share, and Sun Microsystems Inc bought another 1.057m at \$13.02 a share with a warrant to take its stake to 9.9% in the next 180 days at the same price. The \$60m or so net proceeds will be used for the repayment in full of its bank debt, for the relocation and expansion of its manufacturing, testing and quality control facility, for the payment of preferred stock dividends, and for continuing product development and working capital.

Undaunted, **Lotus Development Corp**, **IBM Corp** and **Digital Equipment Corp** have announced a multifaceted pact under which Lotus will provide Lotus Notes to its customers on Alpha RISC systems: DEC's worldwide sales force will sell Notes through its Multivendor Customer Services' existing reseller agreement with Lotus; and Lotus will develop versions of Notes Release 4 for both Digital Unix and Windows NT for Alpha. It expects the Alpha version of Notes for Windows NT during the first half of 1996, Notes for Digital Unix during the second half.

Poor old **Motorola Inc** has had to admit that it's so green about selling computers that it has had to call in a third party to advise it on how to sell RISC PCs to itself: it has called in computer direct marketer Insight Enterprises Inc to develop a direct marketing, sales and fulfilment programme to sell Motorola Computer Group PowerStack RISC PCs and servers to the various departments throughout Motorola, and to its employees for home use.

Three-dimensional virtual reality is dismissed by critics as so hard to manoeuvre through that many who try to do it crash into walls - and as the computer can't update images as fast as the human eye, walking through three-dimensional cyberstores usually feels like staggering, which literally makes some people sick; needless to say, **Sun Microsystems Inc's** Scott McNealy gets the last word - "If you want 3-D, get your head out of the computer: it's all around you."

Naperville, Illinois-based **Spyglass Inc** has now licensed the Java programming language for the Internet from Sun Microsystems Inc and will integrate it with its Spyglass Mosaic Web client technology so that Mosaic browsers will be able to view Web content developed in Java.

A DEC roadmap for its Alpha chips reads that the current pricey 21164 performance leader with a projected SPECint rating of 400 should be the mainstay of \$2k-\$2.5k desktops in 1997 and that the as-yet-unfielded 21264 projected to be worth 1,000 SPECint should descend to that same plateau in 1999. DEC, which has all sorts of volume illusions, also forecasts that the budget CPU subsystem for these widgets, consisting of chipset, cache and CPU, should go for somewhere in the neighbourhood of \$425. Both of them, it says, should go through an intermediary \$2.5k-\$5k systems stage, where the subsystem costs around \$600, after toppling from the above \$5k PC and server heights in '95-'96 and '97-'98 respectively.

**HP VP Rick Sevcik**, general manager of its Systems Technology Group, says the some of the rumours circulating about the Intel-HP chip are wrong, the work of enemies. He does admit that the new architecture is spawning several chips in the family but claims there'll be "perfect" binary compatibility across them all. He's promised us a roadmap in the first quarter.

**Data General** expects to bring in its anticipated NUMA machines next year at a third the price of Sequent Computer Systems Inc's similarly architected Sting because of commodity parts. DG will be adding fiber channel-based technology to its CLariON mass storage line soon.

**FirePower Systems Inc**, the struggling PowerPC company backed by Canon Inc, will be showing Solaris running on its uniprocessor 603/604 Powerized ES boxes at Comdex this week. It can't do it on its dual-processor desktops because the software's not there yet.

Cincinnati, Ohio-based **CinCom Systems Inc** is finally going to unwrap its Total FrameWork object-oriented/relational application development environment during the second week of December (UX No 534). Total FrameWork includes Assembly, Workflow and Persistence frameworks backboned by a Corba object request broker, and utilises a handful of third party software products including Austin, Texas-based UniSQL Corp's object-relational database management technology and VMark Software Inc's Burlington, Massachusetts-based Easel Corp development tools.

Dave Fowler, **Gradient Technologies** VP of sales and marketing, told UK journalists last week just how few copies of the UnixWare version of its DCE implementation had been shipped "You could count them on the fingers of two hands - Novell just never pushed UnixWare" he said. He has higher hopes now SCO is in charge.

The rumour mill says **Informix Software Inc** is hungry for a tools company following its acquisition of Stanford Technology Group Inc.

**UnixWare Technology Group** says the transfer of UnixWare to Santa Cruz Operation Inc and the merged UnixWare-SCO OpenServer product due as a result will require the expansion of its charter and mission, so it's negotiating with Unix trademark owner X/Open Co Ltd to change its name to Unix Technology Group. It says it doesn't foresee any problems.

The **Standard Performance Evaluation Corp** has a SPEC96 benchmark for measuring system performance running specific industrial and scientific applications drawn from the oil and gas industry. SPECseis96 is a seismic processing application and SPECchem96 is a computational chemistry application..

You can't argue with papal infallibility: we hear the Vatican has installed a six-way top-end **Hitachi Data Systems Inc** Skyline mainframe.

**Cray Research Inc** says it's the first vendor to achieve X/Open XPG Base 95 Profile branding; it has a new 9.0 release of its Unicos Unix.

DEC's early-1996 Digital Unix release "will be SPEC 1170 compliant and Unix95 branded." There will be a couple of minor revs to the current V3.2C in the interim. Meantime, seems we were mis-informed by SunSoft Inc when it told us DEC was still on version 2 of NFS. Although SunSoft says it offers NFS 3.0 only as an ONC+-bundled item (UX No 547), DEC says it has an agreement with SunSoft for just the NFS V3 product, and that is not part of any ONC+ agreement.

Whilst acknowledging Sun has it bang to rights on absolute performance numbers right now and admitting it does an excellent job on "packaging," **HP** points to its own alliance with Intel Corp and says the question is really how long Sun can continue to support its own its Sparc CPU development.

**SunSoft Inc's** revved its WorkShop 2.0 development and compiler tools to support UltraSparc: Visual WorkShop for C++ is \$3,000, the C version is \$2,200, Fortran 90 is from \$5,000, Fortran 77 is \$3,200 and Ada costs \$12,500.

**Hewlett-Packard Co's** reportedly been touting its future 64-bit HP-UX Unix around the industry. *Information Week* says HP's been sounding-out competitors DEC, IBM/Motorola, SGI and Sun about replacing their Unices for what's dubbed the "White Box" operating system. From what we hear, HP's advances have been rebuffed or did not happen.

The industry maybe about to get itself a second Antares. *Electronic News* reports that **Mentor Graphics Corp** will spin off its Model Technology and Exemplar Logic PC-based design software subsidiaries into a new unit, which like the joint venture between Amdahl and EDS, takes the name of the Antares star in the constellation of Scorpio. Mentor will focus on development of its high-end Unix EDA software.

In his *Inside The New Computer Industry*, Andrew Allison notes that with volume PA-8000 deliveries unlikely before the middle of next year, DEC and Sun Microsystems Inc have the opportunity to make hay at Hewlett-Packard Co's expense. Although Allison expects DEC to remain the overall performance leader, he believes the real threat to HP is from Sun, whose 64-bit UltraSparc campaign is some three to six months ahead of PA-8000.

Away from the numbers: **Sun** has decided that telling the industry how many computers it ships every quarter has been putting it at a "competitive disadvantage," and has abandoned the practice. Sun was the the only major vendor providing unit shipment data.

**DEC** reminds us that **Cray Research Inc's** T3D massively-parallel can actually accommodate up to 2,048 Alpha RISCs (UX No 563).

Geez, McNealy is having a good week. A baby, an Ultra and a all time stock high. **Sun Microsystems Inc** was hitting 85 7/8 as we went to press. It's all this Java and Internet stuff.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

# unigram·x

The weekly information newsletter for the UNIX™ community worldwide

London, November 20-24 1995

Number 565

## **X/OPEN AND OSF WORKING TOWARDS SINGLE-IMAGE ORGANISATION**

X/Open Co Ltd and the Open Software Foundation have fiddled with the notion of getting hitched - but not wed - ever since OSF re-invented itself a couple of years ago. Vendors and users alike saw the need to rationalise and eliminate duplicated - and costly - processes. Now interim OSF chief Jim Bell (the on-loan Hewlett-Packard Co director of open systems alliances who also sits on X/Open's board) says the plan is to bring the organisations together as if they were two sister divisions of a virtual corporation, appearing seamless to an outsider. Although both organisations publicly deny any decision has been taken, insiders we spoke to say a plan, including the creation of a single board to oversee the activities of both organisations, has been tabled. Who'd get to run the show isn't known. Although Bell doesn't see it quite this way, the same insiders say David Tory's resignation from OSF has created the opportunity to move this process along. Tory's departure of course was reportedly all tied up with those speculative ideas about forming a SUPERconsortium (UX No 547). Following the staging of a joint Open Systems pavilion at next February's UniForum, OSF and X/Open have scheduled meetings in San Francisco in March, where members of their respective user organisations will examine how to establish a single user requirement process and representative body. Paving the way, X/Open chief Geoff Morris will be explaining X/Open's role to OSF staff at a meeting in Cambridge, Massachusetts, on December 8. And last week, OSF's Architecture Planning Council voted to adopt the X/Open standards framework as its reference model.

## **IBM DISSOLVES HESTER'S TECHNOLOGY DIVISION**

One-time IBM Corp golden boy Phil Hester appears to be in the dog house. His Systems Technology and Architecture Division (STAD), charged with developing common core hardware technologies and setting architectural standards for all the company's computer divisions above PCs has been dissolved. Tom Whiteside the VP who has the Somerset PowerPC design centre as well as Power2 follow-on work now reports to IBM Microelectronics Division (IMD) which manufactures PowerPC, DRAMS and other chip technologies, instead of Hester. Hester also reports to IMD, now as head of a newly-created Integrated Product Solutions Group whose role in life even insiders can't figure out. Specifically he is responsible "providing integrated product solutions to selected customers in focused market segments." That apparently includes system design, CPU technology, hardware components and software. The small team is based in Austin, Texas. The official line is that STAD's been dissolved because it has met its goals: establish common server technology for use in the RS/6000 and AS/400 lines and eliminate redundancy. That includes common chip, memory, I/O and power/cooling technologies for low-end, mid-range and high-performance design points. The product divisions - RS/6000, AS/400 and S/390 - regain control of all aspects of system design. Furthermore, IBM indicates that it has now identified the point at which the RS/6000 and AS/400 lines become essentially the same unit, made from identical components, differentiated by packaging and operating system.

## **IBM AND MOTOROLA POOL CHIP EXPERTISE TO EASE POWERPC DESIGN**

IBM Corp and Motorola Inc have announced that they will collaborate manufacturing processes to build future generations of PowerPC chips. The work, which will be based at IBM's Advanced Semiconductor Technology Centre in East Fishkill NY is aimed partly at easing the task of the Somerset Design Centre. IBM sources have acknowledged that in the past, the joint Somerset PowerPC design centre has been forced into compromises in order to accommodate the two company's disparate silicon technologies. A single high-density technology spanning the two companies will make the design team's efforts much easier. In addition, the companies will use the venture to pool that scarcest of resources; silicon process designers who really know what is going on at the cutting edge. The intention is to research techniques to produce CMOS technology at well below the 0.2 micron mark. Neither company is giving exact figures on how many people they will be committing to the joint venture - we've heard numbers which range up to 150 - however it seems that the total number of staff will be less than those ensconced at Somerset. The interesting question is who will be bringing what to the party - neither IBM nor Motorola are keen on comparing and contrasting their approaches. The IBMer we spoke to would only say that IBM believes itself to be the leader in high density, high-speed silicon technology (translation - 'we are giving Motorola a leg-up').

## **ICL AND UNISOFT LEAD SCO INTO THE NON-INTEL WORLD**

Santa Cruz Operation Inc's anticipating its first non-Intel Corp code in the form of Gemini-on-Sparc and Gemini-on-PowerPC ports, courtesy of ICL Plc and UniSoft Ltd respectively. Gemini is the merged offering of the next-generation OpenServer (Comet) and UnixWare (Eiger) releases. Whilst ICL's Sparc implementation of UnixWare 2.0 is almost ready to roll a PowerPC port won't see the light of day until the end of next year at the earliest. London-based UniSoft created a prototype port of a previous UnixWare release on PowerPC at Novell Inc's behest, but lack of ISV and OEM interest in a commercial product sent that effort into a holding pattern. Now UniSoft's found an unidentified PowerPC builder that wants to offer UnixWare on a 604-based SMP machine and says it'll use the prototype to kickstart a port of UnixWare 2.0.2.

## **POWERPC 620 SALVAGED, BUT IBM HAS NO PRODUCT PLANS**

Although they couldn't muster the thing in time for Comdex last week, PowerPC vendors are promising the delayed roadmap outlining the future direction for the microprocessor will materialise "within a few days." An earlier version of the roadmap - the one supposed to have been delineated in time for Halloween, plus a press release - was stopped at the 11th hour by Motorola Inc, which felt strongly that 620 development should continue. It's a toss-up which company actually saved the part however, as 620-system builder Compagnie des Machines Bull SA claims its counseling skills brought IBM Corp and Motorola to agreement. IBM, which has agreed to continue to work on 620 at Somerset, has not yet included the part in any product plans "simply because the price/performance of the 604e and 604++ exceed the present 620 implementation." It has, under disclosure, been showing customers the actual performance expectations based on simulation of the 604 follow-ons and claims these show clearly why it is moving on with the 604 chip in its 1996 product plan. "The only "weak" part is for customers who think they need 64 bit architecture in 1996," it says "and that in reality is a very small and selective industry." A glimpse of PowerPC's future caught at Comdex suggests there'll be two new versions of both the 603 and 604 in 1996 reaching 200MHz. An unidentified part is scheduled to reach 300MHz and a next-generation design is slated to debut in 1998.

## **SEQUENT NUMA DERIVED FROM DOLPHIN TECHNOLOGY**

Despite Sequent assertions that it developed its NUMA-Q backplane interconnect technology separately from Oslo, Norway-based Dolphin Interconnect Solutions, the Sequent NUMA is actually running on a Dolphin foundation. Dolphin supplied the CC-NUMA SCI interconnect hardware and software, but Sequent added software on top to optimize it for Sequent systems, supposedly providing the grounds for its claims that it's developed its own NUMA. Dolphin president Martin Albert said that Sequent has been reluctant to disclose that Dolphin is behind its NUMA-connected boards - in fact, has disparaged Dolphin in public (UX 560) - because it wants the credit for the technology. As for Casey Powell's claims that his NUMA outclasses the vanilla version that Data General is using, Albert says that while the added software leverages the SCI interconnect's capabilities, it makes Sequent's NUMA proprietary, and Dolphin intended for it to remain open. Further, the Sequent market for NUMA might dry up if no one else besides Sequent customers can use the technology.

## DEC'S SECURE INTERNET ROUTE

Tunneling - transporting data from one point to another encapsulated in wrapper packets - is a networking technique that's been around for some years. Claiming to have its neck ahead of the pack, Digital Equipment Corp says its Internet Tunnel has extended this capability to provide ~~encryption and authentication technologies for the Internet enabling corporate data to be transmitted securely over the net (UX No 562).~~ Digital Internet Tunnel uses a regular Internet Protocol (IP) jacket, encrypted and encapsulated inside a TCP/IP packet. The source and destination IP applications work as normal, but data on the network between the two tunnel servers appears scrambled. When a client wants to initiate a connection with an Internet Group Tunnel server, a connection request is sent over the network. The connection request message contains an identification message that is encrypted by the client with the server's public key, and then decrypted by the server with its own private key. The server's database contains a list of clients that are authorised to establish tunnels. If and when the request has been granted, the tunnel server sends a response encrypted using the client's public key, which is then decrypted by the client using its private key. After the authentication session, the two parties exchange portions of a session key, which is then combined to form a secret session key. DEC uses the encryption technology, devised by Rivest, Shamir and Adleman, known as RSA. Versions for the US and Canada use a 128-bit RC4 key, international versions (because of US government restrictions) a 40-bit version only. The session key is changed periodically to enhance security. The tunnel comes in two flavours, the Group tunnel and the Personal tunnel. The Group tunnel software runs on Digital Unix, with a SLIP (Serial Line Internet Protocol), PPP (Point to Point protocol), Ethernet or FDDI (Fibre distributed data interface) connection. It manages the construction and operation of tunnels from other tunnel servers. Performance is based on system configuration and end-to-end network throughput; DEC claims to support up to 512 tunnel connections. The authentication key generation and management software is included with the Tunnel product. Personal Tunnel software installed on a PC must have Windows 95 TCP/IP software active, connected to a network with connectivity and using a valid IP address for the local subnet. Personal Tunnel includes a Win32 Windows-based application to enable the request, operation and management of an encrypted tunnel. The Internet Tunnel is meant to complement firewall products, and unlike other tunnel products is said to be firewall-independent. DEC reckons its tunneling technology differs from router and firewall vendors because it offers connections from home or mobiles to the corporate network, whereas routers only provide a single private data circuit and do not support end to end or trans-Internet privacy. Firewall tunneling products require the use of their tunnels at both ends, since interoperability standards don't exist, says the company. DEC says its approach also wins out over Netscape's SSL (Secure Socket layer) protocol, which also uses RSA encryption, because its used at a different level of the IP stack. SSL encrypts information for applications, while tunnels establish a link for all connections between two networks. With Netscape applications the need to encrypt a specific session, such as Web browsers, Telnet or FTP must be modified to enable the request for an encrypted link. In contrast, Digital Internet tunnel applications are not modified, it says, and all the traffic between the tunnels is encrypted. The international version is due next month. Prices start at \$10,000 on Digital Unix and comes with DEC's own Firewall Unix, \$3,600 on PCs.

## ST PAUL SOFTWARE BUYS EDI FOR ENHANCEMENTS

St Paul Software, St. Paul, Minnesota, has acquired EDI Solutions, Bloomington, Minnesota, a subsidiary of Maersk Data USA Inc. St. Paul makes a suite of high-capacity electronic data interchange translation and management tools that run on most flavours of Unix. St. Paul Software bought EDI to merge some of the company's technology and communications tools into its own offerings. St Paul Software's suite, which goes by the name spEDI\*Eclipse, is presently in alpha release and will debut in April 1996. It consists of spEDI\*tran, which converts EDI documents into users' existing applications, and converts outbound application data into EDI-formatted data; spEDI\*map, a GUI mapping tool that creates maps for converting data from one format to another; spEDI\*exec, which enables control of the scheduled and event-driven flow of documents in multi-application environments; spEDI\*stat, which maintains a database of processes, documents and files; spEDI\*delivery, which configures and monitors email over an enterprise; and spEDI\*fax for connecting to non-EDI systems. These tools cost from \$2,000 to \$100,000 depending on the configuration.

## I-KINETICS READIES CORBA/OLE DATABASE ACCESS TOOL USING ORBIX

Burlington, Massachusetts-based object component house I-Kinetics Inc will send its Corba/OLE Unix database access mechanism out to a two-month beta release by the end of the month. The Database Component ~~supports Oracle and Sybase access from Corba and OLE clients using Iona~~ Technologies Ltd's Orbix object request broker (ORB), with Informix and CA-Ingres implementations to follow. It has SunSoft Inc NEO and DEC ObjectBroker ORB versions in the pipe. The component is said to deliver Unix databases as OLE Automation Servers on Windows clients or C++ objects on Unix - Orbix eliminates the need for database-specific middle-ware and drivers. I-Kinetics says Database Component and the other modules it is planning will allow users to buy end-to-end solutions rather than building them from scratch. A Database Component back-end sits on the Unix server where the relational database is hosted and integrates with Orbix. It's priced at from \$2,000. The Unix/Windows front-end is \$300. It'll demo the stuff at the forthcoming DB/Expo 95 show in New York. Other components due include the delayed ObjectPump - now expected in the first quarter - which puts an object wrapper around non-distributed code (such as a Cobol application) so that it can be accessed by Database and other components (UX No 524). Development of ObjectPump is being funded by a US government grant to the ComponentWare Consortium of which I-Kinetics is a founder member. As the consortium didn't get going until last June, some months later than originally planned, ObjectPump was pushed back until the government money began to flow. The consortium's goal is to package data and applications as standard, reusable software components using Corba, OLE and its member's technology. Siemens AG is a recent addition to the consortium's ranks. I-Kinetics also plans what it calls a virtual application warehouse which will store objects as business components which can be shared as OCXs.

## RED BRICK TOUTS BIT-MAPPED INDEXING IN WAREHOUSE 4.0

Claiming to be first out with much-anticipated bit-map indexing, Red Brick Systems Inc has integrated a TargetIndex bit-mapping mechanism with StarIndex analysis technology in a new 4.0 release of its Warehouse relational database software. Red Brick says it'll allow users to analyse identify trends and patterns in their businesses in detail not previously available. TargetIndex exploits data indexing subtleties within bit mapping technology to retrieve data. It performs straight bit-mapping for low-selectivity indexing, clustered bit-mapping for medium-selectivity indexing, and b-tree mapping for high-selectivity indexing. StarIndex improves transaction processing performance by parceling data into subsets for easy access and analysis against past patterns and attributes. Los Gatos, California-based Red Brick says it's ahead of Oracle and Sybase bit-mapped indexing plans and claims they'll offer none of the mixed bit-map and b-tree indexing it has. It describes Sybase's incremental indexing as slow and Oracle's as poor. Version 4.0 is claimed to support terabyte data stores, plus on-line and near-line optical disk storage which stores older and less frequently accessed data, freeing up space for newer information. Load processing upgrades include a new algorithm that can accept or reject logic during data loading, time formatting capabilities, and accommodation of a broader range of data. Red Brick says Warehouse is used by manufacturing, telecommunications, retail, financial, distribution, and healthcare industries and government to forecast, target and analyse logistics and distribution, consumer trends, rates and usage, budgets and sales. Red Brick Warehouse 4.0 ships from December 4th at from \$37,500 to \$600,000. Red Brick is aiming for an IPO next year.

## SCO REVS UNIX EMULATOR FOR WINDOWS 95, BEGINS ADVANCED SERVER DELIVERIES

As expected (UX No 554), Santa Cruz Operation Inc's UK-based client integration group - formed out of the IXI and VisionWare companies - has upgraded its PC-Connect Unix emulator to support Windows 95 and renamed the thing SCO TermVision. The software allows Windows 3.1, Windows 95 and Windows NT clients to access character-based Unix applications, files, directories and services. The company's also offering a new remote systems administration and management tool which runs in conjunction with TermVision, called SCO SuperVision. Versions of the tool for the SCO XVision PC X Windows server and SCO SQL-Retriever database tool will follow. No prices. From next month, SCO's will at last begin deliveries of the AT&T GIS-developed Advanced LAN Server for Unix (nee Pegasus) on OpenServer. It's the functional equivalent of putting Windows NT Advanced Server on SCO's Unix, providing users with access to Microsoft networks and services. A five-user license for SCO Advanced server is priced at from \$1,000.



### ARIES READIES MARIXX US ULTRA 1 CLONES

Sparc-compatible builder Aries Research Inc, Fremont, California, says it'll have clones of Sun Microsystems Inc's Ultra 1 workstation and UltraServer 1 lines in the shoot by the middle of January. There will be no technological differences between what it's calling the Marixx US line and the Sun boxes initially, though they will be offered in other packaging arrangements - tower configurations for instance - and later revisions may be tailored for particular markets. It expects to continue to support its SparcStation 20-compatibles for up to two years. This time around the cloners will have access to the technology from which Sun will carve its own high-end commercial server line (the SparcServer 1000 and SparcCenter 2000's Xerox Corp-derived XDBus hasn't been made available to the compatible houses), though Aries says it hasn't the resources to track Sun's high-end server offerings. Aries says 50% of its 4,000 installs are in the US, 40% in the Pacific Rim and 10% is Europe and elsewhere. It expects to scale-up its European reseller channels to deliver Marixx US units over the coming year. Aries reckons there's room for all of the Sun-compatible houses in the market under Sun's "new willingness to make it [UltraSparc] an open environment," but expects industry forces to reduce the headcount by at least one over the next year or so.

### OPENDOC 1.0 RELEASED FOR MACS AS IBM TAKES ON WINDOWS VERSION

There was good news and bad news for fans of document-centric application development last week. On the positive side Apple Computer Inc released the finished version 1.0 release of OpenDoc for the Macintosh and in an effort to build bridges with developers, put the whole package up on the World Wide Web ahead of its release on CD-ROM. The company also released a list of 300 developers said to be committed to building component-based software. Some, like Claris, are just building 'container applications' - conventional applications that can have OpenDoc objects dragged into them - adding functionality. The majority, though are going to be developing true object components. The problem is that to be really successful, OpenDoc needs to garner cross platform support - and that support is slow in coming. IBM Corp has already announced that it will be taking over development of the Windows95 and Windows NT versions of OpenDOC from WordPerfect Corp. Judging from the schedule that IBM has outlined, WordPerfect must have had its corporate mind on other things since it was taken over by Novell. A beta release of the developer's tools are not expected until the second quarter of 1996, with a final version not expected until the third quarter of 1996. IBM says the early release code of the OpenDoc for OS/2 tool kit has gone out to over 20,000 OS/2 developers with more than 50 ISVs committed to developing components. The company says that the finished OS/2 version will ship this December and that the runtime will be fully integrated into Warp's next release - due in the middle of next year. A pre-release version of the AIX developer's release will appear on the November AIX developer's CD. Apple's main Web site can be found at [www.apple.com](http://www.apple.com)

### STARLIGHT PORTS VIDEO NETWORKING SOFTWARE TO HP-UX

Starlight Networks Inc, Mountain View, California, has ported its NetWare-based StarWorks digital video networking software to HP-UX. Hewlett-Packard Co will bundle Starlight's software with all of its systems. Starlight has also developed a new version of its StarWare NetWare loadable module for Novell Networks, StarWare 2.0. StarWare 2.0 costs from \$5,000 for ten users to \$35,000 for 100. It ships in December. A media server preconfigured with StarWare on HP's NetServer supporting 50 concurrent users and storing 20 hours of MPEG-1 video costs \$28,000. StarWare 2.0 which supports the same clients and networking middleware as StarWorks, will enable users to start on StarWare on the NetServer and scale up to StarWorks for HP-UX. It will be available in 1996. HP and Starlight will also develop a Unix-based client that formats video signals for screens. The two also plan to integrate Starlight's video software onto other HP products, and to develop enterprise multimedia application products in performance support, video training and information-on-demand. StarWorks was recently ported to IBM's RS/6000 (UX 558).

### CHRP SPEC PUBLISHED - AS THE POWERPC PLATFORM

*By Chris Rose*

It's here - IBM Corp, Motorola Inc and Apple Computer Inc have published the first complete version of what used to be called the Common Hardware Reference Platform, but has now been shortened to the 'PowerPC Platform'. Readers with understanding bookshops can pop down the road and order the 300 page tome, published by Morgan Kaufman. The new document is described by Todd Moore, architecture program manager with IBM's RS/6000 Division, as being much tighter than the PReP specification that it supersedes; "PReP talked much more about recommendations... which lead to confusion" The new platform replaces many of these recommendations with mandatory requirements. In addition the new document specifies a register model for the machine and specifies the way that some registers should be used. So what's new since the general architecture White Paper was published in April? Moore picks out work done on Open Firmware; a new set of 'runtime abstraction services' and support for multiboot as particularly noteworthy. The runtime abstracts define a skinny set of APIs that will help isolate the operating system from differences that manufacturers introduce into their individual implementations of the architecture. Operating systems will be able to rely on these APIs for standardised power management support, to handle the system clock, PCI configuration, L2 caching flushing, error handling and exceptions and a few other things. This is a completely new addition, not present in PReP. On the Open Firmware side, Moore says that the "bindings" have been more closely specified than previously - defining more exactly how adapters and boot devices should function. Should there be a problem using existing PCI/OpenFirmware cards in the new machines "it shouldn't be a problem" he says, though recommending that manufacturers test them out. One big change over PReP is the formalised support for booting multiple operating systems. The design team has completely rewritten the format of the data held in the machine's non-volatile RAM specifically to allow a choice of multiple operating system boot options. On the subject of how expensive the machines will be to build, Moore is adamant that the additional costs above and beyond PReP are minimal. There is the price of the mandatory ROM socket to take the Macintosh ROM, but other than that he reckons that the additional bits needed to support Mac I/O probably come to around \$10-\$12.

#### First machines

When will the first machines appear? The standard answer from the PowerPC triumvirate is the second half of 1996, however it is worth remembering that FirePower Systems has been making noises about shipping a machine within 90 days of CHRP's announcement. The company hasn't been so vocal about this time scale lately, and we couldn't reach them as we were going to press, however, if the timetable still stands, the first machine would appear on the 11th of January. Make a note in your diary. Another company that should prove quick off the mark is Mac OS licensee Power Computing Corp which says it has been working on a CHRP project for the last six months. Apple, IBM and Motorola have announced plans to produce PowerPC Platform-compliant systems along with Canon, DayStar Digital, FirePower Systems, IPC Technologies, Pioneer, PowerComputing, Umax and Zenith Data Systems. Apple, IBM and Motorola are developing a certification process for PowerPC Platform-compliant systems.

### BENTLEY RETOOLS, INTEGRATES UNIX MECHANICAL DESIGN APPS

Bentley Systems Inc, Exton, Pennsylvania, is offering a bunch of desktop mechanical design automation packages for use with its MicroStation Modeler II, including Cosmos/Designer II solid modeling and analysis system from Structural Research & Analysis Corp; Draft-Pak Mechanical dimensioning software and Draft-Pak Bill of Materials formatting software from Baystate Technologies Inc; Adams/MS Motion and Adams/MS Mechanisms kinematic motion simulator software from Mechanical Dynamics Inc; and Esprit/MS PowerFold sheetware and metal design software from DP Technology Inc. Bentley is integrating and will sell the packages (with the exception of Cosmos/Designer) for use in its MechanicalSpace design environment beginning next quarter. Cosmos will be sold by Structural Research & Analysis Corp for \$7,500. Bentley has also upgraded its MicroStation Modeler solid modeler for mechanical design to have full access to MechanicalSpace. Version II runs on Unix, NT and Windows and is priced at from \$5,370. Upgrades are from \$1,650.

## THE REASONS SO MANY PEOPLE ARE BETTING NETSCAPE REALLY IS WORTH \$100 A SHARE

by Tim Palmer

OK, so we are all agreed that the market capitalisation of Netscape Communications Corp is completely off the wall - last price we saw this week was \$101.50, at which level Netscape is valued at \$3,877m - but why does anybody think the company could possibly be worth that now (implying that it will be worth many times that in a few years' time)? The answer is that the share is the biggest gamble in the market, but the odds are not so long as to be uninteresting to the inveterate gambler. But any real gambler that bought big into the Netscape story would be going very short of Microsoft Corp shares indeed at the same time, because if the Netscape fantasy comes good, then it will be game over for Microsoft in the mass market, and later in much of the business world, while those that are betting on \$300 Internet access devices will be thoroughly vindicated.

### Song and Dance

The Netscape story, if there really is going to be one, begins with Netscape Navigator 2.0, the beta version of which just went out on the Internet. The new release is very different from the original one, the Windows to Navigator 1.0's MS-DOS - and that creates problems straight away: World Wide Web applications developed for Navigator 2 are said to look clumsy under Navigator 1 while old applications need to be completely reworked to take advantage of all the bright new things in Navigator 2. The consensus is that the advance over Navigator 1 makes the effort worthwhile, but Netscape is not going to make many friends if Navigator 3 is as different from Navigator 2 as 2 is from 1, although the addition of an application programming interface that enables the likes of Virtual Reality Modelling Language to be embedded rather like NetWare Loadable Modules makes this unlikely. But Netscape will have to settle on a stable environment and find other ways to add value. Moreover one of the most important features of Navigator 2 is not down to Netscape at all: it is inclusion of support for Sun Microsystems Inc's Java language, which as Peter Lewis of the New York Times says, "promises to enable the transformation of the World Wide Web into a dynamic interactive communications and entertainment medium, not just a collection of static electronic pages" - Navigator 2.0 is designed to make it easy to distribute Java applets, which are routines that get downloaded from a Web site to the user's computer and interact with what is on the Web server to make the information or entertainment material to sing and dance. Java applets enable animation, video and two-way information on the Web - and corporate networks, and sad to say, for IBM Corp's hopes of getting \$3,500m of value out of Notes, companies have every reason to build their internal networks on the same standards that the outside world is using - after all, most of them are going to have to develop the Web-Meister skills to present themselves to the world in their best light - why use a different - and more expensive - standard internally? (Take that smirk off your face, Jim Manzi!) But the development is tough for the 90% of people that have set up Web sites because they dread being left behind, but do not want to get involved in the hard work of thinking about how their flat and turgid information could be made appealing. They will have to make the effort, or no-one will visit their site.

### Skinny client

A second feature of Navigator 2 is support for multiple frames, so that designers can create Web pages in which moving advertisements are anchored in a fixed frame on each page, so it stays there as the user moves from page to page in search of the desired information. Has Sun stolen a march on the rest of the industry, and is the company potentially worth many billions of dollars Sun and not Netscape? Sun's interest is in selling the Internet servers, and at this stage in the game is making Java freely available in order to get the whole on-line world hooked. The beta release of Navigator 2 is free too, but is designed to self-destruct around the time the final version is ready. The key point about the Java concept is that it backs up the Larry Ellison pitch, which is that all a vast proportion of lay users wants locally is a word processor, and that anything else that is wanted just now and then could be much better run on a remote (Oracle, naturally) server, which would download to the simple personal computer or Internet terminal the skinny client end needed to run the application, with no need for the mass or morass of local code that makes up Windows95. And instead of selling their applications, software developers - using Java or similar languages - would hang on to them and simply charge a fee every time they were used. A virtuous consequence ought to be that the most useful and best-written applications would get the most use and generate the most revenue, and gone would be the era of people taking home a new application and after a few days deciding that they heartily hated it. Another extremely beneficial potential would be that there would be room again for a hundred operating systems to bloom, and in theory the client machine could as easily be running Taos as Windows. Lewis of the Times notes that besides Java support, Navigator 2.0 adds important new features such as an electronic mail organiser, and suggests that this signals Netscape's intent to make

Navigator both the de facto operating system and office suite of cyberspace - in which case there may be some truth in the gossip linking Netscape with the Wordperfect applications that Novell Inc has put on the block. And Netscape is in the delightful position of being able to capitalise on its bloated share price and exploit it to buy almost anything to which it takes a fancy in the software field - and unlike IBM with its purchase of Lotus Development Corp, which reckoned it had to pay far more than the company was worth to buy the loyalty of key people (it has now said it intends to write off all but about \$300m of the \$3,500m it paid for Lotus), most companies are able to buy software assets at only a small premium over what would widely be regarded as fair valuation.

### Too fluid

And it is vital that the company does quickly turn the buying power of its stratospheric share price into hard - albeit software - assets, because in a world that is as fast-moving as that of the Internet, you are only as good as your last hit, and so long as there are others out there ambitious to corner the same turf that Netscape is after, Navigator - today estimated to have 70% of the Web browser market - runs the risk of turning out to be the 1-2-3 to Microsoft's Excel - or indeed the Lotus Notes to Netscape Navigator. Everything is moving far too fast and the environment is far too fluid for any hard predictions to be made - but the fact that we are heading into completely uncharted waters is exemplified by the fact that where three short months ago, the Microsoft Network was widely regarded as the big bad ogre that was going to sweep away all the other proprietary on-line services, today, people are wondering whether it will manage to get off the ground before all proprietary on-line services are seen simply as premium Internet access services - with a premium relatively few will be prepared to pay.

## AUTOSTEREO SYSTEM DELIVERS TRUE 3D WITHOUT GLASSES

True three-dimensional arcade games that don't need glasses or headsets will be in arcades in the second half of next year, according to Infinity Multimedia Inc. The Los Angeles company has agreed with the Thomson Multimedia arm of Thomson SA to support development of a new display technology from a British company, Autostereo Systems Ltd, that creates three-dimensional images and enables multiple viewers look around the sides and behind of the objects being displayed. The system uses time multiplexing of images to flash multiple pictures up on a cathode ray tube at high speed, one after the other. While one of the pictures is being displayed, one of a set of liquid crystal shutters is opened, making the picture visible to part of the display. The shutters determine where an observer can see each of the pictures. The shutters switch at a rate of around 60 times a second. So each of the observer's eyes see a series of very short images of one of the pictures. The eye assimilates these short bursts of picture to give the effect of a continuously displayed image. And since each eye sees a different picture, the observer gets a depth cue - stereo parallax. As the head is moved, another depth cue - movement parallax - is given so that combined, these give the impression that the image has real depth. The first products will be for video arcades and will be in products in the second half of next year. One of the special monitors will cost between \$2,000 and \$3,000 in the first instance, which compares to \$200 to \$300 for a current monitor. For a wide field of view display with say 10 views, the specialist picture display must have 10 times the conventional 50Hz television raster to prevent flicker. This high-speed cathode ray tube also needs phosphors with a very fast decay time: these are used in a custom CRT that has been developed by Autostereo Systems of Cambridge, an offshoot of Cambridge University. The custom shutter component is being manufactured by Thorn EMI Plc, although Autoscan said the component has completely separate from three-dimensional television work Thorn's Central Research Laboratories announced in April. The next product will be a computer monitor package consisting of plug-in board and screen. The partners are also working on an applications development environment for games developers and on a way to make standard television programmes three-dimensional ones.

## FROST AND SULLIVAN SEES SUSTAINED GROWTH FOR EUROPEAN UNIX MARKET

Unix servers and workstations are two of the strongest markets in the European information technology sector according to a series of new reports by market research analyst Frost and Sullivan. The reports, which cover the European workstation and server market, estimate the total value of Unix product shipments, including workstations and servers, amounted to \$11,640m in 1994. It expects the market to grow by a compound annual rate of 10.9% to \$19,500m by the end of 1999. The RISC/Unix workstation market - excluding defence - was worth \$3,800m (or 300,000 units) in 1994, compared with \$3,000m (206,000) in 1992. Total revenue should grow by an average of 9% annually until 1999, the report suggest; unit ships by over 18% annually. Six vendors - Digital Equipment Corp, Hewlett-Packard, IBM Corp, Intergraph Corp, Silicon Graphics Inc and Sun Microsystems Inc - have 90% of the market. The four largest - HP and Sun, followed by IBM and DEC have 85% of this business. Only Pentium Pro/P7 and NT companies can hope to challenge them, says the company. The industrial sector will continue to be the largest user of workstations. Direct sales will decline sharply, with VARs already influential, becoming increasingly powerful. OEM sales will remain a small percentage. The series of reports, including "The European Unix Markets" are priced at \$3,800.

## 64-BIT SOLARIS NOT ON RADAR SCREEN

SunSoft Inc won't have a 64-bit Solaris implementation on its radar screen until the back-end of 1997 at the earliest, according to Solaris Products Group VP Steve McKay. The company reasons that with its 64-bit UltraSparc only just out of the blocks, the platform will have to build up a head of steam before users and ISVs start to demand a 64-bit operating system in any case. McKay claims moving to 64-bits is technically straightforward, however the fact that Data General Corp's 64-bit DG-UX Unix has been blessed for use with UltraSparc from mid-1996 and that Solaris was designed from the ground-up with 32-bits in may indicate another perspective. Meantime, Solaris 2.6 will include support for file sizes larger than the 2Gb accommodated by Solaris 2.5 full Unix 95 (Spec 1170) compatibility and improved SMP performance on Intel and PowerPC. SunSoft says it's not worried about DEC stalking its SunOS base with its FreePort for Digital Unix binary translation tool (UX No 540): "Who wants an operating system with no applications?"

## DEC REVAMPS MULTIA WITH PENTIUM

As expected (UX No 552), Digital Equipment Corp is offering Pentium-based versions of its Alpha/NT-oriented Multia MI (Multia Intel) PC/terminal hybrid claiming the Intel unit will drive volume sales. DEC's now looking to pick up customers who've standardised on 16-bit applications, concentrating on integration, - the initial Alpha systems were designed as high-end clients for Unix users moving to NT. Multia doesn't easily fit into a category and DEC admits this has confused potential customers. DEC's now positioning the Multia as both an enterprise client for migrating to NT from Unix or VMS and as a system which can access legacy, Unix and PC applications. Components and Peripherals UK marketing manager Malcolm Lees claims DEC has sold "over 10,000" Multias in Europe, and says he'll be disappointed if it does not double that figure in the next year. Powered by a 100MHz Pentium, the Multia MI boxes come with custom management software on top of NT 3.5, including Multia Desktop service and a configuration service for managing distributed desktops. The company has no plans for a Unix version of the machine. The Pentium machines come with from 16Mb RAM - the Alpha versions started at 24Mb - expandable to 128Mb, 1Gb disk, the Kea! VT340 terminal emulator, Netscape Navigator and Multia Application Manager. There's an optional PCI slot, floppy drive, Ethernet, SCSI II, 16-bit audio, graphics accelerator and PCMIA slots. Prices start at \$3,000.

## PRISM TOO ADD AT LEAST THREE NEW MODULES IN 1996 - PLANS IPO

Cupertino, California, Prism Solutions Inc says it'll be offering three new modules by the third or fourth quarter of next year, including Operation Manager, a set of system administration tools for the data warehousing environment; Privacy Administration Manager, which restricts access to meta-data, plus a Transport Manager. Prism has established a European office in Reading from where it'll service recent wins, including AGIP, the Bank of Italy and SVB Bank in Holland. The company expects to unveil IPO soon, and claims it'll double 1994's \$9m revenues this year. It has 150 employees and claims 107 customers.

## RED BRICK OFFERS WAREHOUSING TEMPLATES

Red Brick Systems Inc, Los Gatos, California, is offering query processing templates for data warehouse users it says will enable IT managers to develop, test, and deploy pilot data warehouse applications. The templates are designed for the retail, telecommunications, financial services and healthcare industries. They are compatible with Oracle, Informix, DB2, and Sybase, according to Ken Nicolson, director of marketing. The templates enable potential database users to target data warehouse data they might want access to and plan out warehouse models for a full system before actually setting up the system. Template components include a set of sample business questions, schema design, SQL statements for sample business questions, logical/physical data models, and entity/attribute description documentation. Users can identify source data to populate the database, install files onto a Red Brick warehouse server, create an empty data warehouse and use an entry tool to load data and use the warehouse to answer sample business questions. The templates are available as part of a pilot data warehouse programme and are not sold separately, Nicolson said. Red Brick runs on IBM, HP, Sun, Unisys, Sequent, AT&T and DEC Unix platforms.

## INFORMIX GETS WIRELESS ACCESS, TAKES A BITE OF MOBILEWARE

Mobile networking software maker MobileWare Corp, Dallas, Texas, will integrate its remote wireless access software with Informix Software Inc's relational database, and will OEM the integrated product. This will enable Informix users to remotely access vertical client/server applications connect with the database, according to a MobileWare spokeswoman. MobileWare version 2.5 software enables mobile workers to access Informix via LAN-based applications through a wireless communication connection. Informix, Menlo Park, California, will license MobileWare client software for integration with its database products, and will make an undisclosed equity investment in MobileWare. MobileWare software will be integrated into Informix application development environment as a mobile toolkit for application developers, system integrators, resellers and MIS organisations. Informix said it will ship the first release of its mobile product incorporating the MobileWare technology in the first half of 1996. MobileWare's agent technology is extensible and allows OEM partners to add an agent to its Windows NT-based server so that users can access Unix and other operating systems. MobileWare plans to upgrade its 2.5 software to 3.0 in early December, according to a spokeswoman. Support will be added for a Windows 95 client and Microsoft Mail. Priced separately, MobileWare 2.5 costs \$1,000 for a server and five users until the end of the year, and will cost \$1,400 afterward.

## DAZEL ENHANCES MAINFRAME AND PRINTING SUPPORT FOR UNIX

Dazel Corp, Austin, Texas, has released version 2.4 of its Dazel Output Management System, and version 1.2 of the Dazel Express client. Dazel Output Server runs on SunOS, Solaris, HP-UX, and AIX. It will be ported to AT&T GIS in early 1996. The Output Management System is comprised of the Output Server, which serves as the Unix-based core; the Dazel Express, which provides client access to the server; Dazel Gateway for mainframe, NetWare and VAX; and the Dazel SDK. Version 2.4 now has support for networked and non networked printers through mainframes, NetWare, and PCs. It now also supports output to CD-ROM and file servers, and has a new GUI and queue management. It has a new Output Server 2.4 which has an lpr out facility for printing to networked and non-networked printers that are locally attached to Unix, NetWare, mainframe and PCs, whether or not Dazel is installed on the client system. The 2.4 release also has file transfer protocols so files may be ported to local and remote hosts and printers. It also has parallel port connectivity support and digital paging. Release 2.4 also has a new File System that enables files to be output to CD-ROM or magnetic tape, or transferred to a file server for storage. A new administrator GUI has job, queue and logical destination management using drag-and-drop. Dazel Express 1.2 also has a new GUI which enables job status updates and specification of job attributes such as delivery times, print formats, and document destinations. Express Client runs on Windows. Dazel Output Server costs \$420 per client. Siemens Nixdorf Printing Systems, Boca Raton, Florida, will sell the Dazel Output Management System to customers in the manufacturing, transportation, insurance, utilities, direct mail, finance, banking and telecommunications industries.

### ELLISON DESCRIBES HIS \$500 INTERNET ACCESS TERMINAL

Oracle Corp chairman Larry Ellison has given more details of his \$500 Internet access terminals, and it looks as if the thing will be built around the StrongARM high-speed variant Advanced RISC Machines Ltd's ARM RISC, which is being developed by Digital Equipment Corp in part to put more work into its Digital Semiconductor chip plant in Hudson, Massachusetts. Ellison is talking of a processor running at 220MHz, and that is the sort of speed the StrongARM will do. Ellison says his machine will run an operating system Oracle is developing - perhaps derived from the Newton operating system - that would be licensed for about \$15 per computer and provide an alternative to Microsoft Corp's Windows95 with its wholesale cost of \$35 per unit. The computer will include the 220MHz processor, keyboard and mouse, monitor, 4Mb memory, 4Mb of Flash memory and a network interface board; he said the devices could be built for \$500, but did not specify a retail price or explain how they would be distributed. Oracle is building a prototype of the device and will demonstrate it publicly in February, he said, adding that the things will be available "in quantity" by the summer of 1996, built by a variety of North American and Asian manufacturers. Operating systems, applications and information would be updated automatically as new versions become available. He insists that it will be "dramatically easier to use" and have capabilities beyond today's personal computers, such as the capability to handle multiple streams of video.

### IBM's NETWORK COMPUTER

Giving Monday's keynote speech at Comdex/Fall, IBM Corp chairman Louis Gerstner brought the audience to life by revealing that IBM has been working on a low-cost communicating computer. The machine will not have as much storage capability as a personal computer but will have a fast communications connection so that the local part of applications can be downloaded when needed from the Internet and electronic networks - and IBM plans to launch it early next year. The audience quickly started imagining a hot little embedded PowerPC-based terminal, perhaps diskless but with lots of memory, running a skinny little executive with all the necessary communications functions. However, it seems the machine would lack a floppy disk drive, have a smaller hard disk than current models, and couldn't be upgraded like today's machines. And while the price hasn't been set IBM said that it would be much less than \$2,000, but not as cheap as \$500, so that it will neatly fall between two stools. The Inter-Personal Computer, as Gerstner called it, will probably contain an iAPX-86-compatible CPU and will be able to run Windows - and typical users would be banks and airlines, which don't need "very high-powered personal computers to do rudimentary functions" such as reservations or checking bank statements.

### IBM SPONSORS CYBERSOURCE'S OBJECT MARKET ON THE INTERNET

One concept that IBM Corp is pioneering and at first blush looks as if it is getting right is the object store. The company has joined forces with CyberSource Corp to unveil a Reusable Software Component Market, described as an electronic object store and available via the Internet, where vendors and object developers will be able to sell or buy components "easily, quickly and cost-effectively." But IBM is only sponsoring the service, which will be owned and operated by new Menlo Park, California-based company CyberSource, which specialises in distribution of software over the Internet. Using any Web browser, users will be able to access a multi-vendor listing of components, launch keyword or category searches and place orders with a credit card or corporate account number, before downloading the desired object or objects. Object vendors pay \$99 per part to display their object component in the on-line catalogue. Those interested can access the service at <http://components.software.net> immediately. There are presently only two objects up.

### SUN "SIGNS TOSHIBA TO DO INTERNET TERMINAL, DOES SKINNY EXECUTIVE"

Sun Microsystems Inc has signed up Toshiba Corp, one of its system resellers in Japan, to build its forthcoming low-cost Internet access terminal, *US PC Week* reports, saying Toshiba America Information Systems Inc confirmed the development. The paper also reports that Sun plans to have a thin and highly portable operating system dedicated to running Java applets on anything from low-cost handheld graphical terminals to television set-top boxes. The proprietary operating system is designed to take up very little memory, but has few services.

### PEOPLESOFT USES OPEN HORIZON CONNECTION FOR DB SECURITY

PeopleSoft Inc, Pleasanton, California is integrate its client/server applications with Open Horizon Inc's Connection software to secure databases used by PeopleSoft applications. Connection includes Connection Security Module for encryption and authentication services, and Connection Directory Module for centralised naming services. These provide access to the Kerberos Security Service and the Cell Directory Service from the OSF's DCE. Connection provides plug-and-play access to heterogeneous databases, user authentication, data encryption, directory services and transaction processing monitors for two- and three-tier client/server architectures. The integration will enhance network authentication of users through Kerberos and DES encryption, and database single sign-on. Connection will be available on PeopleTools beginning with the launch of version 5.1, slated for March 1996. Additionally, PeopleSoft has released a maintenance version of PeopleTools 5.01 which uses encryption technology. It is free to PeopleSoft customers as part of their maintenance contracts and is available now. Upgrades to PeopleTools 5.1 are also free to PeopleSoft customers under maintenance.

### INTERNET CAFES VIE WITH MY WAY IN FASHIONABLE PARTS OF TOKYO

The fascination with Western popular culture, however tacky, characterised by My Way being a perennial karaoke hit in Japan and meaningless word combinations such as Luck Window on tee shirts means that the smart set among Japanese youth - even those that have never previously had any interest in computers - is queuing to log on to the Internet, and while the first cybernet cafe in Tokyo may have opened a few months after Cyberia in London's Tottenham Court Road, the things are breeding like rabbits. According to *Reuters* reporter Aya Takada, in Tokyo these venues are vying in popularity with video games arcades and karaoke parlours. "Internet is becoming the key word of the year. Lots of people are afraid that they will be left behind in the march of progress if they don't know about the Internet," says Megumi Yamasaki, a spokeswoman for Electronic Cafe International Japan Ltd, an operator of one of a dozen Internet cafes in Tokyo. Electronic Cafe International was formed by a group that previously operated Japan's most popular discotheque. It opened the first Internet cafe in June in Shibuya, the centre of fashion and culture for the young. "This cafe is designed to show the wonders of multimedia to people who do not know much about computers," Ms Yamazaki said. "We are attracting far more customers than we ever expected."

#### Donated for free

The venue is a cellar fitted out as a replica of a Stone Age residence, it costs \$20 to get in - everything is absurdly expensive in Japan and that is only a little more than the cost of a cinema ticket - and the Internet access devices are Macintoshes cunningly donated for free by Apple Computer Inc, in the firm expectation that those that get sufficiently hooked to want to surf at home will buy a Macintosh. Clientele ranges from school kids through dating couples and businessmen to retired people. "We come here to know how we can enjoy the Internet," Toshio Sasaki, a 24-year-old office worker told *Reuter*, adding, no doubt to Apple's joy that although he was keen to get to know the Internet, he had been hesitant to buy a personal computer and Internet software as he had expected it to be complicated for a beginner. "Now I've found linking up with the Internet is not as difficult as I had imagined," Sasaki said. "I want to buy a computer and try the Internet next time at home," and Internet access is now a key reason for buying a home computer. Despite the enthusiasm of the elite, the craze is very much in its infancy, and the number of active users in Japan is as yet put at only 100,000, so the untapped potential looks to be enormous.

### COMPUTER POWER SELLS MOST OF US, UK ARMS TO INTERIM

Shares of Australian software and computer services firm Computer Power Group Pty Ltd rose sharply after it announced the sale of its US and UK businesses for the equivalent of about \$71m cash. Buyer is Interim Services Inc of Fort Lauderdale, Florida. The Melbourne company wants to refocus its business on the Asia-Pacific region, but still has a small international CP Software operation. The units sold provide flexible staffing and consulting services in areas including client-server support, network integration, technical communications and systems engineering, covering the gamut from banking and energy to telecommunications and health care. The buy furthers Interim's diversification into computing begun this year: its main business is supply of temporary staff and home health care.

### DEC TAKES EDI SOFTWARE TO UNIX

Digital Equipment Corp, Maynard, Massachusetts, has released version 3.0 of its DEC/EDI software for Electronic Data Interchange business process re-engineering and business process automation. It now includes support for Digital Unix servers, as well as Alpha and VAX platforms running OpenVMS. Release 3.0 also supports application clients running in OpenVMS, HP-UX, AIX, MVS CICS, MVS-Batch and VSE-CICS. Future versions of DEC/EDI will be enhanced to run on other Unix platforms, as there has been some interest in the HP-UX and AIX versions, according to Wayne Toye, EDI marketing manager. Most of DEC's EDI customers are in the healthcare sectors, retail and wholesale consumer packaged goods industries, and with the US government and its contractors. DEC has also developed a GUI front end for DEC/EDI called CommandCenter, which enables EDI administrators to create and maintain DEC/EDI system information via configuration and monitoring functions from a Windows GUI. Among other applications, administrators can register remote and local application clients and their business applications, create and edit EDI messages and transactions, and format data sent and received. DEC/EDI costs \$9,000 to \$20,000 depending on system size and user licensing, and CommandCenter is sold separately at \$2,500.

### SYNTAX PLANS TAS 3.0; SNMP INTEGRATION HAMPERS TAMS RELEASE

Syntax Inc, Federal Way, Washington, will release version 3.0 of its Total-Net Advanced Server software early next year. TAS, presently in release 2.1, supposedly upgrades standard Unix systems into advanced servers, processing and distributing enterprise-wide information to desktop users. The new incarnation will contain full Windows 95 support, domain participation, browse master support, and distributed log in, so that TAS users can use the server to log into other systems. Other enhancements will include improved LAN and NetWare support, and Macintosh connectivity (UX No 529). TAS will include support for most Unix servers, as well as NetWare and Windows NT. It presently runs on AIX, Solaris HP-UX and Irix. SCO Unix and UnixWare support is due some time next year. TAS 3.0 will cost \$1,800 on the server, and \$40 for each client. Current TAS users may purchase an upgrade to version 3.0 at a cost of about 30% of the initial server costs, he said. Meanwhile, technical difficulties have pushed back release of TAMS, the TotalNET Administration Management Server, from October 15 to late November or early December, the official said (UX 556). Syntax is having trouble with SNMP integration, especially discovery and mapping, he admitted. TAMS will initially run on Solaris and AIX, with support for Irix and HP-UX to come next year.

### ORACLE ADDS INTERNATIONALISATION FUNCTIONS TO DEVELOPER/2000

Oracle Corp, Redwood Shores, California has added a translation management component to enable its Developer/2000 package to translate applications into Arabic, Chinese, Hebrew, Japanese, Korean, Thai, as well as any European and other Asian languages. Developer/2000 includes drag-and-drop application partitioning, object integration, and is tightly integrated with Designer/2000, Oracle's modelling tool. Oracle has also added productivity features to Developer/2000's translation component, including translation process automation, flexible client/server or standalone configuration to accommodate multiple translators for large projects, and translation memory and glossary support. Developer/2000 costs from \$4,000, and the new features are available in a free upgrade to Oracle users.

### AEON OFFERS EMBEDDED TOOLKIT FOR DIGITAL UNIX

Aeon Systems Inc, Albuquerque, New Mexico, has developed an Embedded Unix Toolkit, dubbed EUT, that automates the creation of Digital Unix configurations for embedded target applications. Developers can use EUT to modify Alpha Unix to fit on embedded targets where EUT serves as a menu from which users can pick what they need to build a Unix kernel. It has an X-Window GUI for configuring the OSF/1 Unix real-time kernel and supports files for deployment on a PCMCIA disk or Flash card. EUT automatically generates file systems and one-button build and download for system duplication. EUT includes a database of files contained in a standard Digital Unix configuration, and based on the facilities requested, it determines which files must be incorporated for certain applications. It costs from \$4,500. Additionally, Aeon recently launched Alpha Macroscopic Tool for DEC OSF/1. AMT, as it's called, logs events and does diagnostic analysis for embedded DEC OSF/1, and enables developers to view and diagnose event-driven multitasking operations.

### ICE PARALLEL SYSTEM NOW EXPECTED Q2

Privately-held MIT Lincoln Labs spin-out Integrated Computing Engines Inc, recently moved to Waltham, Massachusetts, now expects to begin deliveries of its 32- or 64-way parallel Desktop RealTime Engine in the second quarter of next year. The Engine - the size of a small briefcase - is the first implementation of ICE's MeshSP interconnect architecture developed at MIT, designed specifically to work with the 40MHz Analog Devices Inc ADSP-21060 Super Harvard Architecture Computer (Sharc) signal processor. It supports EISA/PCI Digital Unix, Windows NT and NT hosts, with Irix and MacOS support expected. ICE will target high-performance graphics, signal processing and EDA customers for the system, now in beta at AT&T Co, Boston-based Onyx Sciences Corp, MIT and others. At \$100,000 for a 64-way, 7.7GFLOPS box - or \$13 per MFLOP - ICE touts the system as a low-cost, high-performance, high-volume solution. \$50,000 will buy a 32-way system. It anticipates sales in the hundreds. ICE has already demonstrated ray-tracing and tomographic application and will have the system on show at the forthcoming Supercomputing '95 show in San Diego. As Sharc becomes more widely adopted - ICE investors include Sega Corp owner CSK and Cambridge technology Enterprises - is the company expects economies of scale to cut system cost in half within a couple of years. ICE claims four unidentified ISVs with a total of 1.5m seats porting to MeshSP. The 25-strong company will sell direct initially, but is also seeking OEMs. ICE's London office will handle European sales and a Japanese distributor has been lined up.

#### MeshSP interconnect

MeshSP, a two-dimensional, toroidal shared memory model, connects each 'slave' processor to its four nearest neighbours. Instructions are distributed to the array of slaves by a 'master' CPU - identical to each slave but with direct access to program (off-chip) memory - running ICE's Mesh/OS. In small configurations one of the slaves, each with up to 32Mb SRAM, can be provided with external memory and serve as a master and a slave. The unit's serial 80Mbps input/output module (320Mbps if the serial ports of each slave are parallelised) connects the array to a host system, currently a Digital Unix, Windows NT or OS/2 system, with support for Silicon Graphics Inc Irix and MacOS expected to follow. The host provides MeshSP access to peripherals, including console, networking and disk storage. ICE claims the SIMD (single instruction stream, multiple data streams) MeshSP will also operate in SPMS (single program, multiple data), or MIMD (multiple instruction stream, multiple data streams) modes, or in a combination of the three. The C-based programming model is converted to calls and instructions by the MeshOS. Host-based development tools include a SimSP simulator which can execute MeshSP code written in C to examine parallelising issues. SimSP is compatible with ANSI C compilers and debuggers. LibSP is a collection of MeshSP routine and services; ViewEDM is a window display system; LibSIMD is a modified ANSI C library for Sharc/SIMD; ICESuite is a GNU C compiler, linker, assembler, and IBM debugger; RulesSP are described as parallel productivity tools; and there are other C/C++ compilers and assemblers for Sharc. An ICEstart package includes PC server, MeshSP test hardware and development tools.

#### AOP DIGITIZES X-RAYS

Canon subsidiary AOP Medical has developed a system that will digitize X-rays and store them in a Sun Microsystems Inc workstation without ever needing traditional X-ray film. The images would eventually be moved to a electronic storage device and could be recalled as need, as opposed to conventional X-rays, which are stored for only seven years in huge archives. The product, dreamed up in part as yet another way for Canon to sell its laser copiers, will be hooked up to a color copier so that the patient can have an inexpensive copy of his/her charts - 13 cents for a copy rather than \$25 for film. X-rays could take place almost immediately because no time is needed to develop film, and the digitized images could be altered to emphasize soft tissue or bone. The Gardena, California company says that if the system were adopted across the country, \$835m a year could be saved.

#### CA SNAGS NEW INGRES PARTNERS

Computer Associates International Inc, Islandia, New York, has two new ISVs peddling their wares to OpenIngres database users; MTI Technology Corp, Anaheim, California, and Mosaix Technologies Ltd, Sydney, Australia. MTI is offering its relational database storage and backup software, including the Oasis robotic library management and backup software and StorageWare solid state disk and RAID products. Mosaix has development tool for creating geographic-based applications.

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**Digital Equipment Corp** has hired Ilene Lang from Lotus Development Corp to fill the new post of vice-president of the company's Connectivity Software Business Unit: she was formerly senior vice-president of the Lotus Desktop Business Group and for the past year led worldwide development and marketing of the Lotus SmartSuite product line.

**Insignia Solutions Plc**, developer of the widely-used SoftWindows emulator, got its initial public offer of 3.6m American Depositary Shares away at \$12 a share, at the top end of the \$10 to \$12 target range.

**Novell Inc**, which is hotly denying gossip that the whole company is for sale, plans to reduce its workforce by about 420 people in the business applications division and related support functions worldwide ahead of what used to be most of Wordperfect Corp, to make it more marketable. It expects to complete the sale by the end of its first fiscal quarter on January 27.

**Amdahl Corp's** stake in DMR Group Inc has now risen above 90% and it expects to complete the acquisition by month's end: it has had to pay more than it expected because of the IBM Canada Ltd intervention.

Cybernauts disparagingly call it snail mail, so how come that according to **Inteco Inc**, the only on-line shopping purveyor to generate significant revenue in the Florida multimedia trials turned out to be the US Postal Service - selling humble US postage stamps.

Pope John Paul II is ready to take to cyberspace: the Vatican says that it expects to open a site on the World Wide Web in a few months.

The New York Public Library, housed in the grandest building on Fifth Avenue, is now on the Internet - and as well as being able to find books and documents and scan databases for articles - the library has over 50m items, anyone that wanders in off the Manhattan streets can use the system to get onto the Internet; the \$9.5m LEO Library Entrance On-line system, which also salutes the stone lions on either side of the steps up to the building, is also accessible from anywhere in the world at <http://www.nypl.org>.

**Network Computing Devices Inc** president and CEO of 15 months Ed Marinaro has resigned and becomes vice-chairman. It's apparently seeking a replacement with software experience

**Sun Microsystems Inc's** Ultra Port Architecture provides 1.3Gbps bandwidth shared between CPU, I/O, memory and graphics (UX No 564)

We hear *Electronic News* is on the block again. It may also put a few reporters on the street as the paper trims staff to make it more attractive to potential buyers, the most likely of which is reportedly Cahners.

**Data General** is reportedly negotiating with other brand name vendors to license its upcoming NUMA stuff.

**Santa Cruz Operation Inc's** turned-in fourth quarter revenues of \$47.15m last week, down from \$50.56m in the same period last year. Not counting a \$4m charge for its recent restructuring when it laid off 8% of its staff, net profits were \$279,000 - a \$2.58m loss including the charge - against profits of \$5.88m last time. Revenue for the 12 months to September 30 was \$199.32m, up from \$184.06m in 1994. Net profit for the year excluding non-recurring charges was down to \$10.01m from \$14.24m in 1994. Full year results, including the non-recurring charges amounted to a net loss of \$6.10m.

**SunSoft Inc** chief Janpieter Scheerder personally handed RS/6000 boss Irving Wladawsky-Berger the golden CD of the Solaris beta copy for PowerPC earlier this month. Irving assured Scheerder that it was the intention of the RS/6000 division to continue to offer Solaris as an alternative operating system on the RS/6000 in 1996.

**Cap Gemini America** will resell Unison Software Inc's Maestro and Load Balancer workload management software, and RoadRunner backup software products. Maestro job scheduling and workload management software runs on Unix and NT. LoadBalancer distributes workloads across Unix networks, and RoadRunner provides high-speed backup and recovery for distributed systems (UX 556).

**Imperial Software Technology Ltd** has a new version of its X-Designer 4.0 GUI-builder for DEC Alphas running OpenVMS, allowing OpenVMS users to create interfaces for Windows and Unix applications from a single design. Prices go from \$3,500.

**Ing C Olivetti & C SpA** says the discussions it has had with Santa Cruz Operation about the future of UnixWare 2 and SCO's plans for integration with OpenServer 5.0 have reached a satisfactory conclusion (UX No 558). An Olivetti spokesperson said the existing agreements it has with Novell Inc for UnixWare 2 and SCO for Open Sever 5.0 remain in place and it'll continue to migrate its Unix SVR4-based systems to UnixWare, and then the merged UnixWare/OpenServer offering.

Lars Alm, previously general manager for **IBM Corp's** Competitive Marketing Group, has been appointed general manger for AIX Systems Europe, Middle East and Africa replacing previous incumbent, Robert Youngjohns (UX No 563). Alm reports to Bill Steuk, VP product management.

The forthcoming leg of **Object Design Inc's** quest for profitability will be lead by new chairman and CEO Robert Goldman, former chairman of Trinzic Corp until its acquisition by Platinum Technologies, before that president of Trinzic forerunner Artificial Intelligence Corp and before that at Cullinet Corp. Day-to-day operations are being assumed by Justin Perreault, executive VP and COO, who joins ODI from its investor Harvard Private Capital Group. ODI is readying some new databases performance management software for release in the new year.

**Chrysalis Symbolic Design Inc's** Design Verifier 2 formal verification chip design software is up on Sun, HP and IBM workstations from \$95,000, but not on R series RISC-based machines even though Mips Technologies Inc is using the package to design new generations of its microprocessor families.

**Intergraph Corp** has revved the range of tools available for its Unix customers to integrate with and migrate to its Windows NT-based strategy. PC-NFS 2.2 for accessing Unix files from NT includes new directory and file system support plus pcnfsd printing. On Intel, Alpha, Mips and PowerPC (from next month), it costs from \$400, or \$600 bundled with version 2.1 of DiskShare the NFS server that allows Unix users to access NT file systems from Windows File Manager. Version 2.0 of the Exalt X server now supports Windows 95 at from \$350, whilst release 2.1 of the Batch Services task queuing software is from \$250.

**Sun Microsystems Inc** gets its 200MHz Ultra 2 workstation up to 332 SPECint92 and 505 SPECfp92 - versus DEC's 300MHz Alpha 21164-based 600 5/300 ZLXp-L2 at 338 SPECint92 and 503 SPECfp92 - by using 1Mb second-level cache rather than the 512Kb in lower-end Ultra 1s.

**Hewlett-Packard Co's** has plans to rev its Visualize graphics subsystems beginning with a double-buffered 48-bit offering.

**VisiCom Labs Inc**, San Diego, California, is offering a real-time graphics library it says supports embedded and real-time graphics when a full X Windows system can't be used because of memory, CPU or file I/O constraints. Prices go from \$2,000.

CTO Eric Schmidt will run **Sun Microsystems Inc's** sixth business unit, Java Products Division (or JavaSoft), until a president is recruited.

**Silicon Graphics Inc** has lifted Informix Software Inc's TPC-C high to 6,313 tpmC (\$481 per tpmC) running On-Line Dynamic Scalable Architecture 7.1 on a 16-way Challenged XL SMP server

**Sequent Computer Systems Inc** promises news of its interactive multimedia server solution which teams Intel Corp's massively parallel SPP system with its own Dynix/ptx Unix and the Oracle Media Server in a couple of weeks.

**Sun Microsystems Inc's** SunService division is opening a Solution Center in Mexico City.

200 **IBMs** in Austin lost their jobs when the Power Personal division merged with the RS/6000 division.

You can't call **IBM Corp** Big Blue any more. IBM has finally failed in its attempt to get the US Patent & Trade Mark Office to snatch the name away from Big Blue Products Inc, Northport, Long Island. IBM started to get heavy with Big Blue which had been using the name since 1984, back in 1989.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: [info@unigram.globalnews.com](mailto:info@unigram.globalnews.com)

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Registered at the Post Office as a Newspaper

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4 DEC. 1995

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The weekly information newsletter for the UNIX™ community worldwide

London, November 27-December 1 1995

Number 566

## SEQUENT AND INTEL TO SPIN OUT INTERACTIVE MULTIMEDIA CONCERN

Although Sequent Computer Systems Inc and Intel Corp are about to toss their joint interactive multimedia development into a spin-out with funding to "energise" the initiative, Sequent warns that the venture is still very much in the evaluation process (UX No 534). The market, it says, is moving much more slowly than either it or Intel anticipated, although it still expects to be in with a shout at around half of the 40-odd accounts it reckons will be shelling out for large-scale multimedia trials next year. Sequent has ported stripped-down Dynix/ptx Unix kernels on to Intel's Pentium-based scalable parallel processing (SPP) nodes running Oracle Corp Media Server. It's already got a small development unit over at Intel and says a prototype system went out to Oracle a couple of weeks ago. The spinout goes by the generic Interactive Multimedia Server Co until the unit is given a name, probably at a meeting on Monday 27th which will establish levels of funding and focus. Having nothing big enough of its own to throw at these types of interactive multimedia trials right now, Sequent sees the combine as an ideal turnkey solution for more than just video-on-demand. Its SMP Symmetrys - already being deployed with Media Server in some smaller trials - will be used for back-end databases ordering and invoicing in conjunction with SPPs.

## IBM SAYS ITS SP PARALLEL USERS DON'T WANT LOCUS-STYLE SINGLE SYSTEM IMAGE

IBM Corp admits it does not subscribe to the concept of a single system image (SSI) for its RS/6000 SP parallel systems *a la* the Locus Computing Corp definition (UX Nos 537, 559), but that's precisely because its 900-odd SP customers have indicated they don't want a universal paradigm enforced on them, the company says. SP software development manager Dave Turek believes conventional SSI approaches tend to rob developers of the ability to provide certain types of functionality. In this light, IBM's work to globalise specific SP resources individually is more consistent with a point product-type strategy. Under the Locus model, most data and processing resources residing on networked nodes (claimed to be about 90% in the case of Locus' own Transparent Network Computing (TNC) technology) is presented to users as a single system. Interestingly, IBM once had a partnership with Locus for precisely this technology, but Turek says that after much discussion IBM decided the pursuit of a Locus-like single system image was ill-advised. So, where TNC creates single process space, Turek says that as far as IBM's own work is concerned, a unified process space and single IP address approach was, "never there, never contemplated, never begun and never stopped." He says unified process space models are expensive and difficult to implement. Despite supposed differences in approach, both models appear to share common goals in the areas of system and application management. Systems management from a single image point of view is certainly key to IBM's effort to capture the LAN consolidation (or server consolidation) market with SP, indeed IBM will demonstrate some new single image software (the next PSSP, parallel system support program) at Supercomputing '95 in San Diego. PSSP provides extensions to AIX for installing, operating, and maintaining SP systems from a single point - the control workstation. Its multiple components are integrated into a single software program. IBM will have its other 1995 SP software releases on show too, including node isolation - insuring events which occur specific to a node do not propagate to any other nodes or elements of the network - plus partitioning and grouping techniques that enable users to achieve "very granular" system and applications management. Presently, IBM's HACMP high-availability clustering software only works across up to eight nodes, though that's expected to change as other availability software is introduced for addressing events that could occur on the system and the responses to them. Turek says the next slew of administration/management/availability software for the SP line will be characterised by ease of use and use of object techniques. He doesn't expect there to be profound changes to any of the established single image models but says increased scalability will challenge vendors to figure out how to present and administer system information from large-scale installations. *Locus TNC (see page 3)*

## ICL LOSES CEO TO BRITISH TELECOM

As we went to press ICL Plc announced that its Chairman and CEO Peter Bonfield, will be leaving at the end of the year to take up the CEO job at British Telecommunications Plc with Keith Todd, currently Finance and Business Strategy Director at ICL given the job of filling his shoes. The company says the announcement is not a precursor to board reshuffles and said that Bonfield had left with the "full agreement of the ICL Plc Board. Fujitsu Ltd, ICL's major shareholder and Northern Telecom." Bonfield, who will remain on the ICL board as Deputy Chairman, joined the Board of ICL in 1981 and became CEO in 1985.

## X/OPEN-OSF: MORE THAN OPEN SYSTEMS? ALPHABET SOUP ?

X/Open Co Ltd chief Geoff Morris dropped in on us last week to put his spin on how the UK-based standards group will finally hitch itself with the Open Software Foundation research and development organisation. Details of the merger are expected to be complete by the time the organisations' respective user organs meet next March (UX No 565). Morris says his visit to OSF in December will start the ball rolling, but claims there's already firm agreement that a future consortia will need to be more than an "alphabet soup of open systems." It's premised upon the need to speed up the time between technological requirements and branding, Morris says, however users' and vendors' frustration at having to cough up membership dues for a bunch of different committees when what they want is integrated, standards-based solutions has been apparent for some time. Previous attempts to forge an X/Open-OSF supergroup have come to naught; indeed the recently-touted notion of a 'superconsortium' to plug some of the industry's gaping money pits was publicly poooh-pooohed by both (UX No 547). Although both X/Open and OSF are run as non-profit organisations, the UK tax system prevents X/Open being registered as a non-profit company; its 'dividends', as such, are ploughed back into the group. Some \$6m of X/Open's \$15m revenue last year was derived from vendors' fees. User and vendor fees make up most of OSF's \$40m-odd revenue.

## KALEIDA RUNS OUT OF SCOPE

Kaleida Labs Inc is to be folded into Apple Computer Inc. IBM Corp told *Reuters* that the joint venture's core technologies, including the ScriptX multimedia programming language, will be transferred to a development team within Apple and based at Apple headquarters in Cupertino, California, and will no longer operate as an independent firm. The unit was formed in 1991 as part of the alliance between Apple and IBM that also led to the creation of PowerPC and Taligent. ScriptX was being designed to allow PCs, video game machines and other devices to share the same multimedia programs, but appeared to conflict with other products and strategies being devised by its parents. Based on his experience running the unit, Kaleida boss Michael Braun concludes that corporate joint ventures don't work; "companies should have a counselling session with me if they're thinking of doing one," he told the *Wall Street Journal*. "I couldn't charge enough hours to say you're stupid if you try to do one," he added.

### FOUR SEASONS OFFERS SUPERNOVA 5.0

Edison, New Jersey-based Four Seasons Software Inc will release version 5.0 of its SuperNova Enterprise 4GL application development system by the end of the year (UX 530). The company has added support for Linux and AS/400 and claims SuperNova allows developers to run ~~application code on different target systems without modification or recompilation~~. Originally due back in May the release was held back whilst it was fitted with a new GUI. 5.0 includes application partitioning and remote loading. Linux developer licenses ranging from \$1,000 to \$6,000. AS/400 support will provide integration with RS/6000 applications. SuperNova is available for most Unixes, Windows 3.1, NT and OpenVMS.

### UNIPLEX ENHANCES OFFICE SOFTWARE

CP Software Group's Uniplex Software Inc, San Mateo, California, has released version 8.10 of its office automation Uniplex Business Software (UX 539). Version 8.10 has been enhanced to include an object-oriented MS Windows style file manager. A new intuitive file system navigator allows users access to the file manager. Uniplex has also built two add-on products for UBS, Uniplex Document Access and Uniplex Windows Link. Document Access is a suite of document converters; WindowsLink is a terminal emulator for accessing host applications. Version 8.10 costs from \$350 to \$440 per user; upgrades are from \$150.

### SHERPA'S OO TECHNOLOGY ACCELERATES AUTOMOBILE DESIGN AT PEUGEOT CITROEN

*By Marsha Johnston*

French car manufacturer PSA Peugeot Citroen hopes return to the North American market which it gave up as a failure in 1991 by the end of this year. It anticipates a \$4,000m price tag to do so, a steep price to pay considering that in the 40-odd years PSA imported Peugeot and Citroen cars to North America, it sold a maximum of 20,000 a year in a market that shifts millions. The decision, however, is not final and will depend on whether the company believes that, this time, it can meet the needs of that demanding market, which is very different from Europe. And to help it achieve that it has installed a \$30m distributed "technical data management" system for its 3,500 design and production engineers that is expected to reduce the time to market, yet again, by a hefty 30%. The system is based on Sun Microsystems Inc Unix servers running Sherpa Corp's object-oriented product data management system, which has been laid over Oracle Corp's Oracle7 database. It replaces a five-year-old, VM mainframe-based engineering data management system from Computervision Inc. Sherpa manages descriptions of more than 500,000 technical objects from a central request database that occupies only 10Mb of the total. The rest of the 600Gb of active data, including stress and crash-simulation files, is stored in binary code in Oracle. As the traffic cop for PSA's engineers in 43 design centres spread throughout France, Sherpa's software eliminates the time-consuming conversion problem by storing object descriptions in a "neutral" format, defined by PSA. The format enables the engineers to use either Computervision's Cadds and or IBM Corp-Compagnie Marcel Dassault SA's Catia computer-aided design software to modify or create an object. Although several engineers can get concurrent read access to the same object, Sherpa allows them to modify only objects that have been released, or updated to the database, and approved. Once in production, PSA will be Sherpa's largest site worldwide, followed by Sikorsky Helicopter in the US with 600 workstations. Despite its less-than-convivial user interface, Sherpa was chosen because it "can manage all the data from our different design systems and our technology objects concept," the company says. Development of the system, which PSA conceived in October 1993, was completed at the end of last June. The team is at the pre-production stage, verifying the system's performance and functions. It is being rolled out this month and everything should function as expected by New Year's Eve. The car-maker expects the system to return its investment in 24 months. PSA's information technology department is already planning functional upgrades to the system for the near future that will give geographically distant engineers the ability to work interactively and simultaneously on the same geometric diagram. Due for trial in 1997, the second-generation system will include sound and images in the database and provide real-time views of changes to design plans. One design engineer said the time from sketch design to starting up factory production for the latest Peugeot model 506 took 208 weeks, or four and a half years, compared with five years for its predecessor. "It will be 188 weeks for the 1998 models and we want to get it down to three years."

### PLATINUM ON THE ACQUISITION TRAIL AGAIN...

With what, last time we looked, are fifteen acquisitions since August 1994, Oakbrook Terrace, Illinois based Platinum Technology Inc is at it again and this time has swallowed software change and configuration management tool outfit **Softool Corp** and object software house **Protosoft Inc**. Platinum will fold Santa Barbara, California-based Softool's change management solutions, including CCC/Harvest for application change management (UX No 529), CCC/LCM for MVS, CCC/Manager for the enterprise and QuikTrak for spreadsheets and word processing into its Application Development Software product division. Softool's solutions cover Unix, Windows, OS/2, Windows NT, MVS and VAX VMS. The deal involved Platinum exchanging \$25m of its common stock for Softool with Platinum expecting the acquisition to qualify as a tax-free reorganisation and to be accounted for as a pooling of interests. Meantime its also adding privately-owned, Houston, Texas-based Protosoft's Paradigm Plus to the same division, acquiring almost all of the assets of Protosoft for \$30m in cash, and \$10m in stock. Paradigm Plus is an engineering tool for PCs and Unix, and is presently integrated with Object Design Inc's database which it uses as a repository. Platinum will integrate Paradigm Plus with its own repository, and integrate its construction tools AionDS and ObjectPro and its three-tier testing tool Final Exam with the product.

### ...AS IT TIDIES DESKTOP

Meanwhile Platinum has upgraded its database administration and migration tool, Desktop DBA V3.3, replacing SQL syntax with point and click commands and adding support for Informix databases. Other new features include rearranged columns, script editing, remote access to files on the server and support for SQL Server V6.0 and Sybase System 11. DBA supports Oracle, DB2 for OS/2 and AIX. Prices start at \$1,000, and is up on Windows, NT this month, and most Unix systems from the end of December. Meantime Platinum has bundled four of its database and administration and application tools calling it DBA/Developer Toolkit. The DBA Developer includes SQL-Coder, a repository-based server code and object management system, SQL Spy for monitoring heterogeneous databases, SQL Commander, a database querying, editing and reporting tool and Desktop DBA. Unix versions are due next month, prices start at \$2,000. The company is also putting its AutoSys job management and scheduling software up on Siemens Nixdorf hardware platforms (UX No 543).

### SCO'S VISIONWARE ADDS FIRST WIN95 VISION PRODUCTS

VisionWare Ltd, now a part of The Santa Cruz Operation, has come out with the first of its new-generation Windows95 Windows client to Unix integration products: TermVision and SuperVision. Shipping on December 8th, they will be joined next year by the rest of the Vision product family, fully integrated versions of the current X-Vision and SQL-Retriever products. VisionWare was of course the Leeds, UK based software house that, along with fellow UK firm IXI Ltd of Cambridge, now makes up SCO's Client Integration division. TermVision is basically a terminal emulator designed for Windows95, offering transparent access to Unix character applications and file systems. It allows tasks within the Unix application to be automated through icons that can be added to the surrounding Windows tool bar. Because the emulator itself is implemented as an OLE 2 (Object Linking and Embedding) object, portions of the emulated program - such as a dynamic display of share prices for instance - can be embedded within other OLE applications. And it's possible to add a visual front-end to an emulated application by using Visual Basic, using the existing logic but updating the interface - an easy alternative to porting the application over to Windows. It's also easier, says SCO, than doing the same job in Unix-based user interface tools from the likes of Progress or Oracle. SuperVision is a tool for system administrators, offering such facilities as the remote configuration and management of desktops, file distribution and remote monitoring. All the Vision products are aimed at solutions builders rather than end-users. They are fully 32-bit, and run on NT, Windows95 and Windows 3.1 clients, and Sparc, HP, IBM and SCO Unix servers. Pricing is set by the number of connections required. UK pricing is £265 for TermVision single user. A week later, on December 15th, SCO begins the first customers shipments of its Advanced File and Print Server, which adds peer-to-peer NT networking on top of Unix systems.



### LOCUS TOUTS TNC SINGLE SYSTEM IMAGE

Locus Computing Corp's Transparent Network Computing system - now at version 2.2 - includes network processing, distributed file services and distributed communications layers. It achieves what Locus describes as a semantic transparency by using the same commands and operations on all nodes. The interfaces used to access objects are the same whether the object is remotely or locally based; a given object name used from any site in the network always results in the same object; and object names are not location dependent. Layering is achieved by adding OSF/1 AD Mach kernel-based extensions it calls VPROC to Unix kernels. The VPROC layer is middleware that sits between the physical process management layer, the systems calls interface and the network interface layer. A kernel call module interface is added to accommodate the VPROC layer. The company denies its approach limits what developers can achieve with the system. The ten-year-old TNC, used in the past by the likes of Intel Corp on its first-wave Paragon MPP system, appeared to have been one of those good ideas that never caught on; until the current (or at least anticipated) wave of distributed SMP, MPP and NUMA architectures began to form that is. Locus claims TNC is being used as the basis for a number of single-image projects on these SMP clusters and MPP solutions expected through 1996. Although it won't mention any names, Tandem Computers Inc and Siemens Nixdorf Informationssysteme AG's Pyramid Technology Corp are already known to be working with TNC (UX Nos 499, 502). Locus, recently acquired by Platinum Technology Inc (UX No 534), has 40-odd engineers working on TNC and claims single-image technology could provide up to half of its revenue by the end of next year.

### COSESSION PC-TO-UNIX SOFTWARE ON LINUX

UniPress Software Inc, Edison, New Jersey, and Triton Technologies Inc, Iselin, New Jersey, have developed a version of CoSession PC2X PC-to-Unix connectivity software for Linux. CoSession PC2X enables Unix users to remotely display and control PCs from Unix X Windows, the company says. It displays an X Window from which Linux users can remotely run PC programs, access data, print reports and observe operations. The server component of CoSession PC2X resides on PCs, and provides the full PC session to the client, which runs on Unix workstations. The PC sends DOS and Microsoft Windows video, keyboard and mouse information to the Unix workstation via Ethernet, and TCP/IP networking software provides the link. CoSession is Triton's communication and file transfer software, PC2X is UniPress' PC-on-X technology. Already available for Sun, SGI, IBM, SCO and HP Unices (UX 526), prices go from \$400 for one PC Host and one Linux client. Additional clients cost \$300 and hosts cost \$125. UniPress has also ported to Linux its Source Code Manager SCM (UX No 531), and its free single-user version SCM Lite (UX 562), a configuration management system for managing source and binary files created by multi-programmer projects. They'll be out in a couple of weeks. Meantime, UniPress has apparently decided to resell Network Computing Devices Inc's PC-Xware X Server.

### ART TECHNOLOGY GROUP LAUNCHES WWW PAGE GENERATOR FOR UNIX

Art Technology Group Inc, Boston, Massachusetts, is offering a World Wide Web page generator that will supposedly enable developers to prototype, build and manage applications and content for enterprise networks and the Internet. Dubbed Dynamo, it supports Solaris and Linux 1.2 running Netscape, Open Market, Spyglass and other NCSA Mosaic-based browsers. Irix, HP-UX and OSF/1 ports, plus SQL gateways and a C++ API are due in January. The environment includes Dynamo Engine, a server-based application with and integrated an object-oriented database, server-side Web objects, scripting environment and session tracking. Dynamo Web Objects are non-browser dependent mini-applications that will be provided free on a continual basis. The initial suite includes Discussion Threads, Dynamic Ads, Web-O-Grams, mail, Activity Monitor, People Watcher, Live Links, Annotation and Site Broadcast. New objects can be built via the Dynamo environment. Also included is Scheme-D scripting language, which can integrate scripts written in other languages such as Perl, C++ and Java. Dynamo costs from \$5,000 per license.

### AGE LOGIC GOES TO NETMANAGE

Caught in a rapidly-maturing market for PC and Macintosh X Windows servers, eleven-year-old AGE Logic Inc has escaped into the clutches of fast-growing Windows TCP/IP and Internet connectivity software supplier NetManage Inc, Cupertino, California, which has snapped-up the San Diego, California company in a share swap. AGE president Peter Shaw says the company could have survived as an independent unit but acquisition makes most sense for the future of the company, its technology and the people that did the work. Shaw says all AGE employees will be retained by NetManage. Privately-held AGE (which at one time flirted with the notion of filing for an IPO) has captured an 11% share of the PC X server market without recourse to venture funding, and expects NetManage to replace the Network Computing Devices Inc-derived PC X server it currently offers in its Chameleon suite with its newly-acquired AGE Xoftware and Pacer technologies. AGE bought Mac-to-Unix connectivity supplier Pacer Software Inc earlier this year (UX No 531). Although some of AGE's OEMs - including FTP Software, SunSoft and WRQ - overlap with NetManage suppliers, AGE believes the conflicts will be resolved without significant loss of business. NetManage has some 150-odd employees and will retain the development units it has picked up with the acquisition plus those it already has in the US and Israel.

### ORACLE SET FOR ROSY 1996, SAYS REPORT

Of the leading relational database vendors, Morgan Stanley's US Investment Research department is most optimistic about Oracle's new year prospects. Although it has suffered its own share of near-term problems just like rivals Sybase and Informix in 1995 - and each is counting on new product releases to drive 1996 sales - Oracle's scatter-gun-like array of products is more likely to assure continued success, according to Morgan Stanley. It points to planned announcements of new database server suites and vertical market solutions in the applications business later this quarter, with midrange and distributed server suites, mainframe connectivity, video and text storage, Internet access and systems management products in the pipe. Pricing will be targeted at Microsoft's Backoffice. Getting the production version of Oracle Applications 10.6 away recently was important, Morgan Stanley notes, because it adds a slew of previously unavailable internationalise functions that'll allow Oracle Europe to get more serious about applications. The 50% growth in consulting forecast for 1995 is a scaled-down figure based upon the difficulty of finding staff to expand much faster: it already has 5,300 people in consulting. 40% of its consulting business relates to applications, the remainder deals with Oracle databases and tools.

### Sybase and Informix

Sybase is also looking to new releases for inspiration, but has hitched its wagon almost exclusively to System 11, initial impact of which isn't expected until towards the middle of next year. The company's sales force will have Powersoft products to sell in the meantime, Morgan notes. The System 11 beta sites it spoke to - 80 of the 200 are end users - report a 2 to 10 times performance improvement over version 4.9 which most Sybase customers are using, though it cautions most are still working with small data sizes (200Mb). It notes also that SAP AG tested Sybase's design for row-level locking - one of the features missing from System 11 competitors are likely to concentrate on - and is reportedly pleased with the results. Sybase apparently doesn't foresee backward compatibility problems adding the mechanism and other parallelisation features. Informix, which plans to "extend the relational model" next month and add new multimedia architecture, told Morgan Stanley it expects to beat Oracle's 9,000 tpmC on DEC's Turbo Laser and points out that of the recent crop of benchmarks only its have been done with a shipping product; Sybase System 11 and Oracle 7.3 are still in beta. The company says the shake-up of its distribution model lost it market share to Oracle and Sybase but reckons the corner is turned. It's forecasting a \$100m to \$150m annual run rate for its Japanese business in a couple of years from \$45m last year and upswing in the recently soft northern European market. It did \$6m in NewEra licences last quarter - to which it'll add Java support next year - though the long-term trend it sees is for application vendors embedding tools in their products, reducing the need for independent development tools.

## EUROCHANNELS 95 DELEGATES BATTLE OVER EUROPEAN DISTRIBUTION

There was significant disagreement over how much consolidation the European distribution market will see in the next few years among participants in a EuroChannels '95 panel on "overdistribution." Unlike ~~a couple of years ago when participants believed logistics were the~~ most important competence, this year saw equal importance given to value-added services. "What's going to determine the number of channels in Europe is how many value-added resellers can play the logistics game and how many distributors who are good in logistics will be able to do value-added. The point of over-distribution will be determined from that point on," said Tom Schuster, director of distribution sales, Europe, Novell UK Ltd. Emilio Ghilardi, channel marketing manager, computer products, for Hewlett-Packard Europe, was the most stalwart defender against over-simplification of the European distribution scene. "We have 60 distributors and 60,000 resellers in Europe and, in the next few years, I expect that we will continue to have 60. I don't see it going down to 35. There are opportunities in Europe. Even the so-called 'broadliners' are organising themselves into divisions the better to address niches. For most European countries, small and medium-sized enterprises are the most important and fastest growing parts of the economy. That's why value-added resellers will be more and more important. To avoid over-distribution, the manufacturer must try to understand the distribution profile of the product, while the channel must focus first on the customer and choose the business model based on the customers and then move toward the appropriate vendors, not vice versa."

### Lots of different channels

"We believe there are going to be lots of different channels, a broader distribution, because there will be more segments of products. It's not at all clear that each product we sell can be sold by the same distributor. We believe channel management in Europe will become much more complex over the next six to seven years, despite consolidation." Chip Lacy, co-chairman and chief executive of Ingram Micro Inc, said the next few years will see a drop in the number of, for example, broad-line distributors in Germany to from around ten to four, even though he agreed with Ghilardi on "the number of micro-marketing opportunities." Concern about over-distribution in Europe was real, he insisted. "In the US, 20 vendors comprise 65% of sales and there are seven to eight viable word processors, for example. In Europe, it is easily three vendors that comprise 60% of sales and, in word processors, hardly more than one or two. It's a fundamentally narrower market, which concentrates things on a wholesale level, creating more pressure and concern about over-distribution. It's much harder, for example, to just slow-boat a poorly-performing product in Europe like we do in the States," he said. Novell's Schuster agreed. "One of our problems in Europe is that value-added resellers are too dependent on Novell. We advise our distributors not to have more than 28% of their revenues from one product or vendor because it leads to emotional dependency, which is not good for business. A distributor has to spread the risk, so as not to be affected too much by market fluctuations, technology changes or [contract] rights changes," he said. He noted that Novell looks for a distributor with an efficient telephone system; one with ramps not stairs, one that has a warehouse big enough for forklifts to operate; and one with a proactive not just reactive tele-marketing force. Without denigrating the importance of value added, Lacy said that 80% of European distributors did not have their logistics right. "Their request for higher margins is saying, 'Protect us, we're not efficient.' Most European distributors were founded as product marketers, so many of them have a vendor's, not a logistics perspective. We've seen product marketing far superior in Europe to anything in the US, but then you go into the backroom and just want to cry." - Marsha Johnston

### AXIL READIES ULTRASPARKS

Hyundai Electronic America Inc's Santa Clara, California-based Sparc-compatible builder Axil Workstations Inc, says it'll begin selling clones of Sun Microsystems Inc's Ultra 1 clones by the end of the year. Like other Sparc-builders (UX No 564), the first generation of Axil's UltraSparcs will be indistinguishable from the Sun units - except by pricing and packaging. Like it did for SuperSparc, Axil will develop a set of custom ASICs to differentiate subsequent UltraSparc products. Axil says between 15% and 20% of its units are shipped to its parent (not the 75% claimed in some places). In the US, Tech Data Corp has signed to begin peddling Axil boxes through up to 300 resellers it'll begin to recruit; some 30% of Axil's revenue is derived from US sales.

## O2 AIMS TO BE KEY US OBJECT PLAYER

Advancing in the US and Asia coupled with the fine-tuning of object technology are the strategic priorities for Versailles-based O2 Technology SA, the company told its users at its recent annual user meeting in Paris. Chief executive Francois Bancilhon, who recently moved to California to lead the US offensive, said the US will be O2's "major" investment in 1996 and that it hopes to be a "key actor" there in the next two years. "The time is ripe, he said, because "the market is evolving from a need for object languages to a need for object databases, and management applications in banking and insurance are opening up to object databases." Bancilhon told our sister publication *Computergram* that, while the US is an exciting market, France is better for research and development. "Over here, an engineer will stay with you for four or five years. Over there, you're lucky if they stay for four or five months. There is a lot more stability here for a research and development organisation," he said. He added that salaries in the Bay Area are equivalent to those in Paris; the salaries themselves are higher, but equal to Paris salaries plus the social charges. In Europe, where Bancilhon says O2 has become the leader, "since we installed a subsidiary in the UK, we've had successes at Ford and at BT, where we had the pleasure of displacing a competitor on several projects." In Asia, Korea and Japan will remain the two principle markets, said Laurent Hyafil, sales director, because "China is a bizarre market. You go to Peking and they say, 'IBM and Oracle have given us X million copies of this software and these workstations. What are you giving us?' We're not giving software away!" he quipped.

### Smalltalk environment

Bancilhon said the company has had balanced accounts since 1993 and will see this year its third consecutive year of 50% revenue growth, to some \$6m. Didier Plateau, director of production and services, presented the new functions of version 4.6, which becomes available this month. They are O2 Version, which enables users to define and manage versions and configurations of any object in an O2 database, O2 Report and O2 Web, which provides Web connections for O2 databases. Plateau said January 1996 will see O2 versions for Windows NT 3.5, Santa Cruz and Digital Unix, among other systems. Versions for AIX and Solaris will be released this month. O2 spends about \$2m per year on research and development. Patrick Borrás, associate technical director, gave users a glimpse of the developments under way. "We're not giving any dates for these, mind you, but just to inform you of their existence," he said. They include a restructuring of O2 System for greater modularity, and a shared library, a makefile generation extended to all types of O2 applications, and more flexible system configuration; object-level locking for O2 Engine; client-server communication with shared memory, and; multithread server. On languages, O2 is alpha-testing a version of its Smalltalk environment that includes Smalltalk ODMG, and is working "to reconcile OQL and SQL and the mapping between relational and object databases."

## HP NETS \$31,000m SALES BUT WEAKER MARGINS WORRY MARKET

It may be very difficult to make money in today's computer markets, but some companies find it a lot harder than others, and Hewlett-Packard Co turned in stunning fiscal fourth quarter figures to cap a record-breaking year that saw it storm through the \$30 billion turnover barrier to settle at \$31,519m. Net profit in the fourth quarter leaped 42% to \$678m as the computer side fired on all cylinders. The numbers came in well above analysts' expectations, but Wall Street was still not impressed and the shares fell \$2.75 to \$90.25 on the announcement. Problem was that gross margins were lower than expected. HP reported fourth-quarter earnings of \$1.29 a share, up from \$0.92 a year ago, where according to *Reuter*, analysts' consensus was \$1.26. The company says orders for the fourth quarter were \$8,800m, up 27% over a year ago. US orders grew 26% to \$4,300m while international orders rose 29% to \$4,500m. All the computer products did their stuff, and the company cited strong demand for personal computers, HP-UX multiuser systems and HP DeskJet printers as contributing significantly to order growth. In the computer business, orders rose 28% to \$7,000m. The test-and-measurement business did even better, with order growth of 31% for the quarter over a year earlier - semiconductor test, communications test, consulting and services, and digital test products all did very well, the company said. And medical product orders rose 34% over a weak year-ago period. Analytical products were a let-down, growing 8% over the year-ago period, as were electronic components, up just 1% as the company continued its shift away from the external market for application-specific integrated circuits to meet strong internal demand.

## ARE UNIX VENDORS "CHICKEN SHIT?"

Well, the chart reproduced here ran in our sister publication *Client/Server News* two weeks ago and it's not a pretty sight, is it? As you can clearly see from the results, Unix is in the gutter

when compared to **Windows NT**. Even the estimable AS/400 eats its dust which is highly ironic considering these RPerMark tests were originally developed by IBM's own AS/400 people and initially roused analysts-types into fretting that they wouldn't be fair to NT.

Now, Client/Server Laboratories in Atlanta, the independent testing outfit that took them over, assures us that there is nothing in these tests that would give Microsoft a leg up and that they are balanced indications of true client/server performance. They also warn users - sensibly enough - not to use the final benchmark score and to pick their systems according to how they'll be deployed: decision support, file serving, TP. You can see it makes a difference. The current problem rests with the fact that they have yet to attract a significant Unix population to test and, it appears

the reason is that Unix vendors are, in a word, chicken shit. That is not something we at *Unigram.X* like to hear. Unix vendors have repeatedly postured that they are the only effective solution to plug

into the middle of **the three tiered** client/server

paradigm but these results belie that claim, now don't they? And they can't very well be brushed off by saying nobody cares about them. That argument won't hold water very long, will it? Stuff like this grows like Topsy, especially if Microsoft starts noising results like these about. Unix vendors already stand accused of designing their machines specifically to run TPC benchmarks which is one of the reasons *Unigram* has always hesitated to memorialize them. Microsoft, if it's smart, will start spreading this kind of talk around along with suggestions that you daren't put your machines to the test because you'll lose your control and blow your investment. So what are you going to do about it?

## RPERMARK 95 BENCHMARK TESTS

System	# of CPUs	CPU & MHz	OS	DB	Price of H'wre & 150 clients	Decision Support	Transaction Processing	File Serving	RP-Mark	\$/per RPerMark
AT&T GIS S40 (optimized)**	2	P/133	NT 3.51	SQL 6.0	\$56,837	541.3	652.8	92.1	319.3	178.00
NEC RISCserver 2200	2	VR 4400	NT 3.51	SQL 6.0	\$54,821	334.7	647.9	118.3	294.9	185.90
AT&T GIS S40	2	P/133	NT 3.51	SQL 6.0	\$56,837	356.0	565.8	93.7	266.3	213.43
IBM AS/400 30S	2*	IMPI	OS/400	DB2/400 V3R1M0	\$75,781	256.0	445.2	132.5	247.1	306.68
Dell PowerEdge XE5	2	P/133	NT 3.51	***	\$41,793	352.3	473.8	87.7	244.9	170.65
Dell PowerEdge XE5	1	P/133	NT 3.51	***	\$40,134	401.3	441.2	78.11	240.5	166.88
DEC AlphaServer 2000 4/275	2	21064/275	NT 3.51	SQL 6.0	\$78,116	410.7	368.0	91.5	239.9	242.25
DEC AlphaServer 2000 4/275	1	21064/275	NT 3.51	SQL 6.0	\$69,615	400.0	356.4	89.7	233.9	297.63
IBM AS/400 30S	1*	IMPI	OS/400	DB2/400 V3R1M0	\$61,421	242.7	232.6	133.3	196.0	313.37
IBM AS/400 20S	1*	IMPI	OS/400	DB2/400 V3R1M0	\$47,950	144.0	104.0	133.9	126.1	380.25
Compaq Proliant 2000	2	P/66	NT 3.51	SQL 6.0	\$52,881	32.0	351.2	109.9	107.3	492.83
Compaq Proliant 2000	1	P/66	NT 3.51	SQL 6.0	\$48,683	26.7	319.5	108.5	97.1	501.37
HP 9000 E35	2	PA-RISC	HP/UX 9.04 + NFS	***	\$123,839	70.7	403.3	21.9	84.8	1,460.37
HP 9000 E35	2	PA-RISC	HP/UX 9.04 + Netware	***	\$131,434	17.3	356.5	82.4	79.7	1,649.11

ALL PRICES ARE APPROXIMATE and were recalculated from Client/Server Lab reports by CSN using data provided by Microsoft and other sources to include the cost of the server, OS, database licensed for 150 clients and any other required systems software.

\* IBM AS/400 configurations were tested with the FS-IOP option, a dedicated file serving engine consisting of a board with both a 486 and i960 running an OS/2 variant.

\*\* AT&T optimized tests include driver tuning and configuration parameters optimized by AT&T engineers.

\*\*\* The databases running on the HP 9000 and Dell were not disclosed. Informix was on the HP, according to sources. The Dell had either Sybase or Oracle.

## NOVELL, DOLPHIN TO BUILD MASSIVELY PARALLEL SCI INTERCONNECT TO SUPPORT NOVELL PERVASIVE NETWORKING

More details have emerged about what Dolphin Interconnect Solutions A/S and Novell Inc are doing with the Oslo, Norway-based company's Scalable Coherent Interface technology (UX No 564). Our sister publication *Client/Server News* reports that the two are building a massively parallel interconnect capable of supporting close to a thousand processors that Novell will use to further its pervasive networking scheme and, it hopes, create a paradigm shift that will leave Microsoft in the dust. The interconnect strategy will be built on Dolphin's CC-NUMA (Cache Coherent-Non Uniform Memory Architecture) technology that Data General and Siemens Nixdorf Informationsysteme are currently using to build their next-generation machines (UX No 544). Novell is working on software, likely to be called Netware MPP, a superset of NetWare SMP, that it will kick in to make the interconnect fault-tolerant as well as fast. Jeff Merkey, Novell's director of multi-connected systems, says that such an interconnect will be able to cluster 500 to a thousand servers, creating computing power that will outperform mainframes and handle terabytes of information. According to Merkey, such an array is the only way that Novell will be able to get its pervasive networking scheme, based on the AT&T NetWare Connect Services (ANCS), off the ground. "If we're going to hook up all those [processors], we need big stuff," he said. Because of the potential power involved in such a scheme, Dolphin says its adoption will create a paradigm shift

away from other clustering attempts that will leave Microsoft behind. Dolphin approached NT's main man Jim Allchin and invited Microsoft to come on board with it and Novell, but NT would have to be so restructured to take advantage of SCI that it wouldn't be ready for another two-three years at a minimum. Merkey said that Microsoft knew of Novell's manoeuvrings and claims it announced its clustering pacts with DEC, Tandem and Compaq to keep from embarrassing itself. He said Microsoft's clustering strategy, when it emerges, won't be in the same league with Netware-Dolphin. He called DEC's memory channels scheme a relic of the VAX world, while Tandem's ServerNet is simply a fast LAN with nowhere near the scalability or speed NUMA has. Dolphin's director of corporate development Drew Osterman said that SCI is 200 times faster than ServerNet. Dolphin and Novell have lined up hardware vendors including Sequent, DG, Intel, Sun Microsystems and most surprising Compaq, who's already in bed with Tandem's ServerNet, to build machines that support this stuff. Osterman claims Compaq only intends to use ServerNet as a short-term solution through 1996 because NUMA technology is not ready for full-scale implementation. His allegation, however, does not take into account the fact that Compaq is using ServerNet as its NT clustering solution, not NetWare. Novell says the massively parallel interconnect will roll out over the next two years.

### PEABODY PORTS DOCUMENT IMAGING PACKAGE TO UNIX

Peabody Systems, Orange, California, has ported San Jose, California company Pixel Translations Inc's Windows, Windows NT, OS/2 and Macintosh-based document image processing software to Unix. PixTools/Scan and PixTools/Display & Print, are available on SCO, HP-UX, Solaris, AIX and V/386. Peabody plans a DEC Alpha version by year-end and may embed PixTool/Scan into SGI's Irix Unix to widen its support for scanners. PixTools/Scan supports scanning and image viewing, and supports 40 scanner models. PixTools/Display & Print decompresses, scales, rotates and manipulates images for display and printing. The kits cost from \$2,000 to \$2,500.

### TIVOLI BEATS CA TO MULTI-MILLION UNILEVER CONTRACT

Austin, Texas-based Tivoli Systems Inc is hoping to forge new international ground with its multi-million dollar world-wide deal to provide the Tivoli Management Environment to consumer products group Unilever Plc. Unilever has adopted Tivoli's systems management as part of its worldwide, enterprise-wide client-server systems strategy. Dr Martin Armitage, head of technology for Unilever's information technology group said the company had identified "the area of systems management as one of the key factors in the successful deployment of client-server computing." What he felt Tivoli offered was a fully integrated management package, which would "help improve the speed and quality of implementing new technologies." Tivoli apparently beat competitor Computer Associates International Inc to the Unilever deal, after Unilever installed both Computer Associates' CA-Unicenter and Tivoli's Management Environment for a trial evaluation period. Tivoli's manager of International sales, Pierre Schmidt, said the Unilever deal is of great importance to Tivoli, not simply because it will be worth more than \$2m a year, but because outside of the US and the UK, client-server awareness was not very high, and the Unilever deal will open doors for the company to new markets.

#### Provides

Tivoli Management Environment provides a set of systems management applications such as software distribution, user and security management, client and server configuration. The Tivoli Management Framework also provides an architecture upon which integrated systems management applications can be built. It was initially a Unix-based product, but the company has just launched Tivoli Management Environment for Windows NT, which seems to complete the set for the company's client-server offering. The systems management now boasts single action management across Unix, NT, NetWare and desktop computers. For example, adding users to a system can be done from a Unix or Windows machine with a single action, and the Tivoli software will automatically add the user to all the machines in the network, whichever operating system they are running. The company is aware that users do not always want to give up local systems management products, and Tivoli Plus is what it calls its framework for connection to other systems. Microsoft Corp's Systems Management Server comes bundled with NT BackOffice, so Tivoli has been careful to ensure that users wanting to use elements of the Server can do so, and offers a two-way interface to the product. TME for Windows NT will be priced at £600 to £2,040 per server and £270 per client depending on the features and number of users. It will be out in early 1996.

### TI COMPOSER ON DIGITAL UNIX

Texas Instruments Software Inc is shipping its Composer application development tool for Digital Unix. Applications developed with Composer can be deployed on Digital's Alpha workstation running Digital Unix or Open VMS. The company has also released an Implementation Toolset module of Composer for Digital. This automates the compilation, linking and installation of Composer-developed applications and enables the migration of developed code to targeted deployment systems. TI recently launched the latest generation of Composer, release 3.0 (UX No 562). Composer 3.0 costs from \$14,000 to \$24,000.

### EC RAIDS DEC BASES IN EUROPE

Digital Equipment Corp said last week that it was co-operating with a European Community investigation into its business practices following raids by officials from the European Commission's anti-trust enforcement agency on software production offices in the UK, Germany and the Netherlands. "We are co-operating fully with the Commission anti-trust investigators since Digital's policy is to comply with all the competition laws in the countries where we do business," the company said. "We believe our existing practices comply with those laws." The company said it could make no further comment "until we know the precise nature of the complaint and the identity of the complainants," but the Commission said the raids followed complaints from customers of allegedly "abusive practices." The Competition Commissioner's spokesman said the complaints related to linked deals for hardware and software maintenance contracts, saying companies that lodged complaints said the practices had reached a scale where it was almost impossible for a competitor to carry out maintenance on equipment sold by DEC. The complaints reportedly allege that DEC ties maintenance contracts for hardware and for software together, making it hard for companies to get software maintenance unless they buy DEC hardware, and indulges in discriminatory discounting, as well as charging much more for some services in Europe than in the US.

### IBM's AIX CONNECTIONS TO BE BUILT ON TOTALNET FROM SYNTAX

It turns out that the basis of IBM Corp's forthcoming AIX Connections extension to its AIX Unix is TotalNET from Federal Way, Washington-based Syntax Inc. AIX Connections is designed to enable computers running AIX to act as servers on either Token Ring or Ethernets, providing file and print services for connecting many types of client workstation, such as OS/2, AIX Version 4.1, Windows for Workgroups, Windows95, Windows NT, Mac OS and NetWare clients. According to Syntax, AIX Connections brings together IBM's LAN Server operating system for OS/2 and AIX; AIX; and Syntax's TotalNET Advanced Server operating software for Unix. Syntax claims similar deals with SunSoft Inc, Tandem Computers Inc, Fujitsu Ltd, Sony Corp, Encore Computer Corp and Axil Workstations Inc.

### TWO WAY TV ENABLES PARTICIPATION IN GAME SHOWS

UK television viewers can participate in games shows from their armchairs with a new system from Two Way TV Ltd. The service follows trials in 200 homes in the Birmingham, West Midlands region. Up to four players in each home can participate in 30 different shows each week using the Two Way TV handset. Scores are accumulated in the handset during the game. At the end the scores are sent back via a built-in modem to the company's central computer in London and the winners are identified on screen. The phone call back to the central computer takes only eight to 15 seconds and is paid for by Two Way TV. Some prizes are on offer for the winners - £20 is the going rate at the moment, but company chairman Bill Andrewes said he sees scope for advertising promotions here. The system works by sending a stream of data synchronised with the television programme's signal, using the Vertical Blanking Interval. This makes the service available to UK homes. The signal is decoded by the handset. This puts a graphic overlay on the television screen so both the picture and text can be seen. Other services enable users to click a button to view full horse racing text and a fast results service as well as racing coverage with Channel 4 and the Football Association Carling Premiership Football as broadcast on Sky. PA News is also providing the up-to-date sporting information to subscribers.

#### Coronation Street

Similar information services are available on other television shows including facts about the stars in Coronation Street and background and information about artists performing on Top of the Pops. Quiz shows that users can participate in include Mastermind, Fifteen to One, Wheel of Fortune and Family Fortunes. There are programmes for children as well. Two Way TV tested the service to 200 homes in Birmingham and said it found it increased ratings. The Two Way TV box uses a Motorola Inc 68000 chip and Hitachi Ltd H8 processor, 1Mb RAM and 512Kb Flash EPROM for operating system storage. The central computer system is a real time Unix network running proprietary software. The handsets can be bought outright for £200 or rented for £6 a month. In both cases there is a £6 monthly subscription. Two Way TV was founded in 1991.

### DOLPHIN "NOT RESPONSIBLE FOR SEQUENT NUMA"

Although a conversation with Dolphin Interconnect Solutions Inc president Martin Albert indicated a causal relationship between the company's CC:NUMA and Sequent's NUMA-Q ~~SCI architecture (UX No 565)~~, both companies now say that Dolphin didn't supply Sequent with the NUMA technology. As soon as he read the *Unigram.X* story last week, Sequent president and CEO Casey Powell called up crying foul, saying his company developed NUMA-Q all on its own. Turns out he was right; Dolphin said that Sequent developed its own cache controller. There is a relationship between the two companies, but it's twisted and weak at best. Sequent got its data pump link layer from a joint venture by Unisys Corp and Vitesse Semiconductor (UX No 560), with whom Dolphin had apparently previously worked on for Convex Computer Corp. Dolphin says Unisys did the bulk of the work on the data pump, although Sequent may have been involved in development. Dolphin applications chief Tony Turgeon said that it had several early discussions with Sequent and may work with Sequent in the future because Sequent is the only company which uses the data pump. Sequent reportedly is considering using the CMSO-based Dolphin link layer. Dolphin has developed its own backside interface that it calls the B-link or backside link. Powell said that the SCI technology is not as important as the 4-processor building blocks it creates, and doesn't think that Dolphin will get beyond a simple 2-by-4 arrangement whereas Sequent has design specs for a 4-by-64 setup, although he figures 32 is the most anyone will run for a while. Dolphin's Martin Albert, in the spirit of competition, said that Dolphin would bury Sequent in the market because while Sequent is playing around in the high-end, Dolphin will flood the market with commodity SCI connections.

### MICROMUSE TO SPEARHEAD SUN UK INTERNET DRIVE

London-based MicroMuse Ltd says it's been appointed a master reseller for Sun Microsystems Inc Internet solutions which means it'll be targeting companies such as the UK's 90-odd Internet access providers, signing them to deliver their services to customers aboard Sun Netra workstations and servers. MicroMuse also expects to pick up the follow-on business of managing reseller and customer Internet installations via its own NetCool and OMNibus SNMP network management solutions plus the software it resells in the UK such as the Remedy Corp help desk (UX No 486). MicroMuse, which claims to have done £12m revenue in the year to September - £2m-odd on Netcool - is now split into two divisions, one reselling all types of Sun solutions, the other providing network management. MicroMuse, which now has seven staff in its Dallas, Texas office has shelved plans for a San Francisco arm whilst it investigates the likely prospects for opening in New York city. Its main competitor, Objective Systems Integrators Inc, Folsom, California, which peddles the high-end NetExpert CMIP-based network management system, plans to raise an IPO by the end of the year. OSI says NetExpert takes over where the likes of HP OpenView, SunNet Manager and SystemView run out of steam (it's claimed to interoperate with all of them) and is not limited in its granularity.

### NETCON DEBUTS PAGER SOFTWARE FOR UNIX

Netcon Technologies Inc, London, Ontario, is offering paging software that links network monitoring systems such as HP OpenView, IBM NetView and SunNet Manager to pagers. Dubbed FirstPage, it is available for Sun OS, AIX, HP-UX, OS/2, OpenVMS, and Windows NT. The software runs using standard phone lines and modems and is compatible with all alphanumeric and numeric pagers through any national paging network or combination thereof subscribing to IXO/TAP protocol standards. First quarter add-on modules are due for page escalation and employee scheduling, database synchronisation, and distributed paging capabilities for wide area network environments. FirstPage costs from \$1,600 to \$2,600 per server depending on the platform.

### INFORMIX COVETS SYBASE USERS WITH MIGRATION TOOLKIT

Informix Software Inc, Menlo Park, California, is out to try and lift Sybase Inc users via a new Sybase Migration Program which includes four components bundled with on-site consulting services. A Migration Toolkit scans Sybase SQL, flags Sybase extensions, and then converts them to Informix SQL syntax. The software is claimed to automatically convert Sybase database schemas, function calls and stored procedures to Informix. The Migration Toolkit catches about 90% of the Sybase extensions, according to Patricia Lai, Informix marketing manager for servers and connectivity. Informix engineers manually change the remaining to extensions to Informix code, she said. Customers who want co-existing Informix and Sybase applications can use Informix's gateway software products to create individual ports; otherwise the migration is not reversible, she said. Prices for the Migration Program vary, and Lai declined to give examples.

### POWERBUILDER ON SOLARIS - POWERSOFT OFFERS S-DESIGNER MODELING TOOL

Powersoft Corp, Concorde, Massachusetts, has ported its PowerBuilder client/server development tool to Unix and released it initially for SunSoft Inc Solaris. Powersoft and Sun will co-market PowerBuilder for Unix through joint sales and marketing. It will also be sold through 300 third-party vendors and resellers. PowerBuilder for Solaris costs from \$3,300 and is shipping now. Meanwhile, Powersoft is shipping S-Designer for PowerBuilder version 4.2.1, a new data modeling tool taken from the acquisition of SDP SA, Suresnes, France (UX Nos 541 and 536). PowerBuilder version 4.2.1 includes PB-Gen, a PowerBuilder application generator that enables users to generate PowerBuilder applications with windows, DataWindow objects and menus. Users can make customised templates that define how elements within S-Designer such as tables and views, are used to generate PowerBuilder DataWindow objects, windows and menus. These templates can inherit objects from PowerBuilder class libraries. S-Designer is available immediately, at \$2,800 until December 30, when it goes to \$3,500. S/Designer for PowerBuilder will be sold by Powersoft; a standalone version will be sold by SDP.

### BRADMARK REVS DATABASE MANAGEMENT TOOLS

Database tool supplier Bradmark Technologies Inc, Houston, Texas, is offering enhanced database management utility tools for Oracle and Sybase as part of its DB General suite of management tools. For Oracle and Sybase users the company has released version 2.0 of its Performance Monitor real-time monitoring and alarming software. Version 1.0 ran on a PC which users had to connect to the database to access information. Version 2.0 has a new distributed agent running on the server that dispenses with the PC. Performance Monitor will be released with server agents for Oracle 6 and above, and for Sybase 4.2-up on HP-UX. In addition, it will support Sybase running on all other hardware platforms via an open client interface. Server agent ports to Solaris, AIX and other Unixes will follow next year. Performance Manager costs \$1,000 to \$8,000 per server for Oracle and \$700 to \$6,000 for Sybase. Bradmark will also offer Object Manager software for managing Oracle clusters and tables running on HP-UX from a Windows PC by year-end. AIX, Solaris and NT versions are promised for the first quarter of 1996. Object Manager costs from \$2,000 to \$9,000 depending on the size of the installation. Bradmark has built a Tablespace Manager feature for Oracle that enables tablespace to be rebuilt online. It costs from \$500 to \$3,500. Bradmark will focus on Sybase development next year, including ports of Tablespace Manager and Object Manager. The company's DB General suite will go up on DB2, Informix and OpenIngres over time.

### MORNING STAR OFFERS LAN FIREWALL

Morning Star Technologies Inc, Columbus, Ohio, has released a dynamic firewall packet filtering software called SecureConnect, which it says provides security for Unix users connecting to wide area networks. Local logs, remote redundant logging, encrypting data and destination specific keys within the product hide message content and create a virtual private network for Unix users, the company says. It includes a GUI, an authentication server interface, gateway encryption and alarm surveillance. SecureConnect costs \$1,500 per workstation, and runs on Solaris, SunOS, AIX, HP-UX, SCO, and UnixWare.

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Our sister publication *Client Server News* spotted one R10000-based prototype at Comdex: a **Silicon Graphics Inc** box wheeled out for a Mips Technologies Inc bash. The 200MHz 3.3v chip is still at the engineering sample stage, with customer samples not expected until the end of January and full production in the second quarter, roughly five months behind schedule. It's still only quoting simulation numbers of better than 300 SPECint92 and 600 SPECfp92. SGI was supposed to come up with real chip benchmarks in the next few weeks but now Mips says those won't be made public. It'll leave it to Mips vendors such as Pyramid, Tandem and NEC to quote the performance they're getting out of the thing in systems.

DEC is now expecting its delayed Kodiak chipset, which would accommodate the 21164a, in March, with samples appearing in February. There's still no hint from Maynard of anything resembling a multiprocessing chipset for Alpha, it having abandoned the dual-CPU Gemini design ages ago because of scalability issues.

Compagnie de Machines Bull SA to one side (UX No 564), some are crediting **Motorola's** new Computer Group chief Joe Gugliemi, whose political talents juggling IBM Corp and Apple Computer Inc were sharpened by his years as Taligent Inc CEO, with having saved the 620. Apparently the 630 wouldn't wash as a substitute because it's not a joint development.

**Hewlett-Packard Co** doesn't want to acquire Convex Computer Corp unless the shareholders are completely happy to sell out, so the Richardson, Texas minisupercomputer pioneer has retained PaineWebber Group Inc as its exclusive financial advisor and PaineWebber has begun to solicit alternative proposals from any other potential acquirors prepared to pay more than the \$4.83 in HP shares Convex has agreed on.

The US Federal Trade Commission has finally signed off on **Silicon Graphics Inc's** acquisition of those two multimedia software companies; the action clears the way for the Mountain View-based computer maker to acquire Alias Research Inc and Wavefront Technologies Inc, but SGI must ensure access for competing entertainment software developers to its workstations, and allow them the chance to participate in its software development programmes, and Alias has to arrange a partnership with another maker of workstations besides SGI, guaranteeing that Alias' two major applications, Animator and Power Animator and their successors can be run on the new partner's computer systems as well. This has to be in place by March.

The world should see the first PowerPC-based **Amiga** by the beginning of 1997; although best known for games-playing because of its provenance, the Amiga A4000 computer is actually a high-quality graphics workstation capable of far more than playing games in 24-bit colour. Whether Power Amigas will be straight clones of the PowerPC Platform is still an open question, as it debates whether to maintain backwards compatibility with applications in hardware or by software emulation.

Not content with selling Indigo workstations on the strength of their graphics engines, **Silicon Graphics Inc** has gone one step further and is now touting them as coffee machines. The Espresso, as it is delightfully named, is a Gaggia Espresso machine housed in the Indigo's blue casing, but runs on ground beans instead of chips. SGI reckons it has sold 700 so far to large customers that love Indigo so much they want a coffee machine that looks just like one - not bad when you realise that instead of gratefully giving the things to customers that have just shelled out a small fortune, it charges £770 each for the things, making them rather pricey coffee machines.

The big boys are muscling in on the Internet access business in a big way, and having wrapped up acquisition of Unipalm Group Plc, Fairfax, Virginia-based **UUNet Technologies Inc** - where Microsoft Corp has an undisclosed stake - has agreed to acquire a 40% stake in EUnet Germany GmbH for \$1.6m to \$5.4m, with the final price depending on how much control UUNet will have in the management of EUnet Germany. 85% of EUnet GB went to Performance Systems International Inc for about \$3.75m back in June. UUNet is buying the shares held by Gesellschaft Mehrwertdienste GmbH and the German Unix Users Group.

**CP Labs**, a company formed by engineers who left Unix System Labs' Pacific unit prior to its integration into Novell Japan, is focused on developing and enhancing technology initially developed at the the Open Software Foundation Research Institute. It's already sold OSF/1-on-iAPX-86 licences to the Hong Kong Jockey Club, one of Hong Kong's largest computer users, for its World Wide Web access control software and is now working on more OSF/1-based secure Internet access software due in the first quarter.

Downers Grove, Illinois-based **Tangible Vision Inc** will release version 2.0 of its Imprimis real-time Enterprise Resource Planning/Manufacturing Execution System (ERP/MES) in late December. It will support most client/server hardware, including Sun, DEC, HP, and IBM Unices. The upgrade from version 1.0, released in March (UX 525), has enhanced manufacturing and engineering capabilities, including order tracking, scheduling, and shop floor and transaction control.

**EMC Corp**, Hopkinton, Massachusetts, has opened sales and service offices in Sweden, Denmark, Norway, and Finland, and will manage them out of EMC Nordic in Stockholm. Bo Lovelfelt from Hitachi Data Systems has joined the company as manager of EMC Nordic.

San Diego, California-based **Excalibur Technologies Corp** has added Netscape Server and Navigator 2.0 compatibility to its RetrievalWare document retrieval system. Excalibur has built a RetrievalWare module that can be loaded as a shared library into any Netscape server, the company said. The Netscape Server and Navigator 2.0 will be a standard option on RetrievalWare, which ships beginning November 27. RetrievalWare runs on most flavours of Unix (UX 562).

**Pyramid Technology Corp** has tapped Dennis Wolf from Dynacraft Inc as CFO and Auspex Systems Inc director of product marketing Mike Munro as VP and assistant to the president (John Chen). Steve Capelli, Chen's former assistant becomes VP intercontinental sales, responsible for direct sales in the UK and indirect sales on the continent.

**ParcPlace-Digitalk Inc**, Sunnyvale, California, will debut a VisualWave object-oriented development environment for creating World Wide Web applications at EMail World and Internet Expo in Boston this Tuesday (UX No 565). The Smalltalk-based VisualWave will allow developers to create and deploy applications across Unix, Windows and the Web. It includes all VisualWorks 2.5 functionality. IBM Corp is also promising some Internet announcements at the show.

**Taligent Inc** doesn't like the way it's getting caught-up in the wake of Kaleida Labs' demise - see front page. Questions were certainly raised at a Kaleida shutdown parlay to the effect "if we're being closed shouldn't the same happen to Taligent?" It insists the reply was that investors have made no decision to do the same to Taligent.

Some of the OEM partners who told us they had been expecting a little more direction may be interested to know that **Motorola Inc** now says there is no roadmap planned for PowerPC over and above what little it disclosed at Comdex (UX No 564).

Former general manager of **IBM Corp's** now defunct Power Personal Systems Division, Tony Santelli, has surfaced as general manager for product and brand management at the company's PC Co division. He replaces Bruce Clafin who jumped ship to head DEC's PC division last month. Santelli reports to senior VP in charge of the PC division, Robert Stephenson.

Internet security house **Checkpoint Systems Inc** has bought its Norwegian distributor Eagle Security which becomes Checkpoint Systems Norge AS, Oslo.

Gary Eichhorn, former manager of Hewlett-Packard Co's workstation group who was moved sideways to run medical products has left the company to join Internet house **Open Market Inc** as CEO. Former chief executive and co-founder Shikhar Ghosh becomes chairman, whilst co-founder Dave Gifford is now vice chairman and chief scientific officer.

Systems integrator **Tessera Enterprise Systems Inc**, Wakefield, Massachusetts, is now offering to design data warehouse environments using Oracle, Informix, DB2 or Red Brick, for DEC AlphaServers. Tessera, founded last April by former American Express employees, designs three-tiered customised data warehouses using its Early Harvest package.

Honest, we're not taking it as evidence that **IBM Corp's** ditching AIX! Just because mainframes, Thinkpads, OS/2 Warp and AS/400 all get bit-parts in Goldeneye, the latest James Bond caper, and AIX doesn't. Or did we blink?

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

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6 DEC. 1995  
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The weekly information newsletter for the UNIX™ community worldwide

London, December 4-8 1995

Number 567

## HP GATHERING A CREW FOR NEW UNIX SHIP

After all these years Santa Cruz Operation Inc is finally moving to embrace SVR4, albeit with SCO extensions. Concomitantly, the Hewlett-Packard Co, which by dint of cleverness appears to hold the future of Unix in its hands, won't be moving to that kernel reportedly because HP-UX isn't very portable and would have to be de-engineered, to put it kindly, to make the transition. Instead it dismisses the notion of kernels as immaterial and is moving to morph a hybrid amalgam of HP-UX and SVR4 for Unix' 64-bit engine. In its endeavours it is reportedly seeking aid and comfort from a bunch of second- and third-tier Unix vendors, gently suggesting to them, sources say, that they send money not people. In return, these vendors will be "special" and get preferential treatment and early access, sort of like non-working strategic development partners. SCO's name doesn't seem to have made it to the "special" list and sources claim HP will probably seek to freeze it out, throwing it scraps from the table to do, but nothing substantive. HP's new set of friends could include AT&T GIS, Fujitsu Ltd, Hitachi Ltd, NEC and Unisys Corp but probably no more than six companies en toto. Apparently HP's not going to identify its new friends publicly but let them trickle out with the news at their leisure. It should be mentioned that not all of these firms is completely comfortable with HP as a technology provider. HP says it plans to pull Unix SVR4.2 and HP-UX, which is based on the old-fashioned Unix V.3.2 kernel, apart "line-by-line" to bring its new 64-bit Unix into life. All the features in what will basically be a cherry-picked operating system will be "as good or better than Unix SVR4 in all cases," according to Doug Johnson, strategic programs manager for HP's Computer Systems Division. The way he explains it the new Unix will look from the outside like "a superset" of HP-UX and SVR4 with Spec 1170 API's. Internally, however, it'll be much different. For HP, it's the rider for next year's 64-bit PA-8000 RISC pony. To current HP-UX OEMs, users, developers and ISVs worried that HP will break with its installed base in the move, Johnson says the kernel issue is an "irrelevant question," promising upward binary compatibility from both the HP-UX and SVR4 streams. Exactly how this will be achieved and what kind of a beast the kernel eventually turns out to be is only being discussed with potential partners under a flurry of NDAs.

## SIEMENS NIXDORF GIVES ITSELF A PCI MAKEOVER

Siemens Nixdorf Informationssysteme AG (SNI) is giving its Mips Risc-based RM server line a PCI bus makeover in January. The Champion Series, replaces some of the existing EISA-only models in the line. Specifically SNI is introducing a new RM300 C 'compact' server which will supercede the existing RM400 models 430, 420 midrange servers and the 225 minitower. Aimed at the high end PC server base the RM300 C line comes in three models, the 200Mhz R4400-based C62 and C60 with two and one processors respectively and the C20 with the 133Mhz R4600. The RM300 C models come fitted with two PCI and 2 EISA and 512 Mb RAM each. SNI says its 33MHZ, 132Mbps PCI I/O system provides three times the throughput of its vanilla EISA subsystem. RM300 prices start at \$39,000. SNI is fitting three PCI/EISA models - C72, C70 and C60 into its existing 200Mhz R4400 based RM400 departmental server line with up to four CPUs. They replace the existing 730, 630 and 530 models. Prices start at \$116,000. At the low end SNI will offer a PCI enabled version of its 133Mhz R4600-based RM200 desktop uniprocessor as the model C20 at \$9000. The new RM300 and 400 models support RAID subsystems, hot-swapping and dual cluster configurations. The RM 400s support Oracle Parallel Server. All models run SNI's Sinix Unix and Windows NT. At the high-end SNI will introduce the PCI/SCI interconnect work from Norwegian company Dolphin Interconnect Solutions A/S in its high-end RM600 server range in the second quarter.

## COMPUWARE SETS OUT UNIFACE STALL; STARTS WITH Q1 UPGRADE

Farmington Hills, Michigan-based Compuware Corp will upgrade its Uniface application development environment in the first quarter of next year. Compuware, which finally swallowed Dutch 4GL supplier Uniface in December last year (UX No 518) says version 6.2 will include new model entities, features and extensions to accommodate additional forms, reports and application objects. 'Upper CASE' tools will be able to transfer design work into Uniface automatically, the company claims. Uniface model and application components are stored in a central repository. When a component definition is changed it supposedly ripples through the application automatically. As a result, runtime components inherit behaviour from a central model, rather than from each other, avoiding performance problems inherited with "dynamic inheritance" techniques, Compuware claims. 6.2 incorporates object techniques such as abstraction, encapsulation, inheritance and polymorphism and provides templates to create forms, entities and fields, without the need for procedural code. Objects automatically inherit the template's characteristics during compilation. In future Compuware says it will add other application objects representing generic, form-independent executables which could return a data set when triggered, supplementing physical data objects already included in Uniface. The development system already utilises caching, buffering, data conversions and network optimisation to move data between the client and server. (Continued on page 2)

## TALIGENT "TO LOSE HALF ITS 400 STAFF AND BECOME IBM SUBSIDIARY"

Taligent Inc's fate is sealed and the company will become an IBM Corp subsidiary and a shadow of its former self, the *PC Week News* news wire believes. If so, it's unlikely to come as much of a surprise to anyone. Of Taligent's investors, only IBM has displayed any enthusiasm for the object application environment, pushing the thing as a C++ development system for high-end VARs and customers. Hewlett-Packard Co recently began de-emphasising Taligent as anything but an IBM-compatible technology in favour of Next Computer Inc technologies for more general object development. HP declined to comment. Apple Computer Inc's plans for Taligent have never been clear from the start. Taligent product managers reached last week following a company meeting were pessimistic about their future. As we went to press the company said it would make a statement within the next five business days on its future, possibly this Tuesday, which is also IBM's usual announcement day. The wire believes that half the 400 employees will lose their jobs; it is not clear whether IBM will pay Apple and HP anything for their holdings in Taligent, but it seems unlikely. Its Kaleida Labs Inc sister company was folded into Apple last week.

## COGNOS TURNS TO UK'S RIS FOR BUSINESS MODELLING

Cognos Inc, Markham, Ontario, is to bundle business modeling and forecasting technology from London, UK company Right Information Systems Ltd with the KnowledgeSeeker statistical analysis software it's licensed from Angoss Software Inc (UX 551). It doesn't like to call it work integration, but there will be a new product which can be used to create models of future business scenarios, according to Neal Hill, VP marketing. It'll be the third product in Cognos' business intelligence line of tools. The RIS product, 4Thought software, uses DLL-based neural network technology to extrapolate trends from data by creating models from customisable parameters. It can analyse the effect of price changes on sales, gauge the effectiveness of marketing and advertising and determine future costs. KnowledgeSeeker is an automated statistical analysis tool that identifies patterns and trends in sets of data. Cognos will target Fortune 2000 corporations and has not yet determined a name for its version of the products. It explored embedding 4Thought with its PowerPlay 4GL and Impromptu reporting tools, but decided wrapping the 4Thought technology with KnowledgeSeeker makes a more attractive and more marketable option. It will be available as optional add-ons for both however, as well as the Axiant development environment, by mid-1996. It will be priced between \$500 and \$1,000.

## COMPUWARE SETS OUT ITS STALL

(continued from page 1)

In future it will accommodate compiler algorithms and techniques to maintain application performance. The company plans to introduce dynamic partitioning by the end of next year, which will include Compuware's ~~Eco-Tools distributed management performance software - its not clear whether~~ this will be integrated with Uniface - presumably providing some kind of hybrid 'intelligent' partitioning. It'll apparently allow some development and maintenance to be done in the deployment environment. Meantime Compuware has three other developments underway to extend Uniface's partitioning functionality. Distributed Computing Manager (DCM) is an option for the current version of Uniface which provides interfaces to on-line transaction processing (OLTP) monitors and supports DCE Remote Procedure Calls (RPC). An initial DCM version will interface with CICS and Tuxedo with support for Encina planned. DCM comes with a Distributed Form Server which enables developers to build application forms on the client and subsequently deploys the appropriate forms on the server avoiding processing overload or "fat clients". DCM supports Windows 3.1 with the Distributed Form Server up on HP, IBM and Sun servers. With the 6.2 update, Uniface will offer PolyServer, a distributed processing agent enabling Uniface forms, operating system commands, RPCs and DCM-supported external services on the server. Developers can segregate any or all application processing from the desktop application and database server. PolyServer acts as an intermediate server, enabling the presentation layer to run on the desktop or "client tier", the data processing layer on the DBMS server third tier and the application layer on the intermediate tier. This avoids processing bottlenecks by assigning specific processing tasks to the systems best able to deal with them. Mainframe database drivers for DB2, IMS and VSAM and PolyServer are due in the first quarter of 1996.

## TADPOLE, HAVING TO WRITE DOWN £2.4m OF POWERPC INVENTORY, MAKES £9.9m LOSS

Tadpole Technology Plc has been toying with the affections of its shareholders ever since it floated on the London Stock Exchange three years ago - but investors cannot in conscience complain because the prospectus pulled no punches and was full of scarcely-veiled wealth warnings, such as the paucity of profits in the company's trading record. Chief executive George Grey admitted that the Cambridge-based high-end notebook manufacturer had been a big disappointment to its shareholders. This year, promised Grey, things will be different. Tadpole suffered a big blow in May, when IBM Corp cancelled a follow-on contract to manufacture the RS/6000 N40 PowerPC notebook, which had accounted for 26% of sales. The company also cut its US 70-strong US workforce by 30 people and closed the manufacturing facility in Austin, Texas, where the N40 was built. This cancellation contributed to part of the £2.4m exceptional inventory write-down that Tadpole had to take in its figures for the year to September 30, released last week.

### Headcount reductions

Pre-tax losses were up to £9.9m, after the charge, from £1.3m last time. Tadpole shares plunged 15 pence, or 17%, to 73 pence at the news, before recovering to 80 pence later on. Just last March it raised £2.5m net of expenses with a placing of 1.25m new shares at 201 pence per share. Turnover for the year was down 26% to £24.2m, indicating that if the IBM contract had been maintained, revenues would have been flat, according to Grey. The headcount reductions and other restructuring in March saved the company £1.0m in expenses in the year, and they will be £1.6m less this year than last, despite anticipated "significant revenue increases," according to Grey. He said the company had hoped to make up the revenue shortfall with increased sales of the P1000 Intel Corp Pentium-based notebook, but it was marketed badly, and sales had "not advanced to expected levels," said Grey. The causes for optimism about this year's sales include further Pentium-based products and the new AlphaBook, based on Digital Equipment Corp's Alpha chip. Grey would not reveal details, other than that the launch is planned for this month. Sales of the SparcBook notebook are also said to be growing, with the recent introduction of the SparcBook 3GX. Grey insisted the products had "very strong growth prospects." But Tadpole will never position itself as a competitor to Toshiba Corp, IBM or Compaq Computer Corp in the portable computer market, and it will never serve anything other than a niche market unless it diversifies. But it felt there was enough room in a workstation-class notebook market, worth around \$160m, according to Dataquest's figures quoted by Grey, for it to prosper. Tadpole said it did have plans for Pentium Pro, but "not in the near future". Product development costs rose 4% to £3.0m in the year, representing 13% of sales, but will decrease this year. Obviously, Tadpole will not pay a dividend. The lower costs, new products and better marketing are the company's reasons to be optimistic for a better 1996, but it was not making any firm predictions.

## DEC ADDS FOUR VIDEO SERVERS TO ITS MEDIAPLEX LINE

Despite having sold its newsroom automation systems business to Avid Technologies Inc, Digital Equipment Corp wants us to believe that it wants ~~to play a full part in the interactive television world, and has announced four~~ new interactive video servers supported by its Mediaplex video server architecture. The new offerings are the Mediaplex 24-channel and 40-channel ad insertion systems, and the Mediaplex 12-channel and 24-channel near video-on-demand systems. The company reckons that, using existing analogue wiring, the Mediaplex servers enable cable and telephone companies to win additional business by inserting locally customised commercials on cable channels or giving viewers more choice of pay-per-view programming and expanded schedule options. The 24- and 40-channel Mediaplex ad insertion systems digitally encode commercials using MPEG-2 compression, store and distribute them over cable networks to a pre-selected audience. Both are designed to encode and distribute a 30- and 60-second spot to a cable operator's network in an hour or less. They offer local storage of 300 or more 30-second encoded ad spots and automatic verification of completed spots from the system for customer billing. They cost from \$8,000 per channel - at that price you would be paying \$320,000 - from February. The concept of near on-demand services is that the same movie or whatever is started every 15 minutes or so, so no-one has to wait longer than that to start viewing, and DEC says the Mediaplex Near Video-On-Demand systems offer the ability to broadcast multiple movies and other pay-per-view programming according to any schedule over existing analogue infrastructures. They can be used to program closely staggercasted distribution of one movie, a wider range of movies with more delay between streams, or any combination of the two. An optional encoding station is available so that service providers can digitise their own content. The system is available in two configurations - an Alpha-based server, priced at \$180,000 for up to 12 video streams at 8Mbps with capacity to store up to 18 hours of encoded content, also at 8Mbps. A smaller one for up to six video streams is available for \$150,000, now. A second AlphaStation system, at \$200,000, provides up to 24 channels of output with the capacity to store up to 18 hours of content and will be out in the second quarter of 1996. DEC also announced a deal with Macromedia Inc, San Francisco under which the two will create a development system for applications that can be deployed on personal computers, the World Wide Web, and interactive broadband networks. Called the Mediaplex Application Development System, it will come bundled with Macromedia Director, Extreme 3D and xRes. The products will enable developers to create client applications that run on set-top boxes or personal computers; hardware is an Alpha-based Mediaplex Development Server and a Pentium-based multimedia personal computer.

## NEW TWO-PHASE COMMIT, ESCON LINKS IN HDS OSIRIS OPEN SYSTEMS SUITE

Hitachi Data Systems Inc has revved the transaction processing monitor component - OpenTP 1 - of its Osiris open systems environment suite which runs on all of its IBMulators. OpenTP 1 release 3.1 (the TP monitor also runs on Hitachi's SR4300 re-badged IBM RS/6000 SP parallel processors) allows Osiris to function as an application server with two-phase commit management, the company says. Osiris also includes a new release 2.0 of Hitachi's OSF/1 implementation, HI-OSF/1-M, with support for Escon channel, the latest HDS Skyline S/390 systems and newest disk arrays. EpochServ-M release 2.1 can now backup and archive NetWare, Solaris and AIX servers and NetWare, DOS, OS/2 and Windows clients, plus Oracle7 databases. As well as DCE-Base-M, Osiris also includes a new sequential access SA.1 release allowing users to access formatted sequential data on MVS systems that share at least one disk with a HI-OSF/1-M system without requiring an MVS TCP/IP application. Also new is an Hitachi-developed performance management module based upon the Data Capture Interface of X/Open Co Ltd's Universal Management Architecture. It'll licence the stuff to third parties.

## CONVEX ADDS MESSAGE-PASSING

Convex Computer Corp's Exemplar SPP (Scalable Parallel Processor) now features both message passing and a shared memory architecture courtesy of a Message Passing Interface (MPI) library the company is offering. MPI is said to allow programs written using message-passing models to run unchanged on parallel processors, SMP systems and networks of workstations alike. MPI is claimed to reduce the complexity of programming because developers can use SMP programming, message-passing or a combination of both methods. In addition Exemplar tags have been cut; the entry-level SPP1200/CD is priced at from \$147,000, an eight-way SPP1200/XA is from \$350,000.



### CRAY CLAIMS FIRSTS IN NEW PARALLEL T3E MACHINE

Cray Research Inc has duly unveiled its new Cray T3E scalable parallel processor and claimed \$92m in advance orders for the system. The Digital Equipment Corp Alpha RISC-based machines scale to 2,048 processors for a theoretical peak performance of 1.2 TFLOPS; the entry price is lowered and upgrades can be made in smaller increments than with the T3D. It comes with a new Unicos/mk Unix System V-derived operating system and GigaRing scalable input-output and networking channel, which will also be moved into Cray's current and future supercomputers and even its business servers. Cray claims Unicos/mk is the first truly scalable operating system: the single operating system has a series of microkernels which are distributed across the system. It is designed to provide a single image and coherent view of all system resources for users and system administrators. Within the operating system, local "servers" process requests local to each processor, while global servers process system-wide requests. Where other vendors require a new copy of the operating system to be installed on each new node when a machine is expanded, Unicos/mk only needs to be told the new number of processors. The GigaRing channel is described as the key component in the high-speed input-output and networking subsystem, with "virtually unlimited" capacity to store and move data into and out of systems at a peak speed of up to 128G-bytes per second, supporting Petabytes - millions of Gb - of disk capacity. The GigaRing, based on the Scalable Coherent Interface, is a bi-directional, dual-ring channel providing high-bandwidth connections in excess of 800M-bytes per second. Users are able to add input-output capacity to the system as it is needed. It supports distances of 35 feet between nodes, 600 feet with an optical channel option. The T3E machines range in price from \$900,000 to \$45m. As it did with the T3D, the Pittsburgh Supercomputing Center will get the first T3E, in March.

### ADOBE SAYS FRAME TAKEOVER, WILL BE THE LAST FOR NOW

Adobe Systems Inc, Mountain View, California has now completed its \$460m acquisition of document imaging software maker Frame Technology Inc and that it is running out of new takeover candidates for the time being, president Charles Geschke told *Reuters*. Geschke predicted few, if any, problems in meshing the companies' engineering and sales groups. But he said that the companies will cut their combined worldwide staff by 150 people, or 7%. Adobe will take a related charge in the fourth quarter to November 30, but Geschke said the size was still being worked out. He declined to give an estimate. The acquisition of San Jose, California-based Frame, which sells desktop publishing software to the Unix market, follows Adobe's \$525m purchase of Aldus Corp last September. Adobe stock gained \$3.75 to \$58 on the news. "In terms of large software companies, there aren't a lot left to look at, so we're probably not going to be pushing for a major acquisition at this point," Adobe president Chuck Geschke told the news service. Adobe also tidied up its corporate structure, handing the chief operating officer position held by president Geschke to the two senior vice-presidents, Stephen MacDonald and David Pratt, who were handling its functions. Before the deal with Frame, Adobe had started to put together an Internet bundle for a Unix-based operating system, consisting of desktop publishing programs FrameMaker, Illustrator and PhotoShop. The acquisition will enable Adobe to sell its publishing software to the Unix market, the computer system on which many firms run their main operations. Conversely, Adobe is looking to sell Frame products to the personal computer market. Geschke said Adobe could do a much better job for Frame in expanding its market for Frame in the personal computer and Macintosh channels. "It turns out that there's essentially no customer overlap between (Adobe's) PageMaker and (Frame's) FrameMaker, so we think there's a good opportunity for some upside," he declared.

### SOFTBANK, UNITECH, JITONG OFFER INTERNET ACCESS IN CHINA

Softbank Corp is to launch the first countrywide Internet access service in China with its US affiliate Unitech Telecom Inc and Jitong Communications Co. Jitong will provide infrastructure, including use of a satellite, and handle procedures with the Chinese government, Unitech will provide systems and software, maintenance and marketing services, while Softbank will provide \$10m in financing and handle service relations with network equipment manufacturers and other software developers.

### 5.8 MILLION US INTERNET USERS SAYS SURVEY

How many people are on the Internet, 25, 30, 40 million? According to the "first statistically defensible study of Internet users" the whole of the USA only contains 5.8 million Internet users. The study, put together by Internet veterans, O'Reilly and Associates, and Trish Information Services is the first phone poll to specifically target Internet and online use. 29,901 individuals were canvassed in the random-dial survey giving a sampling error of less than 1%, according to O'Reilly. The previous dearth of hard data is highlighted by the fact that the company got funding from International Thompson Publishing, IBM, Lotus, Turner Broadcast Systems/CNN, MCI/News Corp Online Ventures and a few others. Research sponsors pay \$25,000 a year for the privilege of shaping the research and getting unlimited access to the results. The study defined 'Internet users' as people of 18 years of age or over who have direct access to the Net and use email as well as one or more Internet-specific applications, such as FTP, gopher, telnet or Web browser.

#### Universal

When sizing the Internet, the company made the bold, but sensible decision to exclude people who connected via a commercial online service, explaining that "as their access becomes more universal and their tools more complete, such users will be included in future studies." O'Reilly discovered that Internet users already out-number users of traditional online services quite considerably: the US has 3.9 million people whose only online activity is through a conventional online service; compared to the Internet's 5.8 million (about 1 million of whom also use an online service). As for growth, the company predicts that the total online population will grow to 15.7 million; the number of pure online-service users is reckoned to remain constant at 3.9 million, with a further 6 million using both online and Internet services and 5.8 million using nothing but direct Internet feeds. A weakness in the survey is the way it ignores the under 18s.

### GARTNER GROUP TO BUY DATAQUEST FROM DUN & BRADSTREET FOR \$75m

Stamford, Connecticut-based Gartner Group Inc, with one of the tiny handful of blue chip names in computer industry research, is buying another. It is to pay Dun & Bradstreet Corp \$75m in cash and shares for Dataquest Inc, San Jose in a deal that actually increases Dun's stake in Gartner - it currently owns just over 50% of Gartner. Dataquest will gain from Gartner's extensive global distribution network and Gartner Group will benefit from Dataquest's solid presence in Europe, Japan and the Asia-Pacific region, the companies said.

### STEVE JOBS STORY TAKES UPTURN

Pixar Animation Studios Inc has done the business for Steve Jobs - its initial public offering made him a paper billionaire for the first time, with his stake valued at \$1,200m at the \$39 a share first day close - more than his Apple Computer Inc shares were ever worth while he was there - and that for a firm bought for an estimated \$10m, but he has invested at least \$50m. Pixar created its own cluster of 117 Sun Microsystems Inc Sparcstation 20 workstations - 87 duals and 30 four-processor models, to handle the rendering of each of the 114,000 frames in the 77-minute Toy Story movie from Walt Disney Co (in which Jobs gets an executive director credit). Pixar now plans to develop a parallelised version of its software to exploit Sparc and Solaris multiprocessing multithreaded architecture.

### SOFTBANK JOINS REUTERS IN YAHOO ROUND OF FUNDING

Yahoo Corp, the Mountain View, California Internet services company best known for its Internet directory, sold stakes totaling 12% in itself in its latest fund-raising exercise. Reuters Holdings Plc took nearly 21% of the shares on offer. Reuters and Yahoo are not talking money, but Softbank Corp revealed that it paid \$2m for a 5% stake in the round, so it looks as if Reuters paid \$1m and that the total raised was \$4.8m. Sequoia Capital, Canadian company Open Text Corp, and the Capital Corp put up the rest of the cash. Reuters extended its news supply commitment to Yahoo through to the end of 1999. Yahoo claims its World Wide Web site is visited by some 600,000 users per day and is one of the most popular sites on the Web.

## WAREHOUSING WANNABES: "THINK BIG, START SMALL" SAYS REPORT

By Ray Hegarty

With a market that's expected to be worth in the order of \$9,000m by 1997 every vendor and integrator worth its salt is clamouring for a few crumbs. And not just vendors, but countless analysts, market researchers and consulting outfits too. Following its recent investigation into so-called shared-nothing architectures (UX No 551), UK company ButlerBloor Ltd has dived into the warehousing hubris, filling a new tome called ~~Data Warehousing, Strategies and Technologies with its thoughts on the matter. The long and short of its investigation leads it to conclude that despite the~~ hype and relative immaturity of the technology and the market it is the most significant trend to emerge in information technology in a decade. Moreover, information technology, it believes, has come of age. Whilst traditional approaches have served the administrative and production side of business well, data warehousing promises not just efficiency, but a flexibility and responsiveness geared towards gaining business advantage rather than simply automating tasks. It takes to task some of the misnomers about data warehousing, outlines a general approach to implementing data warehouse strategies and considers some of the technology currently available.

### Hype

The hype surrounding data warehousing is attributed in large part to the established database vendors, which have been re-invigorated by its advent after an apparent loss of influence in recent years to the tools community. Data warehousing of course brings databases back to centre stage. As a result, vendors have rushed headlong to embrace it. Oracle, IBM, Software AG, Computer Associates, Informix and Sybase are expected to lead the market next year and have each rewritten or added to their code bases to improve their warehousing standing. They have day-one data warehouseers such as Prism, VMark and Red Brick waiting to pounce, though ButlerBloor believes these companies will probably capture only small market shares, being small fishes in a big pond. And as befits the ecology of such an environment, the smaller are likely to be swallowed by the bigger.

### Solution

Probably only IBM is able to provide a total solution from its own product set the report notes, most others require partnerships for "best of breed" technologies. Many have also allied with niche suppliers to develop pre-packaged solutions. These kind of one-stop solutions now available are "capable" although the report recommends mix 'n' match approaches that combine warehouse management software, an optimised parallel database and data-access tools plus parallel hardware. Indeed in this light data warehouseers need not concern themselves with trying to drum-up a total solution it concludes. Many so-called total solution providers have in any case to call on third parties for help with replication, data bridging and other specialised techniques. It does however commend off-the-peg providers for their high level of integration and consulting skills. For those looking to get warehoused: "think big, start small" it suggests.

### Top marks

Technologies evaluated include decision support tools, middleware and the database. Decision support tools are proliferating but are relatively immature it advises. Newcomers such as Data Analyser from Harvard, Massachusetts-based Attar Software and the data mining KnowledgeSeeker from Toronto, Canada-based Angoss Software get a nod, though Cognos Inc's Powerplay software gets top marks. Software AG Esperant comes a close second. Operating system and standards support, languages, query/reporting, analysis techniques, database support and EIS were the report's considerations. Esperant's support of heterogeneous joins is cheered, along with its ease of use (no need for Knowledge of SQL or database structure) while security and administration is weak. MicroStrategy Inc DSS Agent and Oracle Discoverer/2000 come bottom of the pile. Discoverer/2000 has key drill down and graphical reporting functionality but little feature support. Others considered were Planning Sciences Gentium, Informix New Era, Sybase PowerBuilder, Business Objects and IBM Visualizer

### Runner-up

Connecting data sources is best done by middleware. In general Information Builders Inc's EDA/SQL gets ButlerBloor's vote although the report omitted it from the product ranking, which includes IBM CICS and MQSeries, Sybase Enterprise Connect, Software AG Entire, HyperStar from VMark Software, MitemView from Mitem Corp, OpenLink Software ODBC Drivers, PeerLogic Pipes, Sequelink from TechGnosis, Top End from AT&T GIS and Novell Inc Tuxedo. Of those ranked, Enterprise Connect from Sybase came top of the class overall, with strong third party support plus accommodation of ODBC, DB-Library, DRDA and all types of relational and flat file database topologies. Its downside however is its lack of support for a global directory service, although Sybase said it had plans to provide support in future releases. Lumped in the middleware section the report gave Tuxedo runner-up status, rating for its high performance, strong development tool support, standards observance, strong market share and wide distribution and vendor alliances. The report expressed reservation about Tuxedo's limited support outside Unix. IBM's two

offerings, MQSeries and CICS were considered only average while bottom of the product ranking was Praxis' Omnireplicator and VMark's HyperStar which was criticised for the limited number of databases supported - Oracle, Informix, Sybase, Gupta, uniVerse and Ingres - limited client support with Windows and Unix and the need for greater marketing exposure in the face of increasing competition.

### Gain

The new breed of databases such as Red Brick's Warehouse VPT combine high performance, query optimisation and multiple dimensions, and are, ButlerBloor says, particularly suited to data warehouse applications. However established database vendors, still heavily dependent on support for OLTP, are now providing parallel options that deliver the kinds of response times required by warehousing. It indicates their ability to adapt for query as opposed to OLTP optimisation. Emerging database vendors, Arbor, AT&T, Red Brick, VMark and the like appear to be making inroads into the warehouse market. The report evaluates IBM's DB2 family, Computer Associates CA-OpenIngres/Replicator, Informix DSA, Sysdeco Mimer, Oracle7 release 7.2, Red Brick VPT and Velocis from Raima Software.

### Support

Evaluation of architecture, data types, data structures, indexing, performance tuning, concurrency control, distributed database, management and interoperability left DB2 and Oracle on top of the report's list followed closely by Sybase. ButlerBloor says IBM's often confusing and conflicting marketing message - providing varying images for the same product family - hinders the product's success. It does not believe a unique instance of the database for each platform best serves customer requirements. Oracle7 supports the broadest range of applications, including data warehousing, distributed database and on-line transaction processing. Oracle has responded to the warehousing market by supporting increased ad hoc query optimisation, as well as the OLTP applications through stronger performance, the report concludes. Less impressive was its limited support for complex data types and third party databases. Bottom of the pile came Essbase and Red Brick VPT. Databases for the warehouse such as AT&T's Teradata have delivered very high capacity parallel database technologies, where database management systems such as Oracle and Sybase run in parallel configurations. Other high capacity databases such as OmniWarehouse from Praxis International are also up to the job. Specialist hardware suppliers such as White Cross Systems Ltd, Bracknell, Berkshire offer a highly cost efficient route to data warehousing the report concludes. Initial adopters of new technology can expect to gain most in this market the report says.

### Safety

Bridging data from one location to another, even correcting and validating it en-route, is dominated by three companies, Prism Solutions Inc, Sunnyvale, California with Prism Warehouse Manager, Carleton Corp with Passport and California-based ETI Corp's Extract. It's the process of updating the warehouse where most of the operational problems occur and as a result nearly every data warehouse solution incorporates at least one of these three vendor's solutions. These processes include data retrieval, consolidation where various data types are merged into a master set, scrubbing, in which data is cleaned moving inaccuracies, summarising, in order to obtain a reasonable response time from any query, and the updating of the repository for current and consistent metadata. Each does it effectively, ButlerBloor says. The report concludes that there's much to be said for the safety of buying a recognised solution from a single vendor for non-technical applications where there are few complicated relationships to manage. Integration is likely to be smooth and overall price negotiable. Where the technical requirement is greater, the report advises customers to "spend some time watching the market and choose the products that provide the best fit for the organisation. If the resource is available, go for 'best of breed' and reap the benefits."

## THINKING MACHINES UNWRAPS PARALLEL SOFTWARE FOR SPARC; SGI, INTERNET AND PC IMPLEMENTATIONS EXPECTED IN FUTURE

By William Fellows

Now re-incarnated as a software operation, Thinking Machines Corp last week formally unveiled the software on which it is pinning its hopes for future prosperity, calling it GlobalWorks. GlobalWorks is designed to harness Sun Microsystems Inc UltraSparc workstations running Solaris 2.5 networked ~~with Fiber Channel or ATM switches for parallel application processing or for use as individually-partitioned throughput nodes (UX No 564). The software comes from the Connection Machines parallel processors that Thinking Machines, now in Bedford, Massachusetts, no longer builds.~~

### New Darwin

The GlobalWorks 1.0 operating environment provides system-level software for configuring and managing Sun's 167MHz UltraSparc 1-based Ultra 1 Model 170 'pizza boxes' networked in a Thinking Machines cabinet, managed from a standalone Model 170 console as GlobalServer. It includes systems administration and an X Windows-based user interface with user-level commands that work alongside Solaris commands and Suntools. A run-time environment includes a single-system image - for networked workstations or SMP nodes - load-balanced job execution, and interactive and batch access to the server. The company believes the flexibility of its single-image software to delineate multiple throughput and parallel partitions puts it ahead of the competition. It includes other single image techniques such as a universal IP address. TM/MPI is the Thinking Machines implementation - as a C or Fortran library - of the standard Message Passing Interface for writing message-passing programs. A separate library contains a subset of MPI-IO routine which provides input/output for MPI processes. The Thinking Machines Transport Layer (TMTL) is described as a network-independent interprocessor messaging library providing an interface between the communications software and Ultra 1-based GlobalWorks Server. Internal networking protocol options supported are Asynchronous Transfer Mode (ATM) or optimised Fiber Channel (FC). Thinking Machines OEMs the Ultra 1s from Sun and kits them with either Fore Systems Inc ATM or Ancor Communications Inc FC switches. Ethernet, Fiber Distributed Data Interface (FDDI), and High Performance Parallel Interface (HIPPI) connections are supported for external network integration. Currently GlobalWorks only supports Unix database applications running in serial mode. Parallel implementations of Oracle, Sybase, and Informix will be supported in future. GlobalWorks 1.0 runs atop Solaris 2.5 and Thinking Machines claims all Solaris 2.5 programs will run without recompilation on its suite. Optional 1.0 features include the company's existing Motif-based Prism development environment which (for GlobalWorks 1.0) supports C and Fortran 77 serial programs, Parallel Virtual Machine and MPI programs. Sun's Fortran 77 4.0, C 4.0, C++ 4.1 and Fortran 90 1.1 compilers all work with GlobalWorks 1.0, which runs on the GlobalWorks server Model 100. The company's currently building a GUI that'll allow GlobalServer nodes to be automatically partitioned for use as mixed throughput and parallel jobs. It also has a data mining application called Darwin, originally designed for its proprietary Connection Machine parallel processors, which it is porting to the Ultra 1 as New Darwin, which will be available at the same time as GlobalWorks. It'll demo New Darwin, plus GlobalWorks and GlobalServer running on a partitioned system networked.

### Blinking red lights

Ultra 1 Model 170 units are housed in cabinets that accommodate up to 9 nodes as the GlobalServer Model 100. Communication between nodes is over a dedicated high-speed internal network, either circuit-switched fiber channel (FC) or packet-switched asynchronous transfer mode (ATM). The maximum configuration possible depends on which network technology is used. A 32-node, 4-cabinet system can support both; the 7-cabinet, 64-node configuration supports FC only. An Ultra 1 Model 170 workstation serves as system console (system administration platform) for the GlobalWorks Server. The console is connected to all GlobalWorks Server nodes via a 100Mbps Ethernet network. If connected to a site-based LAN as well, the console functions as a router, allowing access to the server from other systems connected to the LAN. \$200,000 buys a four-node system with 64Mb RAM and 2Gb disk on each unit, FC or ATM switches and a similarly-configured console. The company's retained the blinking red lights which characterised its CM line and expects first beta deliveries to begin in February with general ships by the end of the quarter.

### In the bag

Thinking Machines claims GlobalWorks is only the first stage of its plan to harness homogeneous, then heterogeneous systems for wide spread parallel processing tasks, eyeing the Internet, and especially the idle time of the tens of thousands of Internet servers and internal company net-

works as its logical objective. It envisages small-system and PC implementations of GlobalWorks initially and even conceives of the New Darwin data mining tools being used to interrogate Excel databases running on networks of PCs or Macs. Before this there will further releases of GlobalWorks to support Sun's Ultra 2 systems as the Model 200, followed by other SMP- and server-enabled releases when Sun delivers the hardware. It's also putting GlobalWorks up on other platforms, claiming to have two other vendors in the bag, one of them understood to be Silicon Graphics Inc.

### PARCPLACE GETS SMALLTALK WEBBED; PROMISED FUTURES ROADMAP BY YEAR-END

As expected (UX No 566), ParcPlace-Digitalk Inc, Sunnyvale, California, has created a VisualWave object-oriented development system for building web-based applications atop its VisualWorks 2.5 Smalltalk environment. Previewed at its August user conference as Wadsworth (UX No 550), the Internet-enabled version of VisualWorks includes automatic HTML generation and a CGI programming interface. VisualWave Database Connect provides access to Sybase, Oracle and DB2 databases. ParcPlace says it could have released VisualWave as a new version of VisualWorks but decided to treat the World Wide Web as another platform from which it'll create a family of products accordingly. Existing VisualWorks 2.5 users can add the Wadsworth option to their environments and ParcPlace claims existing VisualWorks-based applications can be Web-enabled with no additional coding. VisualWave applications can be run as a client and as a Web application server. The company promises OLE and Corba connectivity further down the road, the OLE functionality will be its own work, Corba ORB connectivity will likely come from its VisualWorks partner Hewlett-Packard Co which resells VisualWorks as Distributed Smalltalk with additional technologies, including Corba 2 Internet Inter-ORB Protocol (UX No 550). ParcPlace didn't wish to elaborate on how its partnership with HP might evolve such that future HP Distributed Smalltalk technologies could be resold in VisualWorks products. Support for Sun Microsystems Inc's Java is also anticipated. A VisualWave development environment is due this month on Windows and NT with other platforms due in the first quarter of next year from \$5,000. VisualWave server ships on Solaris, SunOS, HP-UX and NT next quarter priced from \$10,000. It supports most CGI 1.1-compliant web servers. St Paul, Minnesota-based Object/FX says it'll create a new component for its SpatialWorks geographic information system using VisualWave, claiming it'll allow users to view and analyse Web information geographically.

### Switch

ParcPlace says its promised roadmap for integrating VisualWorks with the VSE Smalltalk environment it inherited with the acquisition of DigiTalk Inc earlier this year (UX No 540) is currently out for review in the form of a white paper it plans to make public before the end of the year. The anticipated 3.1 cut of VSE will be "syntax-compatible" with VisualWorks, and the company promises a future product (a ParcPlace technology formerly code-named Van Gogh) with 95% class-compatibility. As well as a merged offering, first cut of which is expected within a year, the company claims it'll continue to provide distinct VisualWorks and VSE product families - it has new releases penned for the coming year - and says it won't force users to transition "anytime soon." A promised server-centric VisualWorks release called ServerWorks is still in the pipe, the suggestion is it'll be the vehicle for Corba, ORB (including SOM/DSSOM) and other additional connections. The company denies listening-post scuttlebutt suggesting integration of VisualWorks and VSE is being rolled further back in time than originally planned. However ParcPlace does admit the licensing strategy IBM Corp has aimed squarely at its vulnerable Digitalk VSE installed base - the Armonker is offering its VisualAge Smalltalk environment, plus service and support, at no cost for ParcPlace-Digitalk users willing to make the switch - will make gains at its expense, though only at OS/2 sites. "IBM is still OS/2-centric and VisualAge is OS/2-centric," ParcPlace maintains. VisualWorks incorporates "the most popular client platform [Windows], but offers an open server choice. We lose very little business to IBM." ParcPlace quotes IDC numbers giving it more than 50% of the Smalltalk market, with IBM claiming the largest other single share.

## ORACLE WOOS THE WORKGROUP

by Clare Haney, *Software Futures*

Oracle Corp appears in danger of losing touch with what made it great originally - its Unix-based relational database and to a lesser extent, its tools. It's interesting that even Ray Lane, the company's president of worldwide operations, has had to make a special point of stressing that the company is definitely not shifting focus away from these two core competencies in the last couple of months. Tellingly, he has admitted that this is the question users and analysts alike, most frequently ask him. So should Unix users be worried and are the messages currently coming out of Oracle reassuring or cause for concern?

### Hell-bent

The company after all seems hell-bent on getting into the consumer desktop arena by any means necessary. An example of this is the ongoing debate between its chief executive and chairman Larry Ellison and Microsoft Corp supremo Bill Gates. Ellison sees the era of the personal computer and Microsoft's "Information At Your Fingertips" vision fast drawing to a close. He advocates instead the dawn of the network computer, not quite a dumb terminal, but a machine that lacks both hard and floppy disks and CD-ROM access. All the information this device will use will come from backroom massively parallel Oracle (of course!) databases running on nCube hardware. This move back towards centralising data access all sounds a little too reminiscent of the heyday of IBM and its mainframes.

### Notes-killer

Certainly even taking a cursory look at the range of software it has available, you could be forgiven for thinking that Oracle aspires to be IBM. It currently has three separate databases (its own Oracle 7.x spanning the divide between the desktop and the massively parallel arena, and two via acquisition - Digital's Rdb relational database and IRI Software's multidimensional database); tons of tools - ranging from its Visual Basic clone Power Objects at the low-end up to Developer/2000, Designer/2000 and Discoverer/2000 (formerly its high-end Cooperative Development Environment toolset); systems management offerings; applications galore; data warehousing; middleware; a rather unsuccessful attempt at groupware - Ellison has admitted in the past that Oracle has "messed up" its Notes killer Documents - and much talk about Internet software. The list is seemingly endless. All Oracle is really missing is an operating system and the way the company and Sun are cosyng up together suggests that day is perhaps not too far off.

### Puzzling

But which out of all of this bewildering array of products is most important to Oracle? Well, depending on who you speak to at the company, all of them are. However, of late, Oracle has spent more and more of its time and resources on the desktop and workgroup arena, paying rather less of its attention to its traditional Unix base. To be sure it has recently unveiled its next major database release. Not as might have been expected, its much promised fully objectised Oracle8 product, but release 7.3, designed specifically to be data warehousing friendly. Nimish Mehta, vice president, workgroup solutions division at Oracle US, agrees that the appearance of release 7.3 hot on the heels of 7.2 might prove a little puzzling to users. He explained, "Release 7.3 did come really soon after 7.2. There may be confusion, but you can implement additional features in a sectioned off way - you can load 7.3 in 7.2 mode and we'll have free upgrades to support customers." On the subject of confusion, Oracle's executive vice president and chief financial officer Jeff Henley, has been at pains to put the record straight on the company's first quarter results for fiscal 1996. He admits they are not brilliant, but blamed poor European results and a shortfall in the number of licences sold. On the face of it, revenues up 39% to \$772m and net income up 43% to \$87m look pretty good, but that's before you add in a \$51m charge associated with the acquisition of IRI Software and compare the figures to the previous quarter's 52% increase in revenue.

### Rocketed

Let's take a closer look at those figures. While licence and other revenue grew only 24%, service revenue rose by 55%. It's intriguing to see the criticism often levelled at Oracle by its database rivals that it is more of a services company than a software one borne out by its own figures. Service revenues topped licence revenues by 6% - 53% versus 47% to be precise. As far as regions were concerned, revenues for Asia Pacific rocketed by 69%, while figures for the Americas were up by 44%, but Europe, Middle East and Africa (the UK and France were singled out for special castigation) could only manage a

23% rise in revenue. What's up? Well, there was a lot of blaming of previous European managers who wouldn't knuckle down to Oracle US's way of doing things and suggestions that the UK market in particular was already saturated with Oracle databases. Oracle UK admitted that its sales people needed to be better educated on the products they were selling and rumours of further redundancies were not completely discounted.

### In the red

So angered by the poor European performance was Oracle US that it has made available to those interested two sets of results for software licence sales, the first all inclusive and the second the result excluding EMEA growth (or lack of it!) In terms of server technology which still accounts for the bulk of Oracle's \$350m licence revenue, some 67%, overall revenue grew by only 29%. Exclude EMEA growth and the figure climbs to 44%. The company has even produced a separate chart showing a decline in UK and French server revenue over the past two and a quarter years, down from over 40% of the total to 20% for the first quarter of 1996. However, Oracle can't blame EMEA for its negative growth rate for tools which makes up only 19% of total licence sales and the fall in overall growth to 11%. Take out EMEA and the growth rate remains in the red on 2%. Applications are the quarter's high spot and are Oracle's fastest growing business. They might only account for 14% of total licence sales, but experienced a 109% overall growth rate and, taking EMEA out of the equation, saw a 135% increase in revenue.

### Ironic

Given all this blaming of poor European performance, it is highly ironic that the exemplary user name on every Oracle US VP's lips back at the user conference in September was European car rental company - Europcar. At the event Lane and others proudly singled out the company's reservation system as a successful implementation of its database, claiming that it supports 3,000 concurrent Oracle users. Well actually it had 2,700 users at the last count and as for success - the project crashed spectacularly last April for a few days, losing the luckless client £816,000 in business and forcing it to revert to its mainframes to keep day-to-day operations up and running. It's great that the system works well now, but surely Oracle can't be advocating that other users need to go through the pain of the four year development effort that Europcar had to endure. Doesn't Oracle have any other 3,000 concurrent user success stories? Presumably not, since no other user name was forthcoming.

### Hybrid

Oracle still remains disturbingly quiet on another area of interest to all its database users - where does it go next? In other words, what are its object plans? There have been whispers that Oracle8 will see the folding in of both the Rdb and IRI Software databases into one unified Oracle whole, but the company's still playing a lot of its cards very close to its chest. This is despite the fact that one relational player Computer Associates (via its acquisition of Ingres last year) has already committed to an object/relational hybrid database through a deal with Fujitsu. According to Oracle's Ray Lane, "Objects stores are not that relevant in the market," and the general Oracle view could be summed up as, "Users just don't want objects yet." Isn't it about time the big relational players started getting a tad more serious about OO?

### Cautious

It's not just Oracle. Sybase claims its object database plans are so secret that not even its own personnel know what it's up to. To be fair to Oracle, Lane did also throw into his presentation remarks like "OO development is important" and "We are a big believer in objects" but this was counterbalanced by "OO has become a proving technology, but it is quite real. It holds a lot of promise for the end of the decade." It is possible to find squirreled away at an Oracle(continued on page 7)

## UNISYS UNFURLS OBJECT-RELATIONAL OSMOS FOR TP, DECISION SUPPORT

Unisys Corp will unveil its six-years-in-the-making Osmos object-relational database management system at DB/Expo New York this week (UX No 554). Designed with the telecoms market in mind, especially transaction-laden and decision support environments, Unisys says Osmos combines non-persistent relational storage with object-based application logic for data sources up to 1Tb in size. Unisys counts Morriston, New Jersey-based Bell Communications Research (Bellcore) as an early win and says it's been waiting for a market for Osmos to develop for the last year or so. It says Osmos differs from similar offerings from the likes of Illustra, UniSQL, Versant, Object Design or Ontos by dint of the amount of transaction data it can handle. Osmos' stems from Unisys' 2200 and A series mainframe development efforts. The team took a long look at relational database trends and the way semantic and object-type capabilities including referential integrity and stored procedures were being implemented. These solutions enable the relational databases to go some way in pushing the application code down to the server, but Unisys says they stop half way, failing to take advantage of all the

### Oracle woos the Workgroup *(continued from page 6)*

user conference a demo of Oracle's OO development tool Sedona and a trickle of information about Oracle8. There are two things to bear in mind at this point - one - Sedona and Oracle8 are very closely tied and two - Oracle is already being extremely cautious over when Sedona might appear. "Sedona is very difficult to develop. It should be out by the end of 1996, but if our last venture into multiplatform tools (the much-delayed PowerObjects) is anything to go by, it could be longer than that." So says Ray Lane. Take both points on board and you'll see that Oracle8 is way out there, probably not above being much of a reality until 1997 at the earliest. Developers have talked about pre-alpha code, but Lane claims Oracle8 will be in beta in the first quarter next year. However he has also continued to minimise its appeal. "Release 7.3 has made Oracle8 less important, because it does offer object/relational capabilities. The relational stuff will be taken out of 7.3 for 8.0."

### Scalable

From what I can glean of Oracle8, it is indeed an extension of the relational Oracle model we're all familiar with. It won't strictly speaking be an object database, but one that both supports object and relational data. The idea is that users will be able to store their data where appropriate, relational data in tables and objects in an object repository. The key differentiator will be that relational tables can be made to look like objects and therefore be treated as objects without losing their relational properties. As for Sedona, Sohaib Abbasi, US senior vice president at Oracle's tools product division, explained the rationale behind the tool, "The big projects people tried to develop using OO have all failed. The promise objects held has failed. According to a recent Gartner report, fewer people believe in objects than did five years ago. People have played around with C++, Smalltalk and Object Design. They've learnt from their mistakes. They've learnt to stay away from objects for big systems development." Abbasi positions Sedona as being a tool that can allay such fears and bring users back to the object fold by allowing them to develop scalable enterprise level objects. "The only tool on the market that you can build components in is Visual C++ and that's some of the most complex code you need to write. Sedona will be our component modelling development environment, it'll be as easy to write apps as is using Power Objects or Developer/2000 - and so Sedona will become our component factory by integrating with those tools," he adds.

### Fantasy

Oracle is hard at work on an object repository for Sedona which it plans to integrate with both Designer/2000 and its high-end development tool Designer/2000. It's also going to use some third party products to achieve some of Sedona's aims, including Object Bridge from Canadian software vendor Visual Edge. The tool has four key objectives: to evolve the relational model so users can record more semantics with the tool; building event-driven object user interfaces; supporting software component infrastructures, such as OLE, OpenDoc and CORBA; and finally developing Oracle's CASE tools to the next level. This last feature is an interesting prospect given that the newly GUI-ed Designer/2000, culmination of Oracle's CASE work so far, can only support Windows. Larry replies: "It's not clear if Designer/2000 will ever be on Motif or Unix. We're currently torn between developing products as quickly as possible and making them portable." This is obviously a worry to Unix users if this proves to be a strategy that the company applies to other products within its portfolio. And let's give Mr Ellison the final word. "We're both a service and an applications provider. There's a chance if we execute well that we'll become the dominant solutions provider in computer industry," he boasts. Though with a touch of hubris he added: "That's our fantasy." Nice idea, but not one designed to make Unix database and tools users feel particularly comfortable about their future with Oracle.

object database techniques available. Relational databases fail to embrace encapsulation, which enables extensibility and reuse. As a result stored procedures in the relational database use proprietary languages and rely on programmers to code most of the data integrity features. Osmos applications win out over comparable relational database applications, Unisys says, because of the increased responsibilities the database assumes and by the delivery of mechanisms such as abstract data types, hierarchies and bi-directional relationships, which provide more flexible data structures, enabling the user to grapple with real world business problems. It's not about to throw out the baby with the bath water, however, and has adopted relational techniques such as SQL3 and set-based querying in Osmos. Cocking a snook at object databases, it says persistent storage for object-oriented programming has typically developed with application design tools such as CAD and CASE in mind. Osmos is geared up for mission critical applications which sits uncomfortably with persistent storage. CAD or CASE applications typically load a lot of objects into local memory, manipulate them and store them back in the database, Unisys says. An on-line transaction processing and decision support environment uses multiple versions of an object, involving querying and constant updating, where locking objects for long periods of time is not practical. Osmos is available on Unisys Unix SVR4, Solaris, Dynix/ptx, UnixWare and NT from \$42,500 for 32 users.

## HOLIDAY INN ORACLE+UNIX SYSTEM TO REPLACE MVS

The Bass Plc hotel and motel chain Holiday Inn Worldwide has begun implementing its new, client server-based integrated hotel management system, code-named Galaxy, and has licensed the marketing and development rights to IBM Corp for an undisclosed sum. The system, which integrates the hotel chain's central reservation system with the front desk systems, was developed by Herndon, Virginia-based Intelligent Networks Inc, a start-up company that had barely finished writing the basic system when Holiday Inn bought it last February. The Holiday Inn chain currently runs its reservation system, Holidex, on IBM mainframes, and uses different front desk systems, Encore Systems Inc's Encore in the US and Sulcus Hospitality Inc's Landmark system in Europe. IBM is helping develop and customise the new system for Holiday Inn, and will develop interfaces to the reservation system from the existing front desk systems, to enable Holiday Inn initially to implement only the new reservation system. The company expects this initial implementation to take between 18 months and two years. It will then phase in the new front desk systems over a further year.

### Optimise room occupancy

Dick Smith, senior vice-president of Holiday Inn Worldwide said the advantages of the new system are that it links the availability of rooms worldwide with a database of customer profile information, enabling the company to optimise room occupancy. He said the system architecture meant that it was highly scalable, and equally suited to small hotel operations as it was to Holiday Inn's 2,000 properties worldwide. It is written under Unix, using an Oracle Corp database, and therefore is portable to a wide range of hardware. Smith said the company had not finalised its hardware strategy: although IBM was involved in the development of the system, this did not automatically mean that it would be supplying the hardware. Under the licence agreement, IBM will start marketing the system to the lodging industry worldwide in the second half of 1996. It will be offering the core system only, not the Holiday Inn-specific enhancements. It intends to offer the system either on a bureau-style basis, as a network-based system through its IBM Global Network, or as a stand-alone system. It will also offer systems integration to hotels that want to integrate the central reservation and front desk function. Holiday Inn will receive a royalty on all systems sold by IBM. Dick Smith said Holiday Inn had already had considerable interest in the system from other hotels and believed that it should recoup its investment in the system, and see "significant revenues" from system sale during the next 10 years.

# unigram·X

The weekly information newsletter for the UNIX™ community worldwide

**Netscape Communications Corp** has gone to **Software.com Inc**, Santa Barbara, California, for its PostOffice secure server-based electronic mail package and launched it as Netscape Mail Server at \$500 for NT and Solaris this quarter and for other Unixes starting next quarter.

**IBM Corp** seems to be hedging its Internet bets, and while it is said to be considering licensing Java, it is also working on its own Web-executable language, described by observers as a combination of a new language called Bart, and LotusScript, the development software that is planned to ship with a future release of IBM's Lotus Notes.

**Informix Software Inc** is integrating Computer Systems Advisers Inc's Silverrun business process and data modeling workbench into its New Era Windows-based application development environment. Developers will be able to create SuperViews for integrating data from multiple tables into single view tables for user access. CSA offers a bi-directional interface between Silverrun and Informix OnLine Dynamic Server and SE databases. The product is due for release in the first quarter of 1996. CSA is based in Woodcliff Lake, New Jersey.

**BMC Software Inc** had warned that it was on the acquisition trail and it has duly snapped up two companies on undisclosed terms: Santa Clara, California-based **Peer Networks Inc**, developer of Simple Network Management Protocol tool kits and San Diego, California-based **Hawknet Inc**. Houston, Texas-based BMC intends to integrate Peer's SNMP tools, including its Optima systems management architecture into its own Patrol agent architecture, as well as sell them separately; the same goes for Hawknet's NetWare server tuning tool.

On learning of trade reports suggesting **Hewlett-Packard Co** is already developing workstations around early prototypes of the P7, **Intel Corp** executives were heard to shout "garbage!" Yes, the project's been moving forward in a more timely fashion than expected, and yes, binary compatibility between Intel's iAPX-86 and HP's PA-RISC runs to more than a million lines of code. But there certainly ain't no P7 prototypes anywhere inside HP.

**Illustra Information Technologies Inc**, Oakland, California, has released version 3.2 of its Illustra Server object-relational database management system. Enhancements include support for repeatable reads and a high-speed locking manager. In addition, read-only transactions have been optimised. Version 3.2 runs on SunOS, Solaris, Irix, and Windows NT. It costs from \$1,250 per concurrent user.

Georgia-based **Moai Technologies Inc** will announce a Business Object Architecture for creating database-enabled applications on the Web at the Database and Client/Server World being held in Chicago, Illinois this week.

**Hewlett-Packard Co's** integrated its HP OpenMail messaging system with its OpenView network management solution, allowing, it claims, customers to manage enterprise messaging environments with the same tools used to manage networks and systems.

The Redwood City, California arm of Israeli Internet security house **CheckPoint Software Technologies Ltd** has recruited John Cunningham from RadioLAN Inc as VP sales.

**Persistence Software Inc**, San Mateo, California, has appointed James Berry VP of international operations to oversee all sales, distribution and marketing in Europe and the Pacific Rim. Berry has worked for Objectivity Inc, Sybase Inc and Informix Inc.

**PostModern Computing Inc**, Mountain View, California, has ported its ORBeline 2.0 object request broker to HP-UX, IBM AIX and Digital Unix, and added OLE interoperability with OLE. ORBeline is already up on SunOS, Solaris, SCO, Windows NT and Windows 95. A Unix-based developer's license for costs from \$5,000 with runtime fees of \$250.

The collection of vendors which are bandying to create a common set of 64-bit Unix API specifications apparently haven't yet agreed on a timeframe to begin detailing their plans, even though the basic spec is supposed to be worked out by the end of the year (UX No 552).

In the UK, **Siemens Nixdorf Informationssysteme AG's** Pyramid Technology will recruit up to 50 VARs to peddle the complete SNI RM server line. Ex-Tulip Computers managing director Terry Cooke is on-board as sales manager for the indirect channel. Pyramid reckons it can win at least 10% of the UK indirect market market inside two years. **Pyramid** has appointed Peter Capelli as VP of intercontinental sales, responsible for direct sales in the UK and the indirect channel in Europe.

**McGraw-Hill Inc** has decided to throw in the towel as far as *Open Computing* goes but not before making Rikki Kirzner editor for a day. She came over from *Datquest* some little while ago to join the staff as technology editor. Pink slips were handed out the day before Thanksgiving. Don't take it there's a problem with Unix, we understand the paper lost its focus.

The **UnixWare Technology Group** (UTG) has found it's not as easy as it thought it would be turning itself into the **Unix Technology Group**. A hue and cry has reportedly been raised with X/Open Co Ltd over its impudence in assuming to represent all of Unix. Let's see how they negotiate that little pothole.

A couple of **Novell Inc's** once fair-haired boys, Toby Cory, VP of marketing for the old Operating Systems Division and Joe Firmage, VP and general manager of the Tools Division, have lost patience with things over there and departed to set up their own Internet company.

**Versant Object Technology Corp** has seen off rival **Object Design Inc** at London based-Mobile Systems International (MSI), winning the cellular network planning and design company for its object database system which will be used to develop a Network Planning Tool.

**UniForum's** snagged Lou Gerstner, Lew Platt and Alok Mohan, to keynote at UniForum '96 in San Francisco's Moscone Center on Wednesday 14th, Thursday 15th and Friday 16th February respectively.

**Tandem** draws our attention to one error in last week's RMark 95 benchmark report. The two-way DEC AlphaServer 2000 4/275 actually costs \$325.6 per RMark, not \$242.3.

Ronkonkoma, New York,-based **InSync Software Corp** has integrated Englewood, New Jersey-based **Momentum Software Corp's** X\*IPC asynchronous messaging service into version 8.0 of its Passport three-tier application development system. InSync says it gives its customers the option of high-end asynchronous partitioning development alongside the remote procedure call and publish-and-subscribe methods Passport also supports. Passport is \$8,000 with support for RPC and messaging; middleware licensing is an additional \$200 per client or server. Two-tier Passport (without the support) is \$4,000 with no deployment fee.

**Integrax Inc**, Newbury Park, California, is the first of the Sparc-compatible builders to set out its UltraSparc stall, saying it'll deliver this month a 143MHz UWS1/140 workstation with 32Mb RAM, 1Gb disk, Turbo GX graphics, Solaris 2.5 and 17" screen at from \$14,000 - \$2,500 less than Sun's own Model 140. A base board, chassis and power supply system is \$9,000.

*HPCwire* says "it is not widely known that at midnight, April 1 1995, the number of people authoring Internet browsers exceeded, for the first time, the number of people creating ingenious but essentially irrelevant operating systems."

Although **Thomson Multimedia SA** snubbed its partner **Sun Microsystems Inc's** microSparc in favour of PowerPC for use its set-top decoders, the OpenTV interactive digital television alliance between the two continues (UX No 496). Now Ikonix Interactive Inc says it'll develop new applications and put its existing interactive TV software up on OpenTV. First OpenTV deployment - Sun is providing servers, workstations and networking - is delivering Sprint digital video services to eight schools in the Laguna Salada district of Pacifica, California.

Commands and utilities house **Mortice Kern Systems Inc** has opened a subsidiary in London, England. UK managing director Mike Scott has six staff to support the company's ten UK resellers. MKS has a European subsidiary in Germany. It says it's sold 50,000 Source Integrity licences worldwide.

At the forthcoming MIT-sponsored World Wide Web show in Boston, **IBM Corp** will detail plans for a 'secure' AIX/Web porting centre in San Mateo, California.

How **Hewlett-Packard Co** and **Santa Cruz Operation Inc**, which are still negotiating their relationship, are going to avoid emerging - in true Unix tradition - with two different operating systems remains to be seen (*see front page*). Their notions of trading SCOisms for HPisms at 32-bit and 64-bit junctures sometime down the road remains idle chat until they have a better idea what's going on. Currently there's no roadmap or list of the APIs ISVs should follow. Immediately SCO at least is hurrying to head off talk of there being two kernel exercises underway. It prefers to describe it as "two milestones that are related." A subtle distinction we gather. We are reminded of Alice in Wonderland and the White Queen and running twice as fast just to stay in one place. Just like Unix.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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Registered at the Post Office as a Newspaper

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15 DEC. 1995  
HBN

The weekly information newsletter for the UNIX™ community worldwide

London, December 11-15 1995

Number 568

## X-WINDOWS BOOKS BROADWAY STAGE FOR INTERNET PLAY

It's the end of X Windows as we know it. X Windows 11 Release 6.1 due next quarter will be the final X11 release. Like the rest of the industry, the X Consortium is taking itself off to the World Wide Web, readying a new family of products and technologies called Broadway it claims will "run any X Windows application anywhere on the Internet." The not-for-profit organisation says Broadway - slated to beta in May and ship in August - will allow users to invoke programs on remote Unix or Windows NT servers from their Unix, X terminal, PC or Mac Web browsers. X Consortium envisages PC/Mac X Server vendors upgrading their current connectivity products to support Broadway application servers running on Unix systems in conjunction with the popular web browsers. Broadway is also expected to work with the half dozen-odd mechanisms now on (or nearing) the market which allow Unix/X desktops to display Windows desktops and applications served from NT installations. Broadway incorporates what's said to be a new high-performance flavour of the X protocol designed for use on the Internet, an enhanced security mechanism plus an all-new audio system. It'll be backwards-compatible with X11 releases, though users will have to upgrade their X servers to Broadway technology to take advantage of the new Web functionality. The key difference between Broadway and something like Sun's Java language is that no code is actually downloaded on to the browser. Nevertheless, X Consortium claims remotely-invoked applications will run at native-like performance. "It's complimentary to Java," the organisation says, "a user could have a Java window and Broadway window on their browser." X Consortium believes Broadway and Java could even be merged further down the track. Broadway can also be used to create applications for conventional X11 environments - X11 effectively becomes a component of Broadway. X Consortium expects to be asked to create a Broadway-enabled version of the X11 R6-based Common Desktop Environment further down the line. Although Broadway's currently a code-name, the group's apparently had so much positive feedback it's already using the name as an X Consortium trademark and expects the name to carry over into product releases. X Consortium has a dozen developers working on the thing. The organisation believes one of Broadway's key commercial attractions will be the ability for users to try out applications remotely - such as new Windows 95 games and packages - before buying them. Broadway, described as an "alternative to the static HTML," produces a CGI-compliant component that runs on the browser.

## GATES, IBM CONCEDE; JAVA BECOMES DE FACTO STANDARD

Although largely unproven as a commercial technology, Sun's Java bandwagon has been building momentum. Last week both Microsoft and IBM hitched their Internet ponies to the programming language, stamping it as a de facto standard. Microsoft will write a Java API to be implemented as an OLE control that becomes part of an Internet scripting language built on Visual Basic and called Visual Basic Script. The Java API and runtimes for Windows will be turned over to Sun. The runtimes will allow Java applets to be run under all versions of Windows. Developers will be able to write Internet applications with Java and Microsoft tools and have them interoperate. Java applets can be inserted in applications written in Visual Basic Script. Web designers will be able to write pages using the Sun-Netscape JavaScript (see page 5) and be sure of compatibility with Microsoft's new Internet Information Server, aka Gibraltar, and Internet Explorer Browser. Windows source companies Bristol Technology and Mainsoft will port VB Script to Solaris, HP-UX, AIX and Digital Unix. Oracle will embed the language in its PowerBrowser. IBM will integrate Java in Web browsers, servers and Notes for OS/2, AIX and Windows 3.1, making those versions available over the Web. Adobe will integrate Java into future versions of its PageMill Web authoring software and Acrobat document software.

## ORACLE BUNDLES SOLARIS TO TAKE ON BACKOFFICE

Oracle Corp is bundling Solaris 2.5 from Sun as part of its plan to attack Microsoft Corp BackOffice on Intel Corp boxes. Oracle InterOffice, formerly code-named Bandwagon, will include shrink-wrapped Solaris 2.5, PC NFS Pro 2.0 and PC Admin. It's the first time Oracle's been moved to offer an operating system OEM and is the latest indication of the two companies synergies. There are two offerings: a departmental Workgroup InterOffice, priced around \$300 per seat and Enterprise InterOffice, which Oracle believes outclasses anything Microsoft's got. Oracle will port InterOffice to Windows NT and maybe other operating systems, but won't bundle them *a la* Solaris. InterOffice ships in April; both versions beta in December or January. Each version includes server software, clients and system management. Oracle has developed a couple of new pieces of software for this journey into the shrink-wrapped volume world of the Intel platform. One of them, code named Battlestar, handles software distribution, asset management and license management (UX 563). It is integrated with Oracle's pre-existing Enterprise Manager framework and enhanced with other features to create the InterOffice Management Pack which should be able to handle anything InterOffice throws at it from a secure single screen: database, application, network and systems management. Workgroup InterOffice is based on Oracle7 Workgroup Server; Enterprise InterOffice on the large-scale Oracle7. A server kit includes scalable MAPI-compliant messaging, document management and workflow developed internally as Pegasus. Windows and Web clients are included, and Oracle will embed Java to enable it to dynamically access data from the database.

## IBM SETS TIGERSHARK FOR INTERACTIVE NET VIDEO

With a few seconds to spare, and its people and its people's people on tenterhooks, IBM Corp's press conference about a press conference - in essence a technology demonstration of I-WAY, or Information Wide Area Year - sprang into life last Wednesday and saved any blue blushes. IBM and project partner Argonne National Labs held an interactive press conference over the Internet between sites in New York and Supercomputing '95 in San Diego. With a 100Mbps AT&T Co ATM network under the hood, the demo included an interactive question and answer session over a live video link, plus recording and playback of stored clips. Some 16 other sites were plugged into the streams. Eight IBM SP2 nodes attached to a 500Gb RAID subsystem served up a single system via IBM's Vulcan High Performance Switch to a further 20 SP2s. The SP2s were running a new enabling technology called Tigershark, described as a parallel file system built on Unix which extracts video from disk and readies it for delivery across the net at 30 frames per second using Real Time Protocol, eliminating the usual jerky movements associated with digital video.

### Glue

As well as participating in the development of Tigershark, Argonne co-developed other software-enabling 'glue' including C and C++ parallel scripting languages for Tigershark to tie the various IBM components together and put the material out across the net, including stream feeders, catalog server and stream writers. IBM used AIX client systems running a CalTech-developed browser to front-end the session but expects in future that anyone with a 1Mbps (two-thirds T1 speed) or better connection - which includes ISDN - plus a Unix, PC or Mac browser supporting video decomposition could make use of the service. IBM plans to begin rolling out the architecture on pilot SP2 sites next year. Rather than buying all the components of what's a multi-million dollar set-up, organisations will rent application server space from IBM to conduct Internet-based conferences and meetings. IBM says it's already in talks with a bunch of cable and network providers. Does it sound like a souped-up version of one of the current crop of PC and Mac desktop video technologies which support the Cornell CU-SeeMe reflector? The key difference, according to IBM, is scalability. Tigershark can support up to 300 simultaneous streams: "it's a sophisticated multimedia player that provides live video feeds, recording and playback. Try doing that on your Mac."

### TADPOLE LAUNCHES ITS ALPHABOOK 1 WITH OPENVMS

Tadpole Technology Plc duly launched the Alphabook 1, claiming it to be the world's most powerful notebook computer - it is of course the first notebook driven by a Digital Equipment Corp Alpha 21066 microprocessor, which is speed-variable up to 233MHz. The Alphabook 1 runs the OpenVMS operating system rather than Digital Unix, although the latter is planned for next year, and comes in a "highly rugged" 7.5 lb notebook form factor. Aimed at software development, defence, communications, engineering and performance-critical commercial markets, the box is powered by an Alpha 21066-A with 512Kb level 2 write-back cache, integrated PCI system bus interface for high-speed access to graphics, PCMCIA and SCSI interfaces. Removable 2.5" SCSI-2 hard disks storing 520Mb, 810Mb or 1.2Gb are available, and system memory is user-upgradable using SIMMs from 32Mb to 128Mb; it includes a 3COM Corp Ethernet board and supports an optional 28.8Kbps PC Card facsimile modem. Software includes DECwindows/Motif, TCP/IP Services for OpenVMS and OpenVMS Cluster Client. It has 1Mb video RAM and a 10.4" active matrix screen for 256 colours from 262,144 at 800 by 600. It has built-in graphics accelerator and supports external resolutions up to 1024 by 768. It has 16-bit stereo audio for CD-quality sound, internal microphone and speaker, and in-out audio ports. It will ship early next month through Tadpole and DEC, at from \$13,950.

### IBM CREATES VIRTUAL WORLD BUT PUTS LITTLE INTO IT

Studiously not saying whose technology it is using, or whether it is all its own work, IBM Corp has announced the IBM Virtual World. Saying that the information resources on the Internet are vast, it goes on to say that surfing it can be like junk food for the mind and that "IBM has made getting to that information more exciting by creating a virtual world where avatars" enable users to converse, browse historical libraries and be bombarded with flack on IBM products and services. The IBM Virtual World is at present a three-dimensional extremely limited demonstration environment offering a choice of six avatars. There are three locations to visit, a Community Forum chat area for social computing; the Los Angeles Public Library Photo Gallery and Historical Library, and a Solution Center - the flack; it's free at <http://www.software.ibm.com>.

### PHILIPS TO TURN SMART PHONE INTO LOW-COST INTERNET ACCESS DEVICE

One manufacturer has signed a deal with Oracle Corp to build the set-top Internet access boxes Larry Ellison was so keen to evangelise a couple of months ago. Philips Electronics NV has thus far been pushing its P100 Screen Phone as a way of carrying out home banking and ordering wine from UK supermarket group Tesco Plc through a text-based screen ordering system, but has now signed a deal with Oracle to develop a software package for the device that will pick up and send electronic mail messages via the Internet. According to Philips, the software is likely to use the Magic Cap operating system from General Magic Inc, suggesting that the processor in the phone is the Motorola Inc 68349 or close relative. However, Oracle is said to be fairly laid back about technologies to be used for the boxes, and is working with the Newton operating system as well as the, currently proprietary, P100. Oracle is also believed to be talking to potential manufacturers about developing a set-top box that it would market itself.

### INTERNET: LSI LOGIC SETS SINGLE CHIP TERMINAL

LSI Logic Corp has decided to go ahead and create a MIPS Technologies Inc R3000-derived processor designed specifically for use in Internet access terminals. The company reckons it will offer the chip in volume for \$50 and is looking to summer availability. Combined with 4Mb main memory - about \$150 - and modem, the company reckons a manufacturer could put together a box that could sell for about \$250 if it used a television set as the monitor. "I think companies will be rolling out boxes in the third quarter, and they will be the Cabbage Patch Doll sensation of Christmas 1996," says LSI's executive vice-president for product strategy, Brian Halla, who believes that Internet access providers may bundle the things in with the service charges. LSI points out that it integrated all the functions of the Sony Corp Playstation onto a single chip, so does know something about the capability of the RISC core and its component library. LSI sees the chip being able to run Java applets, although there is no Java interpreter for the MIPS RISC as yet. It is not clear what skinny executive will be chosen to run on the chip.

### ORACLE HAS NEW MANAGEMENT SOFTWARE FOR ORACLE 7.3

Oracle Corp has revealed four new components that will be built into Oracle7 release 7.3, which is scheduled for release in early 1996. Oracle Enterprise Manager is a new systems management product family with graphical drag-and-drop administration tools. It includes open APIs for integrating with hardware and third-party software. It also comes with a central console for configuring, distributing and managing all Oracle software. The Oracle Replication Manager is a graphical administration tool that integrates with Enterprise Manager. It has drag-and-drop tools to configure, schedule and administer data replication. The Oracle Replication Service is a suite of products that provide access to mainframe and open systems data from IMS/DB, VSAM, Adabas, Informix, Sybase, Ingres, DB2/MVS, and DB2/400. The final new component is SQLNet version 2.3, connectivity software. It includes: SQLNet Open, which enables access by non-Oracle, non-database applications via the aforementioned open API; SQLNet Plug-and-Play Option, which automatically configures SQL Net clients and servers; SQL Net Client Status Monitor, a graphical tool that summarises network configurations; and a new network load balancing feature which creates multiple connection routes from a client to a single data source. Meanwhile, several third party management tool makers have revealed their intentions to integrate with Oracle Enterprise Manager. They include Banyan Systems, BMC Software Inc, Bull Information Systems, Cabletron Systems, Compuware Corp, Data Tools Inc, DBMX Ltd, Eventus Software Inc, ISA Corp, Prolin International, Redwood Business Group BV, Open-Vision, Platinum Technology Inc, and Tivoli Systems Inc.

### INFORMATION BUILDERS TEAMS WITH TIVOLI, VISIGENIC, MOMENTUM FOR EDA/SQL 4.0 ENHANCEMENTS

Gearing up for its March 27 release of EDA/SQL 4.0, Information Builders Inc, New York, is integrating products from Tivoli Systems, Visigenic Software, and Momentum Software. Information Builders will license Momentum Software Inc's X\*IPC message oriented middleware and embed it with the EDA /SQL middleware architecture. Information Builders will also sell the resulting combination of n-tier applications as one product. It will run on AIX, SunOS, UnixWare, Solaris, SGI, DEC, AS/400, MVS/CICS, OS/2, Tandem, Windows and Macintosh. Information Builders will work with Tivoli to build an EDA adapter for the Tivoli Enterprise Console (T/EC), an automation console that collects, processes and initiates responses to system, application, network and database events. The planned EDA will correlate EDA events as part of T/EC's event management architecture, and trigger actions to alert administrators when needed. It may be available integrated with EDA/SQL 4.0, or released separately, an official said. Information Builders has also teamed up with Visigenic Software Inc, San Mateo, California, to build EDA ODBC drivers that will enable EDA users to access data from Unix, Macintosh and OS/2 systems. The company will develop the EDA ODBC drivers with Visigenic's ODBC Software Development Kit. The drivers will support AT&T GIS, IBM AIX, HP-UX, SCO Unix, Sun OS and Solaris. The new products will be added to the EDA/SQL 4.0 architecture. Furthermore, Information Builders is developing new EDA server engines and EDA agents for the Tivoli Management Environment. Initially available with Unix support, these will cost from \$1,500 to \$14,000 per server, and be released in the second quarter of 1996.

#### New middleware product

Information Builders also has built a middleware product that eliminates the need to access databases. EDA/Exchange is middleware that transfers meta data and other design data between repositories and CASE tools and the EDA catalog on the EDA server. This enables EDA catalogs to be generated from third party schemas and modeling data, and enables the automatic creation of EDA models. EDA/Exchange supports CASE tools, dictionaries and repositories, and will offer interfaces to EDA data sources. EDA/Exchange will take as input the standard export file for these tools and perform checks, and then process the information for output to target EDA servers. It can also read EDA catalogs and produce input required to create a model or repository entry, the company says. It makes repositories and other tools more accessible, and gives the same interoperability at the meta data level as EDA/SQL offers at the data level, an official said. EDA/Exchange will be released in the second quarter of 1996 and costs \$20,000. Logic Works Inc, Princeton, New Jersey, and Information Builders are developing a CDIF-based interface for EDA/Exchange and Logic Works' data modeling tool, ERwin. Dubbed ERwin/ERX, the product will allow EDA catalogs to be generated from ERwin, and will provide management for relational and non-relational EDA/SQL structures.



## OSF DCE-WEB PRODUCTS EXPECTED BY JULY

Vendors contributing to Open Software Foundation's DCE-Web development project - technology that'll provide distributed computing environment access over the web for DCE licencees - should be fielding products based on the technology by next July, OSF says. Ira Goldstein's OSF's Research Institute has developed a toolkit that implements DCE's security and name service on the web, claiming existing web applications can be ported to the toolkit and make use of the services without changing existing protocols or interfaces. The Institute has ported NCSA Mosaic and HTTPD Web server to the toolkit and added DCE security and name services to them as an example of its capability. OSF has an additional Advanced Technology Offering (ATO) dedicated to DCE-Web technology. ATO is a new-fangled lightweight (nine-to-12 months) process for funneling a sponsor's \$100,000 into small development projects. ATOs can go forward into one of OSF's more advanced Pre-Structured Technology (PST) processes or straight to market through ATO sponsor implementations. The DCE-Web ATO is sponsored by AT&T GIS, CP Labs, DEC, Gradient, HP and the University of Michigan with others said to be coming aboard. The aim of the ATO is to allow web browsers to access CDE-Web servers without modification, to allow web servers to support DCE-Web clients, develop a multi-protocol server providing a way to access to DCE-Web from other secure web protocols, and investigate use of DCE-Web to support transaction services. A kind of "poor man's Notes" is how one official described what the technology would offer.

### SNMP support for DCE

Meantime, the promised DCE 1.2.1 implementation is now expected in the first quarter of next year, 1.2.2 later in the year (UX No 535). Future DCE technologies planned include SNMP and MIB support, messaging and other work to support COM/OLE, apparently being discussed with Microsoft Corp. OSF says its December 7 board meeting will vote two new PSTs into life - one the expected Federated Naming Services project. Of OSF's \$41.4m 1995 funding, \$14.5m went on research and development, \$10.5m was spent on membership services, consulting and technology transfer, \$8.9m went on technical and project services, \$5m on support services and \$2.5m on new initiatives. \$15.2m funding was generated through OSF's Research Institute, \$8.2m came from sponsors - executive sponsors are AT&T GIS, DEC, Fujitsu, HP, Hitachi, IBM, Novell and SunSoft; associated sponsors are Bull, ICL, NEC, SNI, SGI, Sony and Transarc - \$8.1m from licence fees, \$2.3m from maintenance, \$2.2m membership, \$2.0m from PST agreements, \$1.8m consulting and \$1.6m education. As well as the Open Systems pavilion at UniForum '96 in which OSF, X/Open Co Ltd, UniForum and other open systems organisations will participate, the joint OSF-X/Open member meeting in San Francisco between March 11 to 16 and end user groups discussions (UX No 566), the two organisations are also looking at areas in which to cooperate such as a common architecture.

## TUXEDO/NDS INTEGRATION "BY END OF 1996"

Novell Inc will release a NetWare Transaction add-on module in February next year, providing integration between its Tuxedo transaction manager and NetWare. It'll allow Tuxedo application modules on NetWare to move components over to remote NetWare servers. Until now, Tuxedo could handle requests over IPX/SPX by filtering them through a Unix server, and mapping them to TCP/IP. The NetWare Transaction Link add-on which was released in November (UX No 563), enables NetWare to handle these requests directly by providing information and routing tables showing where the components are located, but still required these components to reside on a back-end server. NetWare Transaction enables the components to run on NetWare itself. "Over the last eighteen months Tuxedo has been moving towards becoming a system which handles the integration of distributed-application components as well as being an OLTP monitor," said European Tuxedo marketing manager Dolores O'Shea. The next stage of Tuxedo development - which will take up most of next year - is the object-oriented work and middleware. Native Tuxedo APIs, code-named Matador, will integrate Tuxedo's own naming service with NDS and is slated for release by the end of the year. An integrated Tuxedo/NDS offering doesn't have a name yet, but "it's unlikely to be Tuxedo 7." Novell says it spent \$10m re-architecting Tuxedo between Version 4 and 5. Tuxedo already has links to Iona's Orbix object request broker. The next point upgrade - Tuxedo 6.2 - is expected in the middle of next year and will include intelligent agents for SNMP consoles.

## HP OVERHAULS SOFTBENCH: DCE DE-EMPHASISED; INCLUDES ORB-PLUS

Hewlett-Packard Co this week debuts version 5.0 of its popular SoftBench C++, C and Cobol development environment. Although it includes a slew of new functionality for developers - and more garnered from French tools house Ilog SA - 5.0 must also be viewed against some of the wider aspirations HP had in mind for it. First, the promise of Distributed Computing Environment, support for which HP fanfared with release 4.0, has not materialised and there's n'er a mention of DCE in the 5.0 material. "4.0 was DCE-oriented, and DCE hasn't lived up to expectations," HP admits. Ominously missing from 5.0 are any of the Taligent Inc classes and frameworks which HP had also planned to add to SoftBench. HP officials declined to disclose whether any Taligent technologies would now form part of its product offerings. HP's long-awaited C++ ORB-Plus Corba 2 object request broker for use with SoftBench will now be formally introduced in the March/April timeframe. An integrated SoftBench C++/ORB-Plus release will follow sometime thereafter which will be offered as the vehicle for ORB development, it says. HP will also replace SoftBench's broadcast message server infrastructure with ORB-Plus over time, but plans to offer versions with either mechanism for an interim period. HP says it's also talking with Microsoft Corp about COM support for ORB-Plus. Applications created with SoftBench and Distributed Smalltalk environments will be interoperable at deployment time through the Corba 2 Internet Inter-ORB Protocol. Integration at the development level is planned, but is further out. Rogue Wave Software Inc standard template libraries will be supported when HP delivers new ANSI 4.0 compilers later next year.

### Ilog

Version 5.0 includes a new CM configuration management system built upon the revision control system; a graphical class editor which allows developers to create, manipulate and delete C++ classes and generates new C++ code at source, not just in the module being edited; and a C++ Code Advisor that provides rules-based code-checking. The graphical technologies have been brought in from Ilog under the firm's continuing relationship. In addition, there's a new customisable tool bar, a 'quick fix' debugging tool and support for the Xemacs editor. A new software development kit includes the existing SoftBench Encapsulator for integrating third-party or custom tools; a Static Read API which generates applications from program information stored in SoftBench static database; and instructions for creating user-defined rules for C++ SoftBench CodeAdvisor. SQL and CICS are supported for mainframe migration. Cobol SoftBench 5.0 is said to provide support for mixed-language development with Cobol/C and Cobol/C++ SoftBench. SoftBench suites are priced at from \$3,000 to \$9,000 for HP-UX in January depending which components are required; SoftBench C 5.0 and CM for Solaris is \$2,500 - the C++ version with Code Advisor is \$6,000 - from February. Individual point products - with compilers - are \$1,000 to \$5,500. CM, Code Advisor, the SDK, SoftBench C++ and C are priced at from \$1,000 to \$4,000 on Solaris. Code-testers Mercury Interactive Corp and Pure Software Inc and Plano, Texas-based graphical file editor company Vital Inc are already supporting Version 5.0. Although the business HP does on its ParcPlace-DigiTalk Inc VisualWorks-derived Distributed Smalltalk environment is growing by at least 100% a year against 10% to 15% for C++ SoftBench, HP says the number of Smalltalk developers remains a small minority compared to its C++ population.

## PEER LOGIC PIPES-FOR-SOM DUE LATE '96, ON MVS ONLY FOR TIME BEING

San Francisco, California company PeerLogic Inc now says the IBM Corp Systems Object Model-enabled (SOM) version of its Pipes synchronous messaging system will be available late next year, although only on MVS/ESA for the time being (UX No 547). It's delaying an OS/2 implementation until it has a bunch of other object request broker support arrangements worked up. The company's long-term goal is to support mix-and-match operating system/Object Request Broker environments, though a Corba 2 implementation of Pipes remains far from announcement (UX No 547). Although IBM Corp finished a integrated Pipe/MQ Series prototype some time ago, it hasn't moved off the bench (UX No 559). Peer Logic has also picked-up support from Sybase Inc. The two have created an interface between Sybase's Enterprise Management System, a store-and-forward asynchronous messaging service for remote and wireless users and Pipes. Users will be able to write to Pipes or EMS APIs or both to distribute applications across environments that incorporate wireless components. EMS - version 3.2 is in beta - is installed at 15 sites. The Pipes-enabled version ships at no additional charge for Unix and Windows from the second quarter.

### SYBASE OFFERS SQL ANYWHERE 5.0

Sybase Inc has debuted version 5.0 of Sybase SQL Anywhere, the former Watcom SQL database engine it picked up with the acquisition of Powersoft (UX 562). The new release includes Transact-SQL, for executing stored procedures on SQL Anywhere and SQL Server; **Replication Server, providing replication between SQL Anywhere and SQL Server**; Open Client interoperability for writing applications that can run on both SQL Anywhere and SQL Server; SQL Remote for replication capabilities, and a new GUI-based administration tool. Version 5.0 runs on most PC platforms, and costs from \$300. Additionally, Sybase has formed a Workplace Database Division to focus on the market for PC database servers. The unit will include sales models and channel/server focus and support programmes from the Powersoft division. The division's product family will initially include SQL Anywhere database delivery systems and SQL Server 11 for Windows NT. Former Watcom VP of sales and marketing Dave Boswell will serve as new VP and general manager of the division.

#### System 11 add-ons

Meantime, Sybase has also unveiled several new products for System 11. First, it general availability of the Replication Server for System 11. Enhancements include a new GUI with dialog boxes, event replication and parallelisation of data streams, automated warm stand-by configuration, and text/image replication. Upgrades are free, and pricing for new units ranges from \$2,700 to \$100,400 per server, depending on the number of users participating as a data source or target subscriber for replication. Sybase also is offering SQL Server Monitor, which enables: collection of historical performance information; tracking of SQL server systems; use of a monitor Client Library API to integrate performance stats with other applications; and other administrative tasks. Sybase also launched SQL Server Manager, an SQL server Windows-based management tool to administer local and remote servers. Both will be available later this month. SQL Server Monitor will support SQL Server 11, 10, and in the first quarter of 1996 4.9. It supports all Server 11 platforms, including Digital Unix, HP-UX, IBM AIX, Sun Solaris, and Windows NT. It costs \$2,500 per server, with unlimited access. SQL Server Manager supports Windows flavours, and manages SQL Server 10 and 11. It costs \$1,500 per managed server.

### INFORMIX GETS NETTED; NEW DEVELOPMENT TOOLS

Hard on the heels of Oracle's Websystem announcement a few weeks back (UX No 563), Informix Software Inc duly unveiled its own Internet database connectivity and interface solutions last week at DB/Expo '95 in New York. Informix's Web strategy includes two solutions for developing Internet database applications and connecting instances of its databases over the Web, including common gateway interface kits (CGI) and visual Web development tools. There are two Web Interface Kits enabling Informix 4GL and ESQL/C-adapted applications to be adapted to the Web, supporting Sun Microsystems Java and Netscape's JavaScript and enabling CGI programs to interface with Informix databases. Informix databases support Netscape Navigator, NSCA Mosaic and Spyglass Mosaic browsers. The Menlo Park-based company has signed a slew of Internet partners including Mount Laurel, New Jersey-based Bluestone Inc; Cambridge, Massachusetts-based net.Genesis Inc; Palo Alto, California-based Spider Technologies and Alexandria, Vancouver-based VPE Inc to provide native support for its OnLine Dynamic Server. Informix claims 2,000 customers have already downloaded the kits - including MCI Communications Corp, Choice Hotels International for its Web reservations application and Web retailer Internet Shopping Network. Informix CGI is free from <http://www.informix.com>. Meantime the Menlo Park, California-based company says it will offer SunSoft Inc's Solaris 2.5 on its OnLine Workgroup Server running Intel in the Spring of next year.

### ANDATACO TO GO TO INSIGHT ENTERPRISES FOR \$16.8m

Tempe, Arizona-based direct marketer of computers and software, Insight Enterprises Inc, has a letter of intent to acquire privately-held Andataco Inc of San Diego for about \$16.8m. Andataco sells Unix products into the client-server marketplace, generates about \$100m in annual revenues, and it is claimed to be profitable, despite the lowly price being paid. The company supplies disk, tape, storage array, optical storage subsystems, and workstation and networking products.

### SCIENTIFIC SUPERCOMPUTING MARKET DECLINED IN 1995, SAYS SMABY

High-end market research company Smaby Group Inc poured some cold water on folks down at Supercomputing '95 in San Diego last week, estimating the market for high-performance **worldwide scientific/engineering/technical solutions declined** from \$2,000m in 1994 to \$1,910m this year. It forecasts a market worth \$3,000m in 1999 with most growth in the departmental (under \$1 million) sector. Sales of large-scale systems valued at between \$1m and \$5m will grow slowly; sales of enterprise systems - \$5m-plus - will actually decline by 7.5%. At 23%, Smaby says Silicon Graphics Inc has the largest overall share of the \$1,910m global scientific/engineering/technical market. Cray Research Inc follows with 20%, IBM Corp's SP2 15%, DEC 11%, Fujitsu 6%, HP/Convex 6%, Intel 4% and others 15%. Smaby attributes SGI's leadership position to its departmental SMP solutions - SGI is estimated to account for 42% of the (\$100,000-to-\$350,000) low-end departmental segment of a \$545 million market. DEC is at 18%, HP/Convex 11%, Cray 5% and others at 24%. SGI has 30% of the \$698m high-end market departmental (\$350,000-to-\$1m). IBM's SP2 has 25%, DEC 17%, Cray 14%, HP/Convex 6% and others 8%. Cray has 51% of the \$297m high-end market for systems valued at \$5m-plus. Fujitsu is next at 20%, NEC 10%, IBM 7%, Intel 4% and others 8%. In the \$371m, 1995 low-end enterprise market for systems priced at from \$1m to \$5m Cray's share is 30%, IBM 22%, Intel 9%, NEC 8%; Hitachi 5%, HP/Convex 5% and others 5%. IBM's SP2s are the only systems sold in both the commercial and scientific markets; it has 12% of the commercial space. Tandem and AT&T GIS both have 36%, Unisys 6% and others 10%. Smaby says proprietary architectures will virtually disappear from the technical space, declining from 40% of sales in 1994 to 5% in 1999.

### ETI OFFERS EXTRACT 3.0 DATA CONVERSION TOOLS

Austin, Texas-based Evolutionary Technologies Inc has debuted version 3.0 of its ETI Extract data conversion and integration tools. 3.0 is claimed to automate the retrieval, transfer and transformation of data from any database or file format to others. ETI had to hold back the launch from September (UX 547) to last week, as it was working with Object Design Inc to build the MetaStore database, a new element in version 3.0. MetaStore supports the versioning of metadata and conversion specifications. It enables users to build a comprehensive and detailed audit trail, and to simplify point-in-time access to historical data. It is part of version 3.0's expanded Metadata Facility, that also includes a Metadata Exchange Library, and report generation. The Library enables users to export metadata from the MetaStore database to any other repository or database, import metadata from other sources into the database, and merge metadata from multiple sources. Version 3.0 has a Motif/Windows front-end and conversion editor. Version 3.0 will ship December 31 on Solaris, with support for HP-UX and AIX due in the first quarter of 1996. ETI is working on a licensing agreement with Informix, and may do a deal with Red Brick Systems. Meanwhile, ETI has built a new Data System Library for SAP R/3 to enable the Extract Tool Suite to automatically create programmes in SAP's ABAP/4 language, said to deliver legacy data directly into SAP R/3, and to move data from SAP applications into data warehouses. Prices for the new products were unavailable.

### 'FANTASTIC' DATA GENERAL

One way and another, Data General Corp has done a pretty fantastic job of replacing what until the late 1980s generated its only revenue stream, proprietary minicomputers. The company has not been able to grow much in the transition, but it has not shrunk much in turnover terms either, although employment has plunged to 5,000 from 16,500 in 1985, and the Eclipse minis, which accounted for \$900m of annual business, had shrunk to just \$40m in the year to September 30, when according to the *New York Times*, CLARiiON disk arrays alone accounted for \$170m, up from \$50m the year before, the AViiONs brought in \$400m, the maintenance arm \$400m.

## CA WADES ONTO WEB WITH UNICENTER, NETSCAPE

Computer Associates International Inc, Islandia, New York, has introduced what it says is a management environment for Internet computing for business, Unicenter/Internet Commerce Enabled (ICE). ICE is distributed management software for securing and managing Unix and Windows NT commerce servers on the Internet, Intranet and other TCP/IP-based networks. It also supports major database management systems, Netscape, and NCSA. CA claims that Unicenter/ICE provides security, database monitoring, event management, Web server storage management, intranet capabilities, and other features, including automatic workload scheduling, software distribution, and integrated help-desk support. It is installed and configured through an HTML-based interface. It uses a common gateway interface (CGI) to secure the Web server from unauthorised access, and provides policy-based administration and enforcement of information access control. It works in tandem with existing Web Secure Sockets Layer protocol for authentication and encryption. Unicenter/ICE uses manager/agent technology to filter and correlate http, TCP/IP, and other operating systems and network events. It uses hierarchical storage management to offload seldom-used information to prevent system failures, and supports automatic backup and recovery of data. It has database monitoring to track CGI requests to Sybase, Oracle, OpenIngres, SQL Server and Informix. Intranet-specific capabilities include software distribution, administration and configuration management for Web clients; ICE can read error logs, track system and network events, and monitor memory and disk resources. Agents can be customised to monitor and manage any client application. Included in Unicenter/ICE is OpenIngres/ICE, which acts as an interface between HTML files and SQL databases, providing access to databases through the Web. It creates Web applications by using embedded HTML access to server and host-based data sources. It supports server-based CGI scripts and client-based Java applets, and has query capabilities.

### Surf's-up

CA has a separate agreement with Netscape Communications Corp under which CA will integrate Unicenter/ICE with Netscape's core server products and sell products for doing business over the Internet and other TCP/IP-based networks. CA will integrate Unicenter/ICE with Netscape's Commerce Server for electronic commerce; with Communications Server for publishing hypermedia documents on the World Wide Web; with the Netscape News Server for building secure public and private forums; and with the Netscape Proxy Server for establishing proxy server capabilities to isolate Intranet from the Internet at large. CA will market the four products directly and through resellers. Unicenter/ICE is available now, and can be licensed separately or as an integrated package with Netscape Web server software. It costs 15% of the Unicenter base price; CA prices its Unicenter offerings based on power unit pricing, which is based on what CA determines to be the computing power of each platform Unicenter runs on (UX 564). CA charges \$400 per power unit.

### Ideal

Morgan Stanley US Investment Research group thinks that CA's decision to make its products Net-friendly is a wise one, as it believes that systems management will be one of the Internet's largest derivative markets. Moreover, Morgan says that the Web's heterogeneous environment is ideal for CA's large installed base and cross-platform tools. CA also dominates the market for mainframe security, and Unicenter offers solid security administration in the Unix market, Morgan says. As security concerns grow, CA should be able to justify installation of Unicenter because of its security products. Furthermore, CA will likely extend its security product line with acquisitions among the small companies making Internet security products, Morgan predicts.

### Scheduling

Meanwhile, CA has launched CA-Quick Response Engine, an object-oriented workstation-based scheduling product for plant

managers, enabling real time scheduling and rescheduling. The user can download information from the main manufacturing system, and see the effects of any rescheduling on the whole workload. The user may then make a series of decisions on the local workstation to see the overall effect on the schedule. When a satisfactory outcome has been reached, the user can finalise the plan, and send it back to the main system server, where it will automatically be activated on the main system. The user can personalise menus and business views to reflect his or her daily workload. The system uses intelligent agents to flash warnings to the user relevant to his or her areas of responsibility. CA-Quick Response Engine is available now under Windows and Windows95 for Computer Associates' AS/400-based manufacturing system CA-PRMS, and will be available for its Unix-based CA-ManMan/X in the first quarter of next year.

## SUN JAVA, NETSCAPE LIVESCRIPT MARRIED AS JAVASCRIPT

Netscape Communications Corp and Sun Microsystems Inc have pooled their resources to create JavaScript, which combines Sun's Java and Netscape's LiveScript. It will be integrated in Netscape servers and the Navigator 2.0 browser by next quarter, the partners say. Sun's Java will continue to be used to create applets, but JavaScript, reportedly code-named Mocha, will enable Web page authors and applications developers to link back-end systems with Java applets running under Netscape's Web server software. The effort has won the backing of an impressive array of industry heavyweights, 28 all told, including Hewlett-Packard Co, AT&T Corp, Apple Computer Inc, Oracle Corp, Novell Inc, Toshiba Corp, IBM Corp, Intel Corp, Silicon Graphics Inc, Sybase Inc, Informix Software Inc and Digital Equipment Corp, to step forward and announce their support. Sybase Inc is working to support JavaScript in its development tools so that users can dynamically create Web pages from data stored in Sybase databases. While Java is used by programmers to create new objects and applets, JavaScript is designed for use by HyperText Mark-up Language page authors and enterprise application developers to script the behaviour of objects running on either the client or the server, and is described as analogous to Visual Basic in that it can be used by people with little or no programming experience to build complex applications. Sun has licensed Java to Borland International Inc, Macromedia Inc, Mitsubishi Electric Corp, Netscape, Oracle, Silicon Graphics, Spyglass Inc and Toshiba.

### IBM DETAILS SP2++ PLANS

Although it promises a new higher-speed switch and support for SMP nodes through 1996, there doesn't appear to be a specific IBM Corp SP3 configuration on the horizon (awaiting Power 3 perhaps?). Outgoing RS/6000 boss Irving Wladawsky-Berger says there will be a gradual roll-out of new technologies into the platform. Software enhancements planned include a new GUI, high availability, event management, object technology and systems management functions. Also new is 'partitionable upgradability', which high-end-watcher *HPCwire* thankfully translates for us as the very important ability for users to migrate to a new release or version of the operating system on one, or a few processors in their configuration, while maintaining their production environment throughout the rest of the system. IBM Corp has apparently shifted 200-odd SP2 parallel systems since the summer, bringing its installed base up to 850.

### PLATINUM - WHAT'S IN A NAME?

Platinum Technology Inc, Oakbrook, Illinois, and Platinum Software Corp, Irvine, California, are pumping out missives reminding folks that the companies are not one and the same. Platinum Technology has apparently taken hits on its share price when Platinum Software news has been mistakenly attributed to it. "The headlines [including "Platinum dumps Unix"] have been killing us," its says. Worried that customers would run, Platinum Technology's UK office ran ads in the London *Times* detailing the differences. Why not add Platinum Software to its acquisition roster? "That's another possibility, but we'd rather partner with them than buy them," it says. Neither side is considering suing to remove the other's name. If letters to editors don't work, Platinum Technology will keep asking for retractions.

## EXPONENTIAL AIMS TO TAKE POWERPC LEAD WITH NEW SUPERFAST BiCMOS CHIPS

By Chris Rose

Exponential Technology Inc claims to have a revolutionary BiCMOS design process that will enable it to build PowerPC chips far faster than anything that IBM or Motorola have in the pipeline and three times faster the performance of the fastest Pentium. The San Jose, California-based company, backed to the tune of \$14m by Apple Computer and a collection of venture capitalists and private individuals, has negotiated the right to build its own PowerPC chip and says that its first product will tape out early next year with volume production following in early 1997. Having dumped its original president a few weeks ago, it's now being run by CEO Rick Shriner, Apple's former VP core technology, the man who led the Apple team assigned to Somerset. Co-founders include George Teylor, once director of experimental architecture at Sun Microsystems Labs and Jim Blomgren who worked at Sun on ECL Sparc design. Former Chips and Technologies Inc CEO Gordon Campbell is chairman. Exponential says its PowerPC processors will offer twice the performance of CMOS for the same die size - possibly better. The first processor will be a functional equivalent of the 604, and though the company is being careful not to quote clock speeds, 'twice the performance' would imply a 300MHz - 400MHz part. One source outside the company was talking about 500MHz parts last month. The large majority of the chip's logic circuit will be built from bipolar circuitry, with CMOS used for the onboard cache. Despite early rumours, the company says that it is not involved in building Intel-emulation hardware into its PowerPC clones. Traditionally, Bipolar silicon technology (as opposed to CMOS), has been the province of mainframe manufacturers - it can switch faster than CMOS, with a consequent improvement in processor clock speeds. Unfortunately bipolar has the reputation of being power-hungry, expensive to manufacture and bulky - CMOS components can be packed more closely on the processor. Consequently, even mainframe manufacturers have switched to CMOS-based processors as these have become faster. BiCMOS, as used by Intel in its initial Pentium designs, aims to offer the best of both worlds by introducing relatively small amounts of bipolar logic into the speed-critical areas of a CMOS processor. However, according to Exponential, this approach has its draw-backs. Exponential claims that this conventional bipolar-on-CMOS approach results in a "relatively weak form of bipolar logic suitable only for building small-to-medium size logic functions and driving long wires". An alternative approach - placing small amounts of CMOS onto a predominantly bipolar chip has languished, mainly because of the previously mentioned size and energy draw-backs. This is a shame since a fast bipolar chip with onboard CMOS cache and support circuitry could be a winner. Exponential claims to have cracked the problem by discovering a way to design bipolar circuitry roughly equivalent to CMOS in size and energy consumption; in particular, it contends, since CMOS elements tend to grow in size anyway as clock speeds increase. The company has applied for 18 patents covering bipolar design methodologies, tools and also chip packaging. So far eight have been granted.

### BiCMOS variants

There is no reason why the process shouldn't be applied to build BiCMOS variants of any microprocessor and if the company manages to deliver on its promises its technology will be attractive to a number of chip makers. However, Shriner says that there are no plans to license the technology out, and anyway "we've still got to prove it". No, instead Exponential intends to sell its products on the merchant market, in competition with IBM and Motorola at the high end. The company does not have its own chip fabrication plant, and is unwilling to divulge who will be making them, other than to say that the fab will be off-shore and the company isn't a US one. The smart money has got to be on Hitachi, which already has some ill-defined deal to build PowerPC processors and has also been banging on about its innovative BiCMOS fabrication technology. VP sales Ivonne Valdes denies, however that the company is unduly tied to its nameless manufacturing partner - Motorola and IBM, among others have similar manufacturing capabilities already, she suggests. Exactly how IBM and Motorola will react to the competition will be interesting to watch. Shriner says that relations are very good, but acknowledges that if he had the time he could "talk all year" about the negotiations required to get the rights to build the PowerPC variant. Neither IBM nor Motorola are being forthcoming about their thoughts on Exponential. The third partner in the PowerPC triumvirate, Apple, is obviously delighted at the prospect of competition. It was an original investor in the firm when it was founded in the summer of 1994, and came back for second bite of the cherry in a subsequent funding round. "They were looking for someone to put a flag in the ground" in terms of PowerPC performance. The company is now looking for engineers.

## PLATINUM IN BED WITH THE WORLD

Platinum Technology Inc, Oakbrook Terrace, Illinois, has lined up a bevy of new reseller and cross-development partnerships. Sybase Inc is to include Platinum's InfoHub and InfoPump data movement products into its data warehousing suite, while Platinum will sell Sybase's Interactive Query (IQ) and Direct Connect gateway products. Versant Object Technology Corp and Platinum will develop a version of DBVision, Platinum's performance management tool for the Versant ODBMS. AT&T Global Information Solutions will include Platinum systems management products in its OneVision suite. Hewlett-Packard Co will include Platinum systems management products in OpenView (UX 559), and will jointly market Platinum's data warehousing and systems management products to Fortune 1,000 companies in the US, UK, Germany, Australia, and France. Under a joint marketing alliance, Informix Software Inc is to integrate Platinum's InfoTransport into its product line. Peoplesoft and Platinum have entered the first phase of a strategic alliance in which Peoplesoft will integrate Platinum's data warehousing, repository, and systems management software with its client-server applications software. Siemens-Nixdorf Informationssysteme AG and its Pyramid Technology Corp unit will jointly market, integrate and sell all of Platinum's data warehousing and systems management products to Fortune 1,000 companies worldwide. In an initial agreement, SAP AG will begin recommending TsReorg, Platinum's tablespace reorganization utility for Oracle databases, as an add-on to the SAP R3 client/server management system. Finally, Platinum is also working on a deal with Cabletron Inc, but this had not been finalised by press time, so no details were available, a source said.

### POEMS Roadmap

Meantime, Platinum has unveiled a strategic road map for developing and marketing its long-touted Platinum Open Enterprise Management System (POEMS). It's now slated for a June 1996 beta release, with general availability in September. POEMS will include a central object repository, a messaging layer, an event manager, a central console, and an integrated systems problem resolution module. Platinum will offer three integration options: point-product integration, whereby customers can get integrated multiple key point products for specific needs; integration of reusable objects, whereby Platinum will integrate its products with those of other companies; and product integration into POEMS, where products will be linked via APIs to the POEMS repository, messaging layer, event manager and console. Platinum hopes its POEMS APIs will be picked-up by other ISVs. By the end of the third quarter of 1996 Platinum hopes to deliver SNMP support for all point products; the POEMS API; messaging technology; a POEMS console for centralised management; and an as-yet-unspecified infrastructure to link all this stuff together.

### Masks

Platinum has also launched Enterprise DBA, for database administration, alteration and migration of multiple RDBMSs for Unix, MVS, Windows and OS/2. This is the first product for the Database Manager segment of the POEMS architecture, called POEMS/DM. Enterprise DBA includes single point control for simultaneous administration of all databases, regardless of platform; a common user interface that masks underlying differences of RDBMSs; and automated scheduling and migration between all supported databases. It can be used independently or within POEMS/DM, and supports Oracle, Sybase, SQL, Informix, CA-Ingres, DB2 for Unix and MVS, and OS/2. It will initially support AIX, HP-UX, Sun Solaris, Windows NT, MVS, and OS/2, with support for further platforms to follow. Platinum plans to release other new products for POEMS/DM in 1996, including a tablespace reorganisation tool called Enterprise Reorg, and a log file analysis and maintenance tool called Enterprise Log Analyzer. Enterprise DBA and POEMS/DM will begin shipping in March 1996. Enterprise DBA will cost \$1,200 for Unix and PC versions, and \$16,000 for MVS. Platinum is also shipping version 2.0 of AutoSecure, for Unix platforms.

### Quarter century-up

Finally, Platinum's aggressive acquisition programme (it has bought 25 companies since January 1994) has led it to form a new business unit called Applications Life Cycle Solutions to market Paradigm Plus analysis and design tools, ObjectPro object-oriented visual development tools, AionDS rules-based development stuff, CCC/Harvest configuration and change management tools, the Final Exam Enterprise Testing suite, and the Platinum Repository. Phew!

### ELLIPSE DISAPPEARS INTO SEER

Seer Technologies Inc, Cary, North Carolina is in the final throes of obtaining one of the granddaddys of application partitioning, Ellipse, Bachman Information System Inc's application development environment. But will anyone notice? Senior VP business development Andrei Boisvert says Seer will take over Ellipse's installed base and "flip it over" to its own HPS (High Productivity System) development environment over time. Although Seer may make use of some of the technology in the future Boisvert advises that Ellipse is "effectively dead" in the water. At least part of the reason Seer is grabbing Ellipse is to keep it from falling into enemy hands, although publicly the company will only say Ellipse gives it the chance to get into more client/server sites. Bachman, which has been bleeding money for some time, says it's sold Ellipse because the tool is no longer part of its core business and intends to concentrate its efforts on modeling, database design, predicative performance analysis and process management products including Bachman/Analyst, Bachman/DBA, Groundworks and Terrain. Bachman says its much more interested in selling its CASE tools in the data warehouse arena. Sources claim Bachman has only won 33 Ellipse accounts worldwide.

#### Second generation

Supposedly one of the first of the so-called second generation application development tools boasting application partitioning - the fashionable technology more recently favoured by the likes of Forte Software, Dynasty Technologies, Neuron Data, Ipsys, Unisys, Open Environment, Uniface, Unify and Passport and countless other wannabes - Ellipse started life at San Jose, California-based Cooperative Solutions Inc, a 1989 start up founded by Kim Worsencroft and Dennis McEvoy. A heavily funded start-up, with \$29m, Cooperative's McEvoy - now a Sybase senior VP - prophesied that by the mid-1990s application partitioning would be de rigueur in the client/server environment. However the road from the late eighties to the present day proved to a journey to far and in November 1993 Cooperative went bust. Bachman took over Ellipse and Cooperative debts promising the market had matured enough for an application partitioning solution to the excessive processing bottlenecks on the client which client/server solutions were subject to (UX No 493). Bachman claimed that Ellipse automatically partitioned between the client and the server according to a set of parameters, including the amount of data that should be used and countered criticism from young pretenders like Forte that Ellipse suffered from a lack of object architecture by arguing that the C++ code of Forte's solution was difficult to learn, demanding costly training, with very few people trained to write in C++. Privately, commentators suggest that at least part of Ellipse's problem was due to its poor marketing. HPS by contrast began life in the 1980s as an in-house development at the First Boston Corporation between it and IBM, with Seer Technologies being founded in 1990. HPS aims to be a complete client/server solution and comprises more than just standard CASE features. The HPS development environment is centred around its own repository, requiring DB2 and based on IBM mainframe, with development on OS/2 servers. The toolset addresses all parts of the software development lifecycle, divided into four types: tools supporting definition and analysis activities (ie CASE), tools supporting prototyping, software construction and application delivery tools.

### PLATINUM REFILLS ITS PLATE WITH ANALYSIS, PROCESS MANAGEMENT TOOLS

Turning itself into the next Computer Associates International Inc - or becoming Computer Associates' next major target - Oakbrook Terrace, Illinois-based Platinum Technology Inc is buying again. The company has agreed in principle to acquire Protellicess Software Inc for about \$15m in shares, and AIB Software Corp for about \$10m in shares. Protellicess Software, Santa Clara, California specialises in high-end project management with its Enterprise Process Continuum (EPC). Platinum will integrate EPC in its applications development strategy enabling multi-user products to share data for distributed database environments. EPC components include Enterprise Methods for analysing, prototyping and designing applications; Enterprise MAP, for authoring, customising, maintaining and administering methodologies; Enterprise Estimator for estimating risk, effort and project costs including a time-entry module to track actual time spent against estimates.; Enterprise PM for managing projects and staff; Enterprise Viewer, a read-only version of an application methodology which can be distributed to team members; Enterprise Status-Time, for tracking time and resource use that is integrated with Enterprise PM and Enterprise FormsBuilder, for automating form design and data entry. AIB Software Corp's, Dulles, Virginias' flagship product is Sentinel II, a run-time analysis tool which can detect execution errors in an application including problems with errors and memory leaks throughout C and C++ applications including user code, third-party libraries and shared libraries. It uses an Object Module Transformation (OMT), a platform independent technology which enables Sentinel to monitor memory access by applications. OMT converts object code into system-independent representations of the application under test and then transforms the representation into machine independent object code with debugging capabilities. Sentinel is up on Sun, HP and IBM.

### UNIFY EYES APPLICATION MANAGEMENT WINDOW

Unify Corp, the relational database/4GL-turned-second generation application development tools house, has spotted what it thinks is a gap in the market for application management. It hopes an extra layer of ~~software it's calling AppMan can distinguish its Vision development~~ environment in what's now a morass of companies promising to deliver second generation, three-tier, client/server partitioned applications. Unify, now under the charge of a team of Informix refugees, including president and CEO Reza Mikaili, will also be hoping the new technology will put an end to maybe unkind but certainly not unheard questions such as "Unify? Are they still around?"

#### 400 events

The way Unify sees it, the current crop of management tools, including Tivoli, BMC, CA-Unicenter and the SNMP crowd, can only manage systems and network, not applications. Applications developed using Unify's Vision 2.1 development environment plus AppMan are claimed to automatically generate and report statistics about themselves in the areas of configuration, performance and thresholds. In its first iteration AppMan addresses centralised event management, performance monitoring, software distribution and configuration management and administration. Security and asset management and licensing will follow in a subsequent release. AppMan's centralised event management can report some 400 built-in events from Vision applications and includes agents which support BMC Software's Patrol, Tivoli Enterprise/Console and SNMP management systems. (As Tivoli doesn't yet support Windows, Unify has written a proxy that can pass Windows-based information on to Tivoli). Performance management includes agents for HP MeasureWare and PerfView, BMC Patrol and SNMP management tools. AppMan's software distribution component supports Microsoft SMS and Tivoli Courier. The AppMan console can manage Vision application partitions and servers. A further release will include a baseline set of event management and performance management capabilities. AppMan 2.0, due in the third quarter of next year, will provide agent-based integration with systems management products for security - controlled access to application services - and asset management and licensing. Unify is using Tivoli's Application Management Specification APIs - due mid-1996 which are also being supported by Dynasty, Forte, Informix, Powersoft - to provide closer integration between Vision and Tivoli Management Environment. It'll support CA-Unicenter "when we can find the right person to talk to at CA" about integrating the products, Unify says. It sees no demand for an OpenVision Inc-enabled product. Version 1.0 of AppMan for Vision (only the recently introduced Vision 2.1 supports it) is priced at \$2,000 per Unix, NT or Windows platform from February. Unify, 180-person strong, at a run-rate of some \$30m, claims 6,000 Vision licences at some 200 Unix customer sites plus a smattering of NT.

#### Internet ahoy

At \$5,000 plus \$500 per runtime, price is not the only advantage Unify claims over higher-end rivals such as Forte, Dynasty and Seer. It touts Vision's ease-of-use and easy demo and testing terms and support for all databases. Unify's aiming, once again, for IPO waters, now hoping to get an offering away next July. The company's playing a new vertical solution strategy close to its chest for the present. It expects to work-up a range of partnerships for Vision/AppMan that'll allow it to target industry-specific outlets and publications. Unify's next gambit is the Internet, with next-generation technologies expected to focus on Web-enabled development. Delineating a strategy would presumably bump up its IPO plan. It says it's got technology and packaging details for the stuff pretty much nailed down, but it didn't want to share them with us.

# unigram·x

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**Bachman Information Systems Inc** of Burlington, Massachusetts is to acquire fellow software development tools developer Cadre Technologies Inc for 5m new Bachman shares, valuing Cadre at \$34m. Together, the two did about \$70m in their last fiscal years.

**Tera Computer Co**, formed in Seattle some six or seven years ago to do shared memory massively parallel processors, is finally ready to put something into production, and has signed Unisys Corp as its manufacturing partner for what are now being described as MTA multithreaded architecture high-performance computers.

**Novell Inc** chief executive officer Bob Frankenberg said the company is "very confident" it will complete the sale of its WordPerfect unit in the first quarter of fiscal 1996, which runs through to January 31: "We're deep in negotiations with several" buyers, Frankenberg said at the Personal Computer Outlook conference in Burlingame, California.

Steve Jobs told the *Financial Times* that he gave Larry Ellison of **Oracle Corp** the idea for the \$500 Internet terminal.

**Oracle Corp** is set to take on Netscape Communications Corp with the PowerBrowser combination of a World Wide Web server, SQL database and HyperText Mark-up Language authoring environment, distributing it free for 16- and 32-bit Windows, Mac OS and several Unix variants.

**Novell Inc** last week completed the sale of its UnixWare business to Santa Cruz Operation Inc for about 6.1m Santa Cruz shares, a 17% stake, plus a revenue stream from Santa Cruz based on revenue performance of the UnixWare business to a maximum of \$84m by the year 2002.

**X Consortium** says its long-gestating Fresco project to specify a user-interface system in Corba Interface Definition Language (it has a sample implementation written in C++) is still underway, though Fujitsu Ltd is making most of the running, with some side interest from Silicon Graphics Inc. Fresco draws on InterViews design ideas and will incorporate much of the functionality of Xt and Xlib as well as new capabilities in the areas of structured graphics, device and resolution independent drawing models, Corba and application linking and embedding. Fresco could eventually be implemented in Broadway, X Consortium says - see front page.

**Sun Microsystems Inc** is trying-out with the Dolphin Interconnect Solution A/S Scalable Coherent Interface-based interconnect to cluster workstations internally. It's running up to fifteen systems in one SCI ring connected via SCI-to-SCI bridges to three further rings.

**Oracle Corp** has reached a new TPC-C high, hitting 11,456 tpmC at \$286 per tpmC on an eight-way Digital AlphaServer 8400.

Mountain View, California-based **PostModern Computing Inc** claims it'll be first out of the gate with Web-enabled object request broker. It says what it's calling Black Widow will allow applets developed using Java to be used from Web browsers to communicate with Corba server objects. Essentially Black Widow generates client and server Java code that that'll run over the Object Management Group's Corba 2 Internet Inter-ORB Protocol. Users will download an IIOP/Java-enabling communications runtime module once to run all applets. The \$1,000 item is out in the second quarter for Unix, NT and Windows. Expect the ORB/Web floodgates to open.

**Iona Technologies Ltd** appointed two new Orbix resellers this month. Malmo, Sweden-based Enea Data AB for Scandinavia; Japanese company Toyo Information Systems for the Pacific Rim.

In its new order **AT&T Co** has promoted Bill Eisenman to take overall charge of computer system design, development and manufacturing as senior VP Computer Systems Group. He replaces Tom Mays - most recently VP Global Remote Services - the NCR veteran responsible for integrating the Teradata Corp acquisition into GIS. Eisenman becomes part of chairman Robert Allen's leadership team.

**Object Design Inc**, Burlington, Massachusetts, will install its ObjectStore 4.0 object database in Nomura Securities Co Ltd's fully-integrated front-, middle-, and back-office trading system in Europe. ObjectStore will be used as a front-end persistent cache to provide 300 Nomura traders with real-time reference data.

For those of you that missed last week's electronic *Unigram.X*, Irving Wladawsky-Berger, only recently appointed general manager of the merged RS/6000-PowerParallel division following Bill Filip's retirement, has skipped over to head **IBM's** new Internet software division. A technologist running a software division? "I've been known to hang around software," Wladawsky-Berger declared last week. Rationale for his move is perhaps best characterised by Gary Smaby's parting shot to the Supercomputing '95 crowd last week: "it's the software, stupid." Wladawsky-Berger reports to John Thompson, senior vice-president and head of IBM's software unit. IBM also announced that it is re-prioritising its 1996 research and development budget to reflect its overriding commitment to networking.

Meantime, Wladawsky-Berger's replacement, Mark Bregman, formerly chairman Lou Gerstner's technical assistant, was a no-show at the I-WAY Internet press conference - see page 1. From the TJ Watson Research Center, Bregman went to IBM Japan, becoming Director of Component Technology Manufacturing and Development, Asia Pacific Technical Operations in 1992. Subsequently he moved to the systems, technology and science division of the IBM Research Division in the US as president, with responsibility for semiconductor, packaging and display technologies. He became Gerstner's technical assistant last February.

**IBM Corp's** Hursley, UK labs is now beta testing a set of APIs for its CICS OLTP mechanism which are said to be compatible with the Object Management Group's Corba 2 Internet Inter-ORB Protocol (IIOP). CICS for Solaris is underway whilst CICS for SNI platforms will be announced this month.

**Sybase Inc's** tools division, Powersoft Corp, demo'd the beta version of its PowerBuilder 5.0 client/server development tool at DB/Expo to a throng. Enhancements include extended support for OLE 2.0 plus OLE automation clients and the ability to create OLE automation servers. It has a new server-based object management facility providing versioning, labelling and reporting functions. Up on Solaris, NT, 95, 3.x, and Macintosh it's slated to ship in the first half of 1996.

**Hewlett-Packard Co's** acquisition of Convex Computer Corp is due to complete on December 20th: *HPCwire* notes Convex has sold around 60 systems in the first three quarters of 1995, compared with 62 for all four quarters in 1994.

Israeli Internet firewall security company **CheckPoint Software Technologies Ltd** has sold a 20% tranche of stock to Venrock Associates and US Venture Partners which now hold 10% each. CheckPoint's initial investor, BRM Technologies, Ltd, Jerusalem, Israel has 30%. No additional capital was raised in the process. Market research firm The Yankee Group says the firewall market will grow to \$924m in 1999, up from \$121m in 1995.

The forthcoming 6.2 release of **Silicon Graphics Inc's** Irix Unix will support 32-bit and 64-bit platforms: the company has R10000-based Challenge servers running internally but isn't ready to go to the wire yet. It's still shy of talking about the arrangement it's cooking-up to use Thinking Machines Corp's GlobalWorks software to cluster its workstations and servers for parallel application processing (UX No 567).

**Taligent Inc's** last chapter is hung-up with lawyers. Insiders expect few material differences from what's been published in the press.

The financial arrangements under which **Thinking Machines Corp** will emerge from Chapter 11 protection next February include the transfer of all the company's previously accumulated debt into a separate company. As part of its plan to repay creditors the company says it will begin to enforce and collect on some of the unspecified patents it holds in RAID, inter-process communication algorithms and other parallel software technologies.

We understand **AT&T Co** hasn't yet made a decision whether to go with Hewlett-Packard Co's 64-bit Unix ship (UX No 567). There's apparently passage available on at least two other vessels, including Sun and DEC. Word is AT&T has just a matter of weeks to make up its mind because the Intel/HP axis needs to have its P7 ducks in a row.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

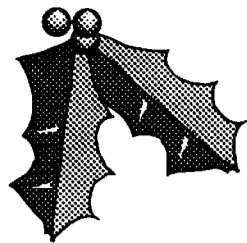
Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

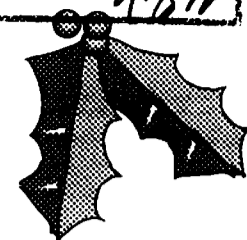
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Registered at the Post Office as a Newspaper



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27 DEC. 1995



The weekly information newsletter for the UNIX™ community worldwide

London, December 18-22 1995

Number 569

## APACHE WARPAINT COVERS SOMERSET'S EMBARRASSED BLUSH; PARTNERS LEFT TO PICK OVER 620 REMAINS

Somerset's post-604 strategy remains in disarray. The glorious alliance that created it is in tatters; reputations have been tarnished; momentum stilled; anti-Intel war talk silenced. Despite attempts by Somerset partner Motorola Inc. and its buddy Compagnie des Machines Bull SA to salvage the troubled 64-bit chip and keep IBM in the game, sources say IBM has washed its hands of the buggy under-powered thing as a commercial part, exiling it to the Siberia of the technical arena. IBM's defection has left Moto and Bull obliged to soldier on alone and make something of the 620 - that something being a widget called the 620e. IBM, meanwhile, has reportedly discerned three routes that can still get it to 64-bitness. One, seemingly a certainty, is to strip the PowerPC AS chip implemented in the AS/400 of its Rochester-specific baggage and use it in commercial RS/8000s in 1997. That morph'd part, dubbed Apache, has a PowerPC core (but isn't a 620 variant, says IBM) and currently includes an instruction superset supporting AS/400 stuff like tagged memory. However its lack of floating-point muscle will drive IBM to seek other solutions for technical workstation engines, including something called a 620 (in SMP arrangements if Somerset can get there), though IBM emphasises that it has not committed to a 620 anywhere in its roadmap. Indeed IBM's Austin unit is expected to supply the company's own 64-bit part., the so-called PowerPC 630, either in place of, or as successor to, the 620. Meantime, IBM's PowerParallels, the SP2s formerly fused at the hip to RS/6000 nodes - and now part of Mark Bregman's RS/6000 Division - have balked at this scheme and are striking out on their own. They'll carve out separate technical and commercial streams, the former using single Power2 Super chips followed by the 630, the commercial units incorporating SMP arrangements of the ever-improving 604, now rumoured - only rumoured mind - to have reached 240 MHz on a 0.25m IBM process. Apple Computer Inc., the other leg of the erstwhile triumvirate that once made up Somerset, suitably named for the site of Camelot's ill-fated court, reportedly grew impatient with the internal politics some time ago and pulled its few people out, keeping them geographically in the area but working on projects far removed from microprocessors.

### Drastic escape route

Rochester's frustrations with the PowerPC debacle - despite any successes of its own in the area - have reportedly driven AS/400 chief architect Frank Soltis' team to concoct a drastic escape route that on paper would have the whole AS/400 kit and kaboodle up on Intel Corp's P7 by means of a 10% increase in the division's budget. AS/400 watchers - who say Rochester's got SMP problems of its own - believe a chunk of IBM's 630 may find its way into a 1998 PowerPC AS; higher clock rates and improved (up to 12-way) SMP scaling will be touted in the meantime, they believe. 1996 will also see PCI I/O introduced alongside AS/400's System Product Division (SPD) bus on the way to full PCI rigging (with SPD daughterboard support) in 1998. Meanwhile, a source in IBM says quite openly that Phil Hester's harmonisation unit, meant to ensure that all product lines use common components wherever possible, has been disbanded not because its work was completed, but because it failed in its mission. The same source alleges that during the unit's run Hester unsuccessfully tried to muscle out a key individual resisting his campaign.

## SUNSOFT SWEATS RECOMPILATION SHORTFALL FOR SPEC 1170

SunSoft is apparently in the vanguard of an effort backed by other vendors to right a Spec 1170 shortfall and create a method to relieve ISVs of having to recompile for all the various Unix platforms. SunSoft VP and chief scientist Rob Gingell described the move, which could bear fruit in 1996 - 97, as a descendant of the old forgotten Open Systems Development Initiative (OSDI). "It's not cold fusion," he said, "it's more perspiration than inspiration," but the political climate in which the Unix industry moves hasn't been receptive to such reasonable solutions until recently. Gingell, who sits on both the X/Open and Open Software Foundation board for Sun, believes Unix companies are finally learning to play together like any group of successful toddlers, hence the new initiative. The technology would make use of current compilers and provide ISVs with a single interface-based runtime/compile environment encompassing different Unix target platforms. It throws them a sop for not coming up with a unified Unix operating system which of course remains the Holy Grail.

## LACK OF MARKET CANCELS SEQUENT/INTEL INTERACTIVE SPIN-OUT

Sequent Computer Systems Inc and Intel Corp have shelved the interactive multimedia spin-out they were on the brink of announcing a couple of weeks ago, claiming "the products are more real than the market," (UX No 566). Rather than "energising" the unit with funding, Sequent says the two companies realised the market is moving much more slowly than either anticipated, and have tossed the venture into frozen storage for a couple of months or so at which time it'll be re-considered. What happens to the solution Sequent is putting together using Intel's SPP Scalable Parallel Processor running its Dynix/ptx Unix kernels plus Oracle Media Server as an interactive multimedia server with Symmetrys to monitor ordering and invoicing, is unclear (UX No 534). Sequent says the two companies could not find a heading on the business compass for the proposed venture. Intel could not be reached for comment.

## ECMA ENDORSES WINDOWS API SPEC

Sun Microsystems Inc chief Scott McNealy must be smiling. Stock up, Microsoft Corp licensing Java and last week the European Computer Manufacturers Association (ECMA) voting in favour of APIW, the legacy of its Public Windows Initiative (UX No 525). It means the Windows API set cobbled together by the little Ray Noorda-financed start-up Willow Software to put a stick through the spokes of Microsoft's wheel is now an ECMA standard. According to its previous record, the International Standards Organisation can now be expected to fast-track and rubberstamp APIW an ISO standard. It's believed Microsoft, not an ECMA member, campaigned against APIW behind the scenes for the last year, while remaining aloof in public. Sources say pressure tactics persuaded Sun to comply. AT&T, Sony and Unisys voted against it. Compaq, NEC and Apple abstained. There were 21 "ayes," including Hewlett-Packard, IBM, ICL, Hitachi, BT, Siemens Nixdorf, Rank Xerox, Sun, Tandem, 3M Philips, Kodak, Novell, Ericsson and Toshiba. An ECMA and ISO sanction will ostensibly produce an 'open,' platform-independent specification for running Windows on Unix, Mac and OS/2 without paying the so-called Microsoft "Tax." How meaningful it is, despite any Sun jubilation, remains to be seen. Meantime, Willow is said to be nearly ready with its long-awaited Twin Cross Platform Developers Kit based on APIW.

This is the last edition of *Unigram.X* before Christmas. The next edition - No 570 - will be cover dated 25Dec to 5th Jan. Nevertheless, Unigram staffers are waiting to put aside their mince pies and forgoe another glass of sherry upon hearing of a major story breaking. In the meantime, we wish all our readers a Happy Christmas and a prosperous New Year.

### LOGIC WORKS DEBUTS NEW SQL RELEASE

Logic Works Inc, the software tools company out of Princeton, New Jersey has launched version 2.5 of its ERwin/ERX SQL modeling tool. ERwin/ERX entity relationship diagrams capture business rules, define entities, relationships and attributes and runs ~~most SQL databases and includes server forward and reverse engineering~~. Enhancements include increased control over the creation, manipulation and printing of database models, added support for AT&T's Teradata and Progress Software Corps Progress 4GL, on-diagram editing, relationship auto layout and enhanced support for latest versions of Sybase, Oracle, Informix, DB2 and Rdb. Shipping now, prices go from \$3,300.

### HP SUPPLYING SERVERS, SOFTWARE FOR BROADBAND NETWORK

Hewlett Packard Co says it'll use HP-UX servers for the giant broadband network venture with AT&T Corp's AT&T Network Systems announced last week. HP will build an API on top of the OpenView BaseWorks framework that is to underpin the network. BaseWorks is a network management system that came to market a year ago in a partnership between AT&T and HP. HP OpenView will be extended, as will the applications that run on top of it. HP, AT&T and ISVs will write management and operational support and cable operations applications. ATT will distribute content over the network. Wired networks will include both hybrid fibre-coaxial and switched digital video technologies, and possibly a Asymmetrical Digital Subscriber Loop. They have inked a memorandum of understanding to build new kinds of network software platforms and applications, and are developing a joint offering for interactive broadband data.

### TI SHIPS ARRANGER 1.1

Texas Instruments Software, Inc, Plano, Texas, is shipping version 1.1 of Arranger, its suite of software component assembly tools. Arranger 1.1 now offers PowerBuilder users access to robust, cross-platform enterprise applications. This enhanced version of Arranger also includes support for Windows 95. Arranger, a companion product to the Composer enterprise application development tools, connects desktop applications with applications built using Composer. Arranger 1.1 includes a new integration assistant that enables PowerBuilder users to develop multi-platform distributed applications. By accessing Composer-generated servers, users can design complex enterprise server applications and integrate them with PowerBuilder clients, the company said. In addition, version 1.1 supports the OLE capabilities of Visual Basic 4.0 and Excel 7. It costs \$500 for a stand-alone, end-user version, and \$2,500 for the developer version, which enables multiple versions.

### IBM'S CGI FLIES IN WITH BIRD LIFE-CYCLE OBJECT METHODOLOGY

IBM Corp's French software applications company CGI Informatique SA says it is making a major commercial thrust with the launch of BIRD, a full life-cycle object-oriented programming methodology for delivering client-server systems. The company says the methodology, which will be available in book form, deals with the whole cycle from business process re-engineering to system implementation. It claims that BIRD does not offer "esoteric techniques," but methods for actually delivering systems. CGI admits to taking the best of other methodologies such as Jacobson and Yourdon, as well as combining its own experiences of best practices in object programming and systems delivery. It says most current methodologies for system design are waterfall methods, starting at the beginning and cascading down, then restarting at the beginning. They do not fully incorporate the idea of re-using code.

#### Specifically

Also, it claims BIRD is written specifically for client-server applications, where previous methodologies have tended to tack client-server on at the end. It is designed to integrate the use of object oriented tools such as PowerBuilder, VisualGen and CGI's PAC/CS. CGI could not give a price for BIRD, which will be available in January, but said it will cost "a few hundred pounds." The company will also offer consultancy and training. CGI will integrate BIRD on-line with its own software engineering front-end tool PACDESIGN, and with parent company IBM's OBJChart.

### CINCOM OFFERS TOTAL FRAMEWORK FOR COMPONENT DEVELOPMENT

Cincom Systems Inc, Cincinnati, Ohio, has introduced its long-promised Total FrameWork application development environment, touted as an object-oriented system allowing users to build software ~~from re-usable components (UX No 534)~~. The workflow, assembly and persistence frameworks utilise technologies from UniSQL Corp and VMark Software Inc and are designed to integrate with Corba-compliant object request brokers. Component prices start at \$3,200, integrated packages start at \$7,000. The company believes it'll take up to two years to create a significant market for Total FrameWork; it claims 20 users so far, 12 of them new Cincom wins. Cincom, best known for its mainframe database and toolset, is now organised into three divisions; document solutions (roughly 10% of its business); the advanced technology group - formerly two separate application development and database groups for its and SupraServer relational database and Mantis tools each representing 30% of the company's business; and business control (manufacturing and financial), also 30% of revenue.

### INTERSOLV DEBUTS SMARTDATA FOR ODBC

Intersolv Inc, Rockville, Maryland, has launched a DataDirect SmartData ODBC driver for Solaris, OS/2, NT and Windows 95. HP-UX, AIX and Mac versions are due by May 1996. It is available as a standalone product for use with any ODBC-enabled desktop tool, or as a component of DataDirect Explorer, Intersolv's virtual data warehouse system. It costs from \$200 for access to a single database, and \$700 for access to all ODBC-enabled databases, which number more than 35. As a component to DataDirect Explorer, it costs \$500.

### CLARIIION LAUNCHES LOW-END RAID

The CLARiiON business unit of Data General Corp has released a CLARiiON Model 155 rackmount disk array, which is targeted at low-end Unix and PC server applications. The C155 provides up to 28 GB of disk and 32Mb cache and up to eight arrays per rackmount enclosure. The C155 includes redundant subsystems to eliminate single points of failure, on-line maintenance allowing hot repair of diskdrives, power supplies, fans and data integrity. It also supports dual porting between servers to guard against server failure. It has a Windows and Motif based graphical management tool. It supports most open systems platforms, including Sun Sparc, IBM RS/6000, and PCs running NetWare, NT, OS/2, SCO, and DEC Alpha. It incorporates RAID 5 and supports multi-RAID configurations concurrently. Global disk spares are available to automatically rebuild failed disks. The rackmount configuration is distributed by systems vendors, OEMs, private label suppliers, value-added resellers and systems integrators. It costs from \$11,000.

### OMG REJIGS FOR VERTICAL MARKETS

In line with its increasing emphasis on technology for vertical markets (UX No 525, 562), the Object Management Group is reorganising its business structure to grab both users and technology vendors in domain specific markets. As part of the re-org, OMG says its technology adoption process is expanding to support business solutions as well as infrastructure software. A Domain Technology Committee will address the specific requirements of the vertical market such as health-care, finance, manufacturing, interactive multimedia and telecommunications and will act as the voting body for the underlying relevant Task Forces and Special Interest Groups. The Technical Committee headed up by Richard Soley has changed its name to the Platform Technology Committee and is adding as yet unspecified new object services, a distributed document architecture and common facilities to the Object Management Architecture (OMA). A new Architecture Board is charged with overseeing the work of these two committees and ensuring any changes or newly adopted technologies preserve, reuse and interoperate with each other. There are two changes to the OMG's Reference Model, designed to reflect its OMA technical agenda and match the activities within the vertical domain task forces. Domain interfaces will refer to vertical application interfaces specific to a vertical market, while application interfaces will continue to be non-standardised application specific interfaces likely to be used in any object-based program. The new membership structure is aimed at improving the interaction with ISV's, end users and system integrators. OMG's existing member categories will be renamed and given increased rights and responsibilities. A domain contributing membership category has been added to enable vertical markets to work on implementing specific needs and requirements. The OMG claims its currently has 555 members, with 103 voting members.



### **IBM LEADS HIGH-END EURO MARKET; MORE COMMERCIAL APPLICATIONS REQUIRED, SAYS REPORT**

Market researcher IDC expects the European market for Massively Parallel Processing (MPP) and Scalable Parallel Processing (SPP) systems to grow more than 70% in value this year to \$460m. IBM Corp heads the pack with its RS/6000 SP systems reckoned to have earned \$75m, a clear \$30m more than the next nearest vendor Silicon Graphics Inc with its Power Challenge systems which earned it \$45m. Tandem took \$35m, Pyramid \$25m, AT&T \$20m, nCube and Meiko \$8m each. The remaining \$244m - more than 50% of the market - is accounted for by other vendors earning less than \$6m each for their solutions. Both the commercial and technical markets have grown substantially IDC says, though with the exception of large customised query and database installations commercial sales are being held back by the lack of applications support, it feels. Data mining, decision support systems and video servers are expected to begin driving sales over the next couple of years. IDC notes the rising use of clustered symmetric multiprocessing systems as MPP sites and expects this trend to gather pace, likely to account for 80% of high-end systems within five years. Like the ButlerBloor report on Parallel Database Technology (UX No 560) IDC believes that as the market matures the major vendors will gain a stronger foothold at the expense of the smaller concerns. IBM (SP2) and Tandem (Himalaya) have been chief winners this year, AT&T is losing some ground in its transition to the new WorldMark lines. At the other end of the market IDC expects smaller vendors, like UK-owned Meiko Scientific Ltd - claimed to be "running out of steam" - to go the way of Thinking Machines and Kendall Square Research.

### **SGI COSMO WEB DEVELOPMENT TOOLS DUE BY MID-1996**

Silicon Graphics Inc, Mountain View, California, has pitched in with a suite of Web development tools called Cosmos designed for use in creating interactive interactive applications. Included are Cosmo Create, CosmoCode, Cosmo Player and Cosmo MediaBase. All support HTML, VRML 2.0 and Java. Cosmo can be used for content creation, application development, multimedia browsing and media asset management, SGI claims. Cosmo Create is a development tool for writing Web pages and multimedia titles. Cosmo Code includes a runtime interpreter and compiler for Java, graphical debugger, a visual source code browser and several libraries. Cosmo Player is described as a multimedia viewer that can be used as a primary browser or as a plug-in to existing browsers. The Cosmo Motion engine, a runtime environment embedded in Cosmo Player, can be licensed for other browsers. Cosmo MediaBase is media asset management software for interactive access and provides structure to multimedia Web sites. The new software provides storage, retrieval, delivery and management of multimedia data. There are APIs for browsing, querying and delivering data. The Cosmos set is due by mid-1996.

### **NOVELL TO DEVOTE A QUARTER OF 1996 R&D SPENDING TO INTERNET**

Novell Inc's 1995 revenues topped the \$2,000m mark, fuelled by sales of NetWare 4 and generating net income of \$338m - 17% of revenues, compared with 10% last year. Revenues from NetWare reached the highest level ever, bringing in \$1,034m. Other network and systems software revenue also grew, reaching \$600m, but applications revenues declined, pulling in only \$49m in the fourth quarter - demonstrating why Novell is so keen to get rid of WordPerfect. It promises a plethora of new products over the next 12 months, including NetWare Transaction Monitor, a new version of Tuxedo adding NetWare Directory Services. Also planned are a NetWare Mobile Client for laptops and Personal Digital Assistants and an extended version of GroupWise with full NetWare Directory Services integration. 25% of the company's research and development budget in 1996 will go for Internet products and services. And by the end of this year, he said, the company will bring out a NetWare 4-based Web server. Novell's fourth quarter showed net profits up 189.4% at \$59.0m, against a period including \$61.1m in restructuring and other exceptional charges, on turnover down 1.1% at \$480.5m; net profits for the year to October 28 were up 63.6% at \$338.3m, against a period that included restructuring and other charges totalling \$190.5m and a merger-related charge of \$5.8m, on turnover that rose 2.2% to \$2,041.2m. Net per share was up 166.7% to \$0.16 in the quarter, and 60.7% to \$0.90 in the year.

### **SEAGATE DETAILS POST-FRYE SYSTEMS MANAGEMENT PLANS**

Seagate Technology Inc, Scotts Valley, California, is folding its Boston-based Frye Computer Systems acquisition into Seagate Enterprise Management Software (SEMS), the former NetLabs Inc unit, which also includes the NetWork Computing Inc and Creative Interaction Technologies buys (UX 549). SEMS says it is readying a number of products for event correlation and correction, inventory and automation in 1996, including NerveCenter version 2.5 due in the first quarter. Enhancements will include better fault resolution; it's being integrated with HP Operations Center for systems management, presumably under NetLabs' prior agreements with HP. The AshWin job scheduling application and Palindrome's Backup Director backup and storage management product, will also be integrated with NerveCenter. Seagate LAN Alert NetWare and NT server management applications will be consolidated to provide alerts to NerveCenter 2.5. Seagate will consolidate the asset and inventory management products, Seagate Asset Manager and Frye LAN directory for Windows, by mid-1996. These products enable users to share information over an enterprise, SEMS says; each workgroup can see local assets and forward them to the database for inventory and asset management. Officials were unsure if the company will bundle the products or sell them separately. Asset Manager presently runs on SunOS, Solaris and HP-UX, with support for AIX due in version 2.1, to be released in February 1996. SEMS will add support for Oracle in addition to present support for Informix and Sybase. Seagate Software Europe will serve as the common distribution arm with headquarters in Paris and offices in London and Dusseldorf.

### **TIVOLI INTRODUCES MANAGEMENT APIs**

As anticipated (UX No 568) Tivoli Systems Inc is now offering its Applications Management Specification APIs for creating objects that allow applications to be managed by the Tivoli Management Environment (TME). Dynasty, Forte, Informix, Intersolv, Oracle, Powersoft, Softool and Unify are all working with Tivoli on the APIs. Tivoli's offering an AMS developer kit for creating Windows applications that can be managed by TME (which doesn't currently manage calls from Windows-based applications). The SDK prompts for application management information and creates application description files compatible with TME tools. The SDK is compatible with Visual Basic and Visual C++ and Tivoli says it's working with Powersoft Corp on a version to support PowerBuilder. As well as trying to get the Desktop Management Task Force (DMTF) to adopt the Desktop Management Interface-compliant AMS extensions into its management information framework, Tivoli's creating a Web site to publicise the work and is seeking further partners. The SDK is within 90 days and will cost between \$250 and \$400.

### **DYNASTY ADDS SUPPORT FOR TANDEM**

Dynasty Technologies Inc, Lisle, Illinois, says its second generation application development environment now runs on Tandem Computer Inc's massively-parallel NonStop Himalaya and Unix-based Integrity Network Resource (NR) and Integrity Fault Tolerant (FT) hardware. It can also now generate the code necessary to use Tuxedo, DCE or TCP/IP to communicate between Integrity and Himalaya servers. Other clients supporting these technologies can access Dynasty-generated servers on Integrity environments. The Dynasty development environment also generates the SQL needed to run against Oracle and Sybase on the NR (re-badged SGI Challenge servers), and Oracle on FT (Tandem's home-grown Unix box). Versions of Dynasty for Tandem's massively-parallel Himalaya systems running the NonStop operating system are slated for the first quarter of 1996.

### **ON-LINE SERVICES IN A BIND AFTER PRODIGY CASE RULING**

Judge Stuart Ainsworth of the New York Supreme Court has made life a whole lot more difficult for operators of on-line services by ruling that Prodigy Services Co must either control what people write on their bulletin boards or face legal responsibility for any libel committed. The ruling upholds an earlier decision in the case between Prodigy, owned by Sears, Roebuck & Co and IBM Corp, and the broking firm Stratton Oakmont. Lawyers for Prodigy said they were filing new details to the judge yesterday, and if that was not successful, would appeal. The problem faced by Prodigy and the others is that there is no foolproof method to police bulletin boards - any more than there is a live radio broadcast. But to do nothing would be equally dangerous. "It is now the law of the land that online service providers who exercise editorial control, like Prodigy, be held to the standard of a publisher," said Jacob Zamansky of the New York firm Singer, Bienenstock, Zamansky, Ogele & Selengut.

### D&B SOFTWARE OFFERS SMARTSTREAM 4.0

Dun & Bradstreet Software Co, Atlanta, Georgia, is shipping SmartStream Distributed Enterprise, which now in release 4.0, has been enhanced for distributed enterprises with integrated client/server financial, manufacturing and information management applications (UX 526). The company says SmartStream DE distributes data, workflow and business processes throughout an enterprise. It runs on HP-UX, Solaris, AIX, Digital Unix, Windows NT, and has been upgraded to support Windows 95 clients. It runs over IBM LAN server, Novell NetWare, DEC Pathworks and TCP/IP networks. SmartStream DE has a component-based structure that enables moving to a client/server system incrementally. It is designed to enable data, workflows, reporting/query capabilities, structures, intelligent agents, transaction services, job scheduler and business processes to be created once and replicated or distributed to the servers that support users. Data can reside with associated applications on the same server, so applications don't have to access the same central database, the company says. Enhancements include Distributed Intelligent Workflow, in which workflow is embedded in the SmartStream DE architecture and can be distributed to servers throughout an enterprise. SmartStream DE's workflows can be configured to automate many routine activities, and can launch third-party applications. Workflows can initiate email to outside vendors, customers or partners. Fax and telephone also can be integrated. Workflows can be designed graphically in SmartStream DE using an application called Business Process Maps. Objects can be pulled using drag and drop to set off a specific chain of events for each pre-determined activity. SmartStream Builder, a toolset based on Powersoft's PowerBuilder organisations, can generate distributed client/server applications that include all of the distributed components in the architecture. SmartStream Builder can integrate system extensions, workflow and electronic mail into existing applications. SmartStream Builder also enables users to change window contents without changing window structures and alter data views without changing code. SmartStream contains an integrated electronic help desk called Assistant, linking customer sites and D&B Software support. It can operate over Internet, private and dial-up. APIs for workflow, scheduler and electronic mail are also now included. A new Workflow API enables SmartStream transactions to generate e-mail to non-SmartStream users or to launch third party applications. A new Scheduler API enables batch jobs to run anywhere, and allows SmartStream to interface with monitoring tools such as HP OpenView. Smartstream's decision support toolset has been re-written for the DE release to include a distributed structure and data analysis. It also supports Pilot Software Inc's OLAP Lightship suite. Decision support components now reside on the server rather than the client, and executables can be distributed across servers. Written in Visual Basic, it includes a new GUI a Navigator with customisable filtering and tailoring, a Query module with output to Excel, Lotus and ASCII text; a Reporter which has formatting options; and a Management Reporter for report templating.

#### Financial applications

The SmartStream DE core applications now available include SmartStream Financials, a financial management system that includes ledger, receivables, asset management, payables, allocations and consolidations. Other applications include SmartStream Procurement and SmartStream Budget. SmartStream Financials supports multi-national sites, currencies and languages. SmartStream Manufacturing and Distribution, an ERP system that has integrated manufacturing and distribution applications, is also now available. It includes Indented Bill of Materials, MRP, Scheduling, Inventory, Order Management, Customer Management, Cost Management and Purchasing. D&B has also released SmartStream Decision Support to access and analyse financial, manufacturing, and personnel data. In the spring 1996, D&B will release SmartStream Payroll and SmartStream Benefits for SmartStream Human Resources, which supports a number of human resources functions. SmartStream DE costs from \$100,000, based on modules purchased, the number of users, and network configurations.

### UNISYS, COMPAQ JUMP ON INTEROFFICE BANDWAGON

Unisys Corp, San Jose, California, will resell Oracle Corp's InterOffice suite (UX 568) on its U6000 Unix SMP servers and Unix and NT PC servers. Unisys will bundle hardware and software onto new sales as requested, and sell InterOffice separately to existing U6000 users. It says it will charge the same price for InterOffice as Oracle, although Oracle hasn't yet determined tags for the bundle. Oracle's Workgroup and Enterprise InterOffice packages include an integrated database, messaging, systems management, and Web software. It is due to ship in April. Compaq Computer Corp, Houston, Texas, will offer both packages from the second half of 1996 using its SmartStart integration tool to install, configure and optimise the software on its servers.

### PLATINUM TECHNOLOGY BETAS INFORMIX TOOLS...

Platinum Technology Inc, Oakbrook Terrace, Illinois, has beta'd its InfoTransport data migration tool for Informix databases. It's a GUI-based tool that moves data from DB2, IMS and VSAM to distributed server databases including Informix OnLine Dynamic server 7.1, DB/2 for OS/2 and AIX, Sybase, SQL, and Oracle. InfoTransport will be generally available for Informix in January 1996. It costs from \$151,300 depending on CPU size. Platinum has also integrated other tools for Informix: the InfoRefiner data extraction tool; InfoHub, a tool for SQL access to MVS-based data from PC based applications; and InfoPump, middleware for bi-directional data replication and movement. Platinum also offers SQL Assist for creating SQL code for data access, ProReports GUI reporting tools, and Forest & Trees GUI-based reporting tools for Informix.

#### ...ADDS PEOPLESOFT TO PARTNER LIST

Meantime, as we reported last week (UX 568), Platinum has entered into a slew of partnerships. This week the company saw fit to elaborate on a number of these deals, and added a few more. It says it will explore synergies across PeopleSoft's product lines whilst standardising on PeopleSoft toolsets internally. It will integrate its data warehousing, business intelligence and systems management applications with PeopleSoft's line of client/server business applications for internal use. Over the next six months, the two will build a series of products to sell. Versant Object Technology Corp and Platinum will develop a version of DBVision, Platinum's performance management tool for the Versant ODBMS, which Versant will market. Hewlett-Packard Co and Platinum will cooperatively market solutions: Platinum's HP OpenView integrated tools will ship by the end of the first quarter of 1996. Tools to be integrated include the InfoRefiner data extraction tool, InfoExpress, SQL Assist for creating SQL code for data access, and Forest & Trees GUI-based reporting tools with HP OpenWarehouse Framework.

### MANAGEMENT BUYS OUT LEGENT IT DIVISION

Executives of Legent Corp's Information Technology Division have bought the unit off new parent Computer Associates International Inc and will trade as Pathlore Software Corp. The Columbus, Ohio-based Unix and mainframe help tools and training operation will sell Preference and Explain suites of on-line help tools and Phoenix productivity and computer-based training software. In January, Pathlore will release a long-awaited Windows version of the mainframe-based Phoenix training product it gained with the acquisition of Columbus, Ohio-based Goal Systems Inc in August 1992 (UX 527). Phoenix for Windows will provide a mixed graphical and scripting environment for building interactive tutorials and have audiovisual multimedia elements. It will run on AIX, HP-UX, OS/2 and Windows NT servers, with NT, Windows 3.1 and OS/2 clients. Pricing has not yet been determined. Pathlore is also cooking up development wizard tool code-named Northwoods, for some time in 1996. Pathlore will increase its staffing from 50 to 70 in three months.

### OPENPLUS OPENS IN US, DEBUTS FINANCIAL APPLICATIONS

OpenPlus International Inc, an Australian-based developer of client/server business software, has decamped to Austin, Texas, to focus on the North American market, and has launched a suite of Unix enterprise business software applications. Dubbed OpenPlus, the suite includes OpenPlus Financials, OpenPlus Distribution, and OpenPlus Application Development Framework. The applications run on most flavours of Unix, but the company is focusing on HP-UX, AIX, Solaris and Digital Unix. Financials and Distribution are for managing business accounting and distribution operations, and are comprised of 10 and six modules, respectively. Application Development Framework is a set of tools for modifying functions in the products. OpenPlus enables the migration and integration of legacy applications for most operating environments. Database administrators may distribute databases and manage these over many servers. OpenPlus designed the applications using LBMS' system engineering case tool and Compuware Corp's Uniface development environment. The company completely redesigned its old 3GL designs, which accounted for 47 financial and maintenance modules. The OpenPlus suite runs on all databases at the same time, and has support for Oracle, Informix, Sybase, SQL, and DB2, and runs on OS/2, Motif, Windows 95 and Macintosh clients. The company plans to develop new applications for OpenPlus, including human resources and manufacturing applications. The OpenPlus suite costs \$4,500 per user per server.

## UNIDATA WILL INTEGRATE ACQUIRED SYSTEM BUILDER TOOLS

By Nancy Stair

Denver, Colorado-based Pick-popper Unidata Inc has completed its acquisition of 4GL and application development tools maker System Builder Pty Ltd, Sydney, Australia (UX No 545). The company will retain the Unidata name, with products being acquired to remain under the System Builder name. Unidata will expand its current offerings of nested relational legacy migration and application development tools, and begin to focus on developing object relational technologies. Unidata's tools, applications and the UniData RDBMS run on most flavours of Unix.

### VMA and Unix

Unidata has a centralised host-based application for SB+, System Builder's fourth generation toolset that can be built on Unix and VMS. SBClient, formerly called Termulator, is a host-based application that converts character-based applications to GUI and migrates host-based applications to become client/server applications. Unidata can now use SBClient to give SB+ running on UniData RDBMS distributed presentation. By the first or second quarter, SB+ running on UniData RDBMS with SBClient and DataC++ will have remote presentation (this function is presently in beta). Unidata is also working on SB+ for Windows, which will enable SB+ applications to run on Windows as a stand-alone desktop or with remote data access and distributed functions across UniData RDBMS. This will be accomplished with business logic migration, which moves and alters code. These capabilities are in beta presently. SB+ will be ported to Unidata's UniData RDBMS in the coming month. Unidata will restructure the architecture of SB+, and release object-oriented products for SB+. Unidata will port SB+ to Windows 3.1 and Windows 95 in the first quarter of 1996, and will release Windows NT support for SB+ in mid-1996. Unidata will also continue to work on SB++, an internal code name for a planned product that would build and deliver an object-oriented 4GL development environment. There's no release date for SB++ yet.

### Basic to Unix

Unidata has written a migration tool to migrate and recompile data written in Basic to run on Unix relational databases. B2C, presently in beta, converts Basic into C++. Via SBClient, Basic applications may be ported to the UniData RDBMS for distributed presentation. Using SBClient and Unidata's language DataC++, Basic applications may be run on UniData RDBMS for remote presentation. Furthermore, using B2C Basic applications running on UniData RDBMS may be migrated to run on SBDesktop, which is Unidata's object-oriented 3GL development environment for the PC. Formerly called SBOpen, the product is a target environment for migrating applications from the host to the desktop and migrating legacy data. Remote data access, distributed functions and a stand-alone desktop version of SBDesktop will also be available. All of these tools and functions are in beta, with release slated for the first half of 1996.

### Cobol Direct Connect

Unidata will continue to offer Cobol products (UX 538), and is enhancing its Direct/Connect migration technology for users who need to continue to run Cobol but also access to data warehouse data environments for decision support. Unidata says it has an application that migrates data from flat files to the UniData RDBMS without changing source code or recompiling it. Cobol Direct Connect data migration tool maps and moves Cobol data into a Cobol application running on UniData RDBMS. This is presently available in release 2.0. Unidata will use third party application migration and recompiling tools to run Cobol applications on the desktop via CDC stub. Part of Direct Connect, this relays requests from the PC to the host Unix server. Using RPC, Cobol applications on the desktop will be able to communicate with Cobol Direct Connect running on UniData RDBMS. These capabilities are in beta, with release set for the first half of 1996. Although Cobol applications may presently run on UniData RDBMS, users can use off-the-shelf tools to access this via PCs, but cannot move existing Cobol applications to the PC, as there is no Direct Connect interface. The acquisition includes all subsidiaries in the US, UK and the Australian development group, but excluded are certain System Builder distributors in Australia, Europe, and South Africa. SB Tech Pty Ltd, the exclusive Australia/New Zealand distributor of System Builder products, will retain its distribution rights. All System Builder contracts will be honoured. Unidata will be discontinuing System Builder's third-party products Termite/SBTermite Windows-based GUI tool, SBMac, and Docusys.

## TANDEM REVS OPEN SYSTEMS SERVICES, ADDS MICRO FOCUS CICS APIS

Tandem Computers Inc has introduced version 2.0 of its Open Systems Services API, the set of Unix services and standards it's implemented as a personality on top of its NonStop operating system kernel. New is support for Berkeley sockets, NFS and symbolic links, though it doesn't yet claim support for XPG4 Version 2 (Unix 95) or TxRPC (transactional RPC) both due in 1996 (UX No 528). In addition it's working with a tools and utilities house to bring it up to full Spec 1170-compliance. Tandem's NonStop SQL database now supports system management storage, IBM Escon and a load append facility. It also offers Distributed Computing Environment for NonStop. In addition, Tandem is implementing Micro Focus Plc's CICS APIs on its Mips-based Himalaya parallel processors which it says will allow IBM customers to migrate mainframe CICS applications to the NonStop environment. The APIs will be available by mid-1996 as the Parallel Transaction Processing Services (PTPS) for CICS. It may be entirely unconnected that Tandem, which wanted to make public much earlier than October 11 a planned port of IBM's SOMobjects 3.0 (System Object Model) to its servers (UX No 560), wasn't able to until it had agreed on the unwieldy PTPS name for its CICS services. 70% of Tandem's revenue is derived from its transaction-based products. Tandem claims to have 50 of its new R4400-based S4000 Unix SMP servers running the ServerNet 'big bus' interconnect in the field and maintains it'll begin general deliveries by year-end. It expects to name a new president and CEO within a month to replace Jim Treybig who's being bounced up to chairman. Executives said that if Tandem subsidiary UB Networks chief (and former Unix System Labs boss) Roel Pieper was going to get the job he would have been named to the role by now.

### No trouble

Meantime, Tandem says the fact that its HATS High-Availability Transforming Software hasn't been passed back to Silicon Graphics Inc for use on its Challenge servers (even though it is available on the SGI servers Tandem rebadges as its Integrity NR line) shouldn't be taken as an indication that there's trouble at t'mill. Despite the general availability of its own ServerNet-ready, one-to-four way S4000 Unix multiprocessing platforms this month (UX No 556) Tandem says it'll continue to offer SGI servers for "classic" SMP and pricing. Tandem's 300Mbps ServerNet interconnect will be used to link multiple S4000s, initially via a sub-\$1,000 PCI-to-ServerNet adapter due in the second half of next year, then directly over fibre links, providing it says, a 215ns latency for local memory access, 600ns over ServerNet through two routers. ServerNet is now being fitted to Tandem's MPP Himalaya line, it'll be available by the end of next year, along with the NT-based ServerNet units being developed in conjunction with NEC Corp. The company says it'll have a 64-bit Unix out by 1997 and is currently in discussions with SCO, HP and other Unix developers about how to get there. It says it'll have a plan within three months and is taking its ServerNet technology into the discussions. The company says it's got further talks underway with Microsoft Corp about closer cooperation in a number of areas.

## GEMSTONE OFFERS NEW SMALLTALK INTERFACES FOR RDBMS

GemStone Systems Inc, Beaverton, Oregon, is readying an interface it says will allow Smalltalk developers to integrate object application created under its Gemstone environment with Sybase and Oracle databases. The interface apparently works as a virtual object storage location, enabling users to create objects with data from multiple relational databases. Data can be modified through client applications and the relational databases updated. It will run on SunOS, Solaris, HP-UX, AIX, Sequent and Sinix Unixes. The interface will also work in conjunction with IBM VisualAge 3.0 Smalltalk and ParcPlace-Digitalk VisualWorks 2.5 development tools via new Smalltalk interfaces. It's due in the second quarter. GemStone will market the product to Sybase and Oracle users. The Smalltalk interfaces can only be used in conjunction with GemStone 4.1 object application server and up. Development licenses for them start at \$1,000 per user; licenses for the object application server software on Unix go from \$5,000. The GemStone interface for VisualWorks runs on Solaris, AIX, HP-UX, Mac, OS/2, Windows NT and 3.1. For VisualAge it supports OS/2 and Windows 3.1. Both products ship in the first quarter of 1996. Meantime, GemStone has joined Sybase Inc's Open Solutions Program and Oracle Corp's Business Alliance Program to build development tools, interfaces and business object management software for each.

### **IBM SETS LAST DITCH BID TO REPOSITION NOTES FOR WEB**

Lotus Development Corp's chief executive Michael Zisman has laid out the company's strategy to integrate Notes with the Internet, positioning Notes as a ubiquitous server, combining databases, messaging and World Wide Web server functions in one. The IBM Corp subsidiary also increased the price of the next release of Notes servers while giving the InterNotes Web Publisher 2.0 away for free, where it previously cost around \$3,000 and had struggled to gain market share. Release 4.0 of Notes Server is expected in the first quarter of 1996, having been promised by the end of this year. Once it's out, a package, previously codenamed Spike will be released. It combines the server, a HyperText Transfer Protocol server and a copy of InterNotes. By mid-1996 the company will ship an integrated HyperText Notes server on all current Notes operating systems. All Notes clients from release 4.0 will include the InterNotes Web Navigator browser. Zisman said that the term Web Server would become "content-free" as everything would be a Web server by default. On the Notes clients, Web access would be embedded in all applications, so Web pages could be accessed anywhere in a Notes application via doc link icons or LotusScript commands. Notes Mail, which features the cc:Mail interface will arrive with Notes Server 4.0. Server prices have shot up to £341 for a single-processor server and £1,584 for the multiprocessor version from £198 per processor. The Notes 4.0 desktop client will cost £47, representing a 57% price cut on the current version. Jeff Papows, Lotus chief operating officer said "this new pricing model is one example of the benefit of our merger with IBM." Zisman said of future Notes users "by virtue of the fact that they're in the Notes database, they're on the Web."

### **BELL COMMUNICATIONS RESEARCH SETS SUN, NETSCAPE INTERNET ALLIANCES**

Bell Communications Research Inc, the Morristown, New Jersey research house currently jointly owned by the Baby Bells but expected to be spun off, is to explore joint opportunities for Web-based products, services, technology and training for Internet and World Wide Web offerings with Sun Microsystems Computer Co and Netscape Communications Corp. It will become a Sun Independent Software Vendor, become a Sun Object Reality Center and Sun may use it as a subcontractor for its systems integration services where appropriate. With Netscape, the two will explore ways to work together on systems integration consulting services based on Netscape's software for the Web.

### **HP TAPS MICROSOFT, NETSCAPE FOR WEB PRINTING STANDARDS**

Hewlett-Packard Co wants users to be able to print Web pages out as easily as they can display them on their screens, and has reached separate agreements with Microsoft Corp and Netscape Communications Corp to develop the necessary standards. It plans to work with the two to develop nonproprietary printing standards for HyperText Mark-up Language so that users can print information from the Web in the format in which it was originally created. The standard will enable selective printing from portions of Internet pages, faster printing and improved printing resolution, it promised.

### **FUJITSU'S £25m VPP BID BOUNCES CRAY OUT OF EUROPEAN WEATHER BASE**

Since the former Control Data Corp dropped out of the supercomputer business, Cray Research Inc has pretty much had the weather forecasting computer business sewn up in the US, Europe and most of the rest of the world, despite the best efforts of the Japanese. Now, in a stunning coup, Fujitsu Ltd has bounced Cray out of the European Centre for Medium Range Weather Forecasting in Shenley Park, Reading, and will replace the vector Cray Y-MP C90/16 and parallel T3D with one of its VPP Vector Parallel Processing systems - an as yet unannounced model - which run under Fujitsu's Unix System V.4-derived UXP/VPP. The current flagship VPP500 scales up to 222 processors, each rated at 1.6 GFLOPS. The new one should be much more powerful, although the original one is in Gallium Arsenide and BiCMOS while the new one is being built in CMOS. A low-end VPP300 model will go in in March for testing and conversion, and the top-end machine will follow in June. The Centre goes out to tender every time it replaces its computers and it appears that this time around, Fujitsu bid a price - £25m over five years - that Cray simply did not feel able to try to beat.

### **STAFFWARE INTEGRATES VERTICALLY BY BUYING ITS RESELLER**

London-based workflow software company Staffware Plc has bought one of its resellers, Software Support Ltd of Nottingham, for an undisclosed sum by means of a share swap. Software Support shareholders are swapping their shares for new shares in Staffware for the acquisition, due to be completed in January 1996. The two companies have worked closely with each other for more than six years, and both feel the merger is an obvious step forward. Nick Kingsbury, Software Support director said he and the company's other two founding directors, will be taking senior positions in Staffware, and all 16 of their staff will also be joining the company. Software Support brings its insurance and finance market expertise to Staffware's workflow product, which has been integrated with Lotus Notes, and is also sold by Data General Corp and Digital Equipment Corp on an OEM basis.

### **SAMSUNG USES POWERPC IN NEW TV SET-TOP BOX FOR ORACLE MEDIA OBJECTS**

Oracle Corp says its Oracle Media Objects interactive multimedia authoring tool will support a next-generation PowerPC-based television set-top box. At the Western Cable show, Samsung Electronics Co Ltd demonstrated a video-rich interactive application, created with Oracle Media Objects, running on the new Samsung Interactive Digital Set-Top Box, also introduced at the event. Oracle Media Objects, now available for \$100, is claimed to be a flexible, cross-system object-based authoring environment that enables the creation of "compelling" interactive applications which incorporate audio, video and text. At the show, Samsung demonstrated an interactive application it has developed, a video dating service. The application, authored on an Apple Computer Inc Macintosh, features on-screen menus that enable the user to select the required traits for a potential date. After narrowing down the requirements, participants then view a short video and have the option to receive more information on that person. The Interactive Digital Set-Top Box uses a 66MHz PowerPC 603 processor with the Microware Systems Inc OS-9/David 2.0 operating system and is MPEG-2 compliant for high quality video resolution. Samsung is a member of the Oracle New Media Alliance, the Redwood Shores, California company's developer programme designed to promote open offerings in the emerging interactive applications market and comprising more than 300 companies that are involved in interactive multimedia, ranging from cable and telecommunications operators to content developers.

### **HP JOINS THE VIRTUAL WORLD CONSORTIUM**

There has been gossip in City of London parlours that Hewlett-Packard Co is so enthusiastic about the prospect for virtual reality that it may be about to buy a stake in Division Group Plc of Bristol. While not saying anything about Division, it has made its keenness for all things virtual manifest by joining the Virtual Worlds Consortium, formed to promote and foster virtual reality technology. Hewlett will work with other members to help them create real-world virtual reality applications. The Virtual Worlds Consortium was organised in 1990 and is managed by the Human Interface Technology Laboratory of the University of Washington in Seattle, a hot-bed of virtual reality research. Members include Division Group Plc, Microsoft Corp, Philips Research Laboratories, Samsung Advanced Institute of Technology, US West Inc, Hughes Aircraft Co, American Express Co, Boeing Co, the US Air Force and US Navy.

### **IBM TO FEED REUTERS TO YOUR STATUS LINE**

While Microsoft Corp gets into a heavy petting session with the NBC arm of General Electric Co Inc over a 24-hour news channel, IBM Corp has allied to leap aboard the Internet with Reuters (Holdings) Plc. IBM plans to introduce an Internet-based on-line news service, called the IBM infoMarket NewsTicker, with the news content to be provided by Reuters New Media Inc. News headlines will be displayed in a ticker format that scrolls across the bottom of your computer screen. US and international news headlines will be offered free to desktop users of the Internet, will be available 24 hours a day and will be updated hourly. The service will also include business, sports and entertainment news, and IBM plans financial and industry-specific information in the future. How to pay for all this? There will be interactive advertising space available, where users can link to an advertiser's Web site by clicking on its icon. IBM has "a new secure container technology" called Cryptolopes to enable owners of digital content to distribute it securely on the Internet, and to ensure payment for its use.

## OSF CALVES FEDERATED NAMING, FOREIGN LANGUAGE CHARACTER SET PSTs; ADOPTS SUN SINGLE LOGIN FOR COMMON DESKTOP ENVIRONMENT; OFFERS WEB ENHANCEMENTS, NEW JAVA PORTS

*by William Fellows*

~~Following the December 7th meeting of its board, Open Software Foundation had a little trouble getting its ducks in a row, but eventually~~ birthed two more of its Pre-Structured Technology (PST) processes, this time for Complex Text Layout (CTL) and X/Open Federated Naming. It's also adopting a single login mechanism for use with Common Desktop Environment/Motif. SunSoft Inc chief scientist Rob Gingell says all three are based on Sun-derived technologies.

### Bi-directional

OSF says CTL will enable the next version of Motif to support complex languages that use composed characters, context sensitive characters or have bi-directionally intermixed characters. Digital Equipment Corporation, Silicon Graphics Inc, and SunSoft Inc are the PST's backers. It'll utilise an implementation of the X/Open Portable Layout Services Specification. In plain English it means the creation of a standard way supporting foreign language applications under Motif. CTL will support composite characters - defined as a group of character elements that are rendered together as a single composed shape. Languages include Korean Hangul, Lao, Thai and Vietnamese; Context sensitive characters - the shapes of the characters can change depending on the neighbouring characters and/or placement within a word. Languages include Arabic, Korean Hangul, Thai and Urdu; Bi-directional writing - languages that are written with intermixed left-to-right and right-to-left directions. Languages include Arabic, Farsi, Hebrew, Urdu and Yiddish. SunSoft claims to be the originator of the technology. It'll be at least eight months before reference technology is turned over to PST sponsors and then offered to OSF members.

### Unified directory

OSF has finally agreed on how to build the long-promised unified (federated) network naming service which will supposedly allow any client machine to use a unified directory to dial up NetWare, NIS+, DCE Internet domain name and X.5000 network services. It's an implementation of the Sun-derived X/Open Federated Naming specification. Given that when we spoke to Gingell early last week Novell still hadn't thrown NetWare Directory Services into the pot - Novell, it was thought would integrate NDS as an freelance effort - its progress should be interesting. The six-month project - in which SunSoft is the primary contractor - is smaller than the CTL PST, but the first in which all primary OSF sponsors - AT&T, DEC, Fujitsu, HP, Hitachi, IBM, Novell and SunSoft - are participating. There'll apparently be no requirement to extend the X/Open Co Ltd XFN specification as a result. OSF says the PST will integrate naming services, file systems and application databases as a single system. Specifically it'll implement a single API for all directory services - including DCE's Cell Directory Service (CDS), ONC+ NIS+, NetWare NDS, X.500 and Internet DNS; unite multiple directory services into a composite global namespace enabling information access across heterogeneous enterprises; define and implement an Internet directory protocol providing access to global directory services; bring enterprise directory services to Windows desktops; help organise information through XFN policies about users, hosts, files and services across the enterprise to simplify finding and accessing network objects; allow new services and applications to be integrated into the federation; and conform to the X/Open naming specification. The next step includes the signing of the Technology Licensing Development Agreements (TLDAs) between all sponsoring companies.

### PAM authentication

OSF is also incorporating SunSoft's integrated login system called PAM - Pluggable Authentication Module - into Common Desktop Environment (CDE)/Motif. PAM - not a PST - will supposedly enable users to deploy different authentication technologies on different machines without requiring modified login and other commands. PAM integrates low-level authentication mechanisms by plugging them into applications at runtime via a high-level API. The authentication mechanisms which can be either standalone operating system or network mechanisms, are encapsulated as dynamically loadable shared software modules. The modules can be installed by system administrators independently of applications, and executed by applications depending on the system configuration, OSF says. The PAM technology handles authentication, account, session and password management. Other character and graphics-based applica-

tions using local and remote login, file transfer, remote execution and password-changing programs can all use PAM as their system access API. OSF describes PAM as complementary to the GSS-API (Generic Security Services API) technology which supports application-level, peer-to-peer or client-server authentication, but not system access authentication. Once users are authenticated using PAM, they can communicate securely using GSS-API together with a transport service of their choice, OSF says. PAM also supports security-integrated communications technologies such as RPC. PAM also provides single sign-on, where users type their password only once, even when using multiple security services. A preliminary version of PAM will be available to in the CDE 1.0 maintenance release due by the end of this year. The final version will be available in the 1996 CDE/Motif release being developed by X Consortium. PAM modules will support ONC+, Kerberos, and DCE network authentication mechanisms on Unix. Smartcard support is under consideration for a future release.

### Tree

Alongside the introduction of DCE Web (UX No 568), OSF's Research Institute also fleshed-out some of its other web projects. WebWare 1.0 is a set of software technologies claimed to extend web capabilities as accessed through standard browsers. It includes tools which can reveal changes in documents independent of browsing activity and alert interested users; a tool which exposes the tree of links below a web documents and allows navigation of the tree; maintains an index of HTML documents searched; a document correlation service which finds web documents or email similar to that being viewed; a navigable, graphical history of browsing activity; a group web-creation system allowing remote users to co-develop and maintain web pages; and tools for developing application-specific transducers for HTTP streams between web clients and servers. WebWare 1.0 is free for research and development purposes for January. Under the Institute's existing Java Advanced Technology Offering, it has ported the Alpha3 version of SunSoft Inc Java to HP-UX 9 and 10 on PA-RISC and to UnixWare 2.0 on Intel. Java and HotJava are available from Sun on Sparc/Solaris 2.3 or above and Intel/Windows NT. OSF will have beta implementations of Java/HotJava available for AT&T Globalyst S40 with System V, HP 700 workstations with 10.0x, and Intel/UnixWare in the first quarter; CP Labs' OSF/1, Digital Unix and Sony News in the second quarter.

### SYBASE RE-AFFIRMS MESSAGES

With Powersoft Corp digested and System 11 finally out of the door, Sybase Inc's getting some of its corporate messages together. It says we should think of it Neapolitan ice-cream style, with database, middleware and tools layers. All tools considerations now rest with its Powersoft operation. Indeed it believes the Powerbuilder development tool family is on the brink of generating its own dedicated industry *a la* Visual Basic, claiming there are a number of companies set to reveal themselves as Powersoft-only shops. Now up on its first Unix, Sybase claims a significant percentage of its Powerbuilder-on-Solaris customers are new to the toolset and not simply switching from or adding to their Windows environments. It won't be rushing out flavours for each and every Unix, and although additional implementations are planned for 1996, it's shy of putting their names in lights right now. Meantime, shooting back across the fence (UX No 566), it notes that the row-level locking mechanism still missing from System 11 was only brought to DB2 this year and that in any case it is in reality required only by one application from one company, namely SAP AG R/3. At the big-iron end of its product range, the company says its Sybase MPP parallel database implementation (formerly Navigation Server) is now up at a dozen AT&T sites, with betas in place on IBM SP2 environments and versions for HP and Sun clustering technologies due in the first quarter. Navigation Server co-developer AT&T no longer has six months exclusive rights to each new iteration of the database which it did under the original agreement.

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The beta version of the VRML-based VRealm 3D browser is now available on the World Wide Web. VRealm, from partners **Integrated Data Systems Inc** and **Portable Graphics Inc** of Austin, Texas, lets users fly or walk through three dimensional worlds. It uses rendering and texturing techniques provided by Open Inventor 2.1, licensed from Silicon Graphics Inc. VRealm integrates real-world features, such as collision detection, gravity, point and jump navigation within the world. It is at <http://www.ids-net.com>.

Sunnyvale, California-based **Pure Software Inc** is shipping its PureDDTS WebTracker this month, an extension to its PureDDTS defect tracking system, for accessing defect reports and change requests stored in PureDDTS from any web browser. WebTracker is up on most Unix clients and goes from \$9,500 per server.

**Netscape Communications Corp** said a pair of software sleuths won \$1,000 each for finding security gaps in its new Internet-browsing software.

Andrew Allison thinks Pentium Pro "marks the beginning of the end for Unix as a client platform and of the workstation and server as we know them. The only question is how far and how fast the Wintel axis will penetrate these markets." If it ships 100,000 by the end of this year that's already 15% of the entire RISC-based market share, Allison postulates.

**Learmouth & Burchett Management Systems Plc**, now decamped from the shores of its birth and headquartered in Houston, Texas has turned in a respectable set of interim results, showing as promised that it is back on its feet after past troubles. The software design and services company turned in profits of £407,000, after losses last time of £2.8m, on turnover up 17.3% to £12.4m. The company decided to concentrate solely on its process management and systems engineering business last year, selling its consultancy business in July 1994. It says the strategy has paid off. On November 16 it completed its initial public offering on Nasdaq, raising £8.2m. It said it was looking for acquisitions to increase its global presence.

**Meta Group Inc**, Stamford, Connecticut computer industry research house and consultancy, got its initial public offering of 2.4m shares, 1.5m of them new, away at \$18 per share, against a target price of \$12 to \$14 a share.

**Oracle** has decided that it should not have all its development eggs in the West Coast basket, and has decided to establish a database technology research and development facility in Nashua, New Hampshire. Planned in two phases, the 120,000 square foot centre will be completed by March 1997. It will start with 200 employees, but phase two will give it capacity for up to 500 people.

**Zona Research Inc** forecasts sales of Intranet software - \$142m this year - will hit \$488m in 1996 and \$1,200m in 1997. Meantime, Cardinal Business Media's looking for a buck on the back, recasting its TCP/IP Expo as TCP/IP+Intranet Expo, set for August 13 to 15 in San Jose.

**IBM Corp** has now officially achieved XPG4 Base brand certification for the open systems flavour of its MVS/ESA System/390 main-frame operating system (UX No 557). There's still no operating system - Unix or otherwise - that's achieved full Spec 1170 compliance according to the XPG4 Base/Unix 93 and XPG4 version 2/Unix 95 specifications. IBM's promising full Spec 1170 conformance for MVS/ESA by the end of 1996.

Meantime, with DEC's anticipated Spec 1170-compliant Digital Unix 4.0 already pushed over into 1996, **Hewlett-Packard Co** says it won't be keep its end-of-year promises either, penciling an early January announcement for its user-level threads/Spec 1170 HP-UX release.

Looking more closely at five-year-old **Siemens Nixdorf Informationssysteme AG's** \$16.3m profit for the year to September 30 - its first annual set of numbers above the line since it was established as the computer unit of Siemens AG - *Electronic News* believes that only four of its 14 business units are now losing money.

**Data General Corp's** the latest to leap aboard the data warehousing wagon, partnering with 22 companies to provide solutions under a Business Warehouse Program for its new Intel Corp-based AViiON servers.

**Tatung Science & Technology Inc's** added a couple of Sun-compatible workstations using the 150MHz HyperSparc. The SuperCompstation 20 Model HS152-MP is a dual-processor and is priced at from \$21,000; the HS151 uses a single CPU and costs from \$15,600. Tatung's cut prices on its other SparcStation 20-compatibles. The four-way 125MHz HS24MP is \$26,700, down from \$30,650; the two-way 125MHz HS22MP is \$18,100; and a uniprocessor is now \$14,000, down from \$16,600. The two-way 85MHz microSparc II-based 20S/81 is down to \$14,800 from \$16,300; the 20S/812MP is now \$19,300 from \$21,350.

As expected (UX No 527), **Insignia Solutions Inc** has revved a version of its SoftPC Windows-on-Unix system for NextStep-on-Intel. SoftPC 4.1 includes support for larger MS-DOS partitions, 8-bit video colour (for notebook support), support for cut-and-paste graphics between Windows and NextStep, enhanced Winsock software and improved NFS access. Prices go from \$300.

Bill Eisenman's **AT&T GIS Computer Systems Group** has around 2,500 people across development and manufacturing facilities in Columbia, South Carolina; San Diego and El Segundo, California; Lincroft, New Jersey; and Dublin, Ireland.

Lisle, Illinois-based **Dynasty Technologies Inc** is integrating Belmont, California, Open Horizon Inc's Connection Application Broker with its Dynasty Development Environment to enable existing two tier client/server applications to migrate to its own three tier environment.

**Edify Corp**, Santa Clara, California, has introduced version 4.0 of its Electronic Workforce, server software for building and deploying interactive applications on the World Wide Web. It has three components: agents providing interactive services; an Agent Supervisor runtime environment for delivering interactive services; and Agent Trainer, a visual development environment for defining interactive services the agents will perform. Pricing starts at \$40,000 for Web capabilities. It runs on OS/2 and can access any Unix environment.

After a year of shipping its first products, **Netscape Communications Corp** claims its Netscape Navigator browsers and servers are now used by 70% of Fortune 100 companies. With some 15m Navigator users, the company claims to hold more than 70% of the market share of Internet clients.

Macclesfield, Cheshire-based **Lincoln Software Ltd**, which acquired the software and trademarks to second generation wannabe Ipsys Software Plc back in October (UX No 561) says Ipsys' existing development plans, including the next release of its object oriented meta-case software Toolbuilder 2.1 and Version 4.1 of Object IE, will be released early next year.

**DataFocus Inc**, the Unix-to-NT software outfit in Fairfax, Virginia is bringing its NuTcracker porting kit to Europe, opening a technical support office in Vienna, Austria. It's also putting the final touches to a distribution network. NuTcracker shortcuts the need to rewrite Unix application code by reinterpreting Unix calls for NT and if the company is to be believed has proved such a hit State-side, that ISVs are buying it two to three times the rate it originally expected.

**XVT Software Inc**, Boulder, Colorado, and **Peregrine Systems Inc**, San Diego, California, have merged. XVT builds platform-independent client applications; Peregrine offers network management using XVT development tools. The two firms will blend products but claim that for the most part operations and strategies will remain independent.

**Sun's** Federal unit, is preparing a Trusted Solaris 2.5 implementation including SMP and multithreading support for the first quarter of 1996. Meantime, Sun's achieved international software security evaluation and certification from the UK Information and Technology Security Evaluation and Certification Board for Solaris 2.4 Basic Security Module, on Sparc and Intel, and for its Trusted Solaris 1.2 environment on Sparc.

**SNI** has acquired the distributed applications products and services (DAPS) division of Covia Technologies Inc, which makes connectivity software mostly for the airline industry.

An **Open Software Foundation** board member tells us that it's an entirely "reasonable outcome" to suppose there may not be a full-time replacement for departed OSF chief David Tory now X/Open Co Ltd and it are climbing into bed. Sources claim X/Open boss Geoff Morris won't get the helm of any body calved from the two.

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: [info@unigram.globalnews.com](mailto:info@unigram.globalnews.com)

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# unigram · X

1 JAN. 1996

KBN

The weekly information newsletter for the UNIX™ community worldwide

London, December 25 1995 - January 5 1996

Number 570

## IBM ABSORBS TALIGENT, FIRES 190

As expected Taligent Inc, the joint venture of IBM Corp, Apple Computer Inc and Hewlett-Packard Co dedicated to building object-oriented tools, is to become a wholly-owned IBM subsidiary. Although the partners claim neither the technology nor the business model was broken it's clear the companies have decided to cut their losses. Taligent grew out of a landmark 1991 Apple/IBM agreement that also spawned the multimedia Kaleida Labs (which went belly-up a few weeks back (UX No 566)) and PowerPC. It's not clear just how much Apple and HP have had to write off - funding and ownership details were never made public - however HP was thought to have paid around \$50m for the 15% stake it took in 1993 (UX No 469). Apple and HP get rights to the technology developed so far and the possibility of getting access to future IBM-built Taligent enhancements - if there are any and if they are still bothered - though no-one we spoke to was sure whether these would be licensed freely or be subject to charge. IBM says the new subsidiary, called the Taligent Object Technology Center and based at Taligent's existing HQ in Cupertino, California, will concentrate on integrating Taligent technology into IBM products, including VisualAge, and - importantly - OpenDoc. How much of this stuff will be recognisable as 'Taligent' once subsumed, however is open to doubt. Half of Taligent's 375 staff will be laid off, including the entire sales and marketing team. The new head of the operations is Debbie Coutard, one of the Taligent founders and originally from Apple. She will report into tools supremo John Swainson, VP advanced development solutions and director of the Toronto Labs. Though the three partners are trying very hard to present Taligent as a success, it's difficult to see it as anything else than a failure. Back in June 1991 Apple CEO John Sculley was saying that Apple's prototype object operating system Pink already consisted of "over a million lines of tested code" and could no longer be considered a research product - Pink lay at the heart of the aborted Taligent object operating system. Four and a half years on, and \$x million dollars later (where x is an unknown), the company has got essentially two products - the Commonpoint set of object frameworks and cpConstructor, a GUI builder. Both are currently available for AIX only. IBM has about 150 customers for the products worldwide and most of those are bleeding-edge types who are looking at its use in the labs; there are no known examples of production code developed from Taligent kits.

### Return

It is still possible that Apple will get little or no return from its investment in Taligent; Commonpoint requires a kernel-based operating system to run, so it can't be used for much until Copland arrives. Even then, an Apple spokesperson says that Taligent technology will only be developed if there is customer demand, no commitments are being made. It said there would be no additional information until the summer and described Taligent inside IBM as being "no longer a redundant entity." In the meantime Apple's emphasis is firmly on OpenDoc. Hewlett-Packard is even more vague. A spokesperson told us that it was delighted with Taligent's progress, and that it had met its research goals. Unfortunately, the spokesperson didn't know what any of those goals were, or in what form any Taligent technology might be incorporated into HP products. From here on in, it could become quite difficult to track the Taligent technology's progress since the likelihood appears to be that IBM will dismember its constituent parts and roll them into existing products. It told us it hadn't decided whether the Taligent name would survive into the future. The cpConstructor development tool is set to get pulled into VisualAge, and the company says it doesn't know yet whether Taligent's more distinctive features - such as the People, Places and Things metaphor - will see the light of day. Despite this, IBM is still talking about delivering a beta version of Commonpoint for Windows NT in the middle of 1996.

## INFORMIX PICKS UP ILLUSTRATE AND RUNS TO THE NET

Rather than wait around for its own development to bear fruit, Informix Corp, Menlo Park, California, is buying its way on to the net, last week snapping up object database house Illustra Information Technologies Inc for 12.9m of its shares which valued the Oakland California company at around \$387m at press time. Although three-year-old Illustra has yet to turn in a profit, it's a nice return for its venture capital backers which have pumped only \$10m into the 200-person concern. The net result will be a Universal Server object-relational database Informix hopes will be ready by the end of 1996 which it believes will put it up to two years ahead of rivals. The notion is that it will store and manage web pages, text, images, video, sound, spatial information, financial tools and other unstructured multimedia data types as true objects, not simply as parcels of data with object wrappers *a la* Oracle. Illustra will remain a separate entity and take over all of Informix's object database work, including the Extensible Framework and Server it was working on. The companies claim that Universal Server will be the first commercial database to combine scalable OLTP, OLAP and extensibility. Illustra's existing DataBlade technology will be integrated with Informix Dynamic Scalable Architecture - the work could be done in nine months. Both databases will support the emerging object-relational database SQL 3 standard so that folks writing to interim products can be sure their applications will work against the merged product. There'll be a single API to Informix and Illustra applications. The deal will close in February, its ultimate value being decided by Informix's stock price on the day. The market sent Informix shares up \$4.25 to \$30 on the news.

## ASPEN SHUTOUT CALLED FOUL

All computer companies should be back to school for lessons in constitutional government. No matter who's in charge of what, the impulse (or is it testosterone?) runs to petty dictatorship. The latest example concerns Aspen. Back in August (UX No 552), Hewlett-Packard Co and Intel Corp rushed out a 64-bit Unix API initiative and got a big bunch of other companies, ISVs and vendors, to publicly pat them on the back, say it was a good thing and pledge allegiance. Little did the majority of those unsuspecting third parties know that with their testimonials having been given, and their names used to secure legitimacy, that that would be the end of it. They wouldn't be asked for any further input into the basic spec, which was then set to be hammered out by year's end, much less to the second-phase "enterprise" features due in 1996. Unless they had the secret password, known only by an honoured few, they couldn't go to the secret meetings. They couldn't even find out when and where they were being held. The situation is such, sources say, that cries of "foul" and stronger language are circulating. It remains to be seen to what avail. Industry concerns about such little tyrannies have already been fuelled by the news that HP is trying to play footsie under the table with a few select vendors and - perhaps at the expense of some early access rights - get itself a small crew of strategic partners apparently to help it pay for 64-bit Unix development (UX No 567), now that it has fallen heir to such a thing thanks to Novell Inc's retreat. Currently it looks to be pursuing Japanese vendors, presumably NEC, Fujitsu and Hitachi. What's not helping the situation is that HP is set on using a hybrid Unix V.3.2-SVR4.2 code base for the 64-bit system - and dismissing the code base as irrelevant - while the Santa Cruz Operation, Novell's other heir, finally moves to SVR4.2 in blending UnixWare with OpenServer to get Gemini by 1997 (UX No 567). Sources say OEMs have brought a certain amount of pressure to bear on that crisis and HP is learning to mouth some words concerning a common code base but no sounds of commitment are coming out. It's said OEMs had best assure themselves their messages are getting home intact and that folks like HP VPs Bernard Guidon and Rich Sevcik are receiving them.

## DEC MOVES VLM DATABASE-IN-RAM TECHNIQUE DOWN TO 2100s

Digital Equipment Corp, Maynard, Massachusetts, is taking Oracle Corp's Very Large Memory (VLM) database-in-RAM option down to its AlphaServer 2100 line. Until now VLM has only been available on the high-end 8400 Turbo Lasers. DEC says it's now also working on similar capabilities for Informix, Sybase and Software AG. There's new generation of 2100s is in the pipe for the spring - the line will get 300MHz parts in the meantime. The 8400s will get 350MHz 21164s by mid-year.

## SYBASE FORMS WORKPLACE DATABASE DIVISION TO EXPLOIT PROSPECTS FOR PC DATABASE SERVERS

Sybase Inc has announced the formation of a Workplace Database Division focused on the rapidly-expanding market for personal computer database servers. This new unit will be based around the sales model, channel partner focus and support programmes of Sybase's Powersoft division to deliver Sybase database products for the personal computer server marketplace. The Workplace Database product family will initially include Sybase SQL Anywhere (formerly Watcom SQL) and Sybase SQL Server 11 for Windows NT. Former Watcom vice-president of sales and marketing, Dave Boswell, has been named vice-president and general manager of the Workplace Database Division, reporting to David Litwack, senior vice-president of Sybase Inc and president of Powersoft. The company has also announced Sybase SQL Anywhere Version 5.0, a full-featured database optimised to enable greater access to information. New in this release are Transact-SQL compatibility support, Sybase Replication Server and Open Client interoperability, Sybase SQL Remote replication technology for occasionally connected users, and the new SQL Central graphical user interface administration tool. SQL Anywhere is available on personal computer systems including Windows95, Windows NT, Windows 3.X, NetWare, MS-DOS and OS/2. Sybase SQL Anywhere version 5.0 features SQL Remote, which provides replication capability optimised for occasionally connected users. The new SQL Central Graphical User Interface tool is designed for administration of SQL Anywhere servers, and for managing replication with SQL Remote. Its Windows95 user interface is Explorer-based and features advanced controls, wizards and drag-and-drop functionality. It provides a graphical performance monitor and advanced editor for procedures, triggers and views. Sybase SQL Anywhere version 5.0 also features enhanced compatibility and interoperability with Sybase SQL Server. Sybase SQL Anywhere is now shipping, offered through concurrent licensing or on a per-seat basis. Concurrent licensing pricing ranges from \$599 for a four-user version to \$5,000 for an unlimited-user version. On a per-user basis, Sybase SQL Anywhere has a suggested retail price of \$300 and includes server and client software, stand-alone capabilities and Sybase SQL Remote. Currently each additional client is priced at \$120, and copies of the stand-alone version are \$120. The stand-alone version of SQL Anywhere with Sybase SQL Remote currently costs \$180.

## IBM LAUNCHES CAMPAIGN TO REDUCE STATIONERY COSTS

by Louie's Keyhole

As part of its continuing campaign to reduce costs and provide better value to shareholders, IBM has embarked on a bold new plan to slash the costs of office stationery. Beginning today, December 21, IBM will no longer put middle initials, roman numerals or descriptive modifiers, such as jr, on its executives' calling cards. Henceforth, IBM calling cards will show only the first name, last name and title. "This policy will go all the way to the top," explained IBM spokesman John Z Thompson. "Even the chairman's new cards will drop the jr." The expected savings, Thompson added, "will easily reach into the millions of dollars in North America alone. We expect to achieve even greater savings in Europe and Latin America, where IBM executives have many more middle names." Separately, IBM announced several changes in its key personnel: John M Thompson will become manager of IBM's personal software products division, reporting to John W Thompson. John A Thompson has been named director of software vendor relations, replacing John M Thompson. John B Thompson has been promoted to vice-president, marketing, of IBM's tape and glue products group. John C Thompson was named chief etymologist and caterpillar collector of the IBM laptop contraption division. John D Thompson has become associated director of new product development of the IBM frozen vegetables company. John E Thompson has joined IBM's headquarters relocation team as manager of washroom keys. John F Thompson is retiring as manager of the Adstar storage division's lucky charms department. John G Thompson will be transferred to AdStar from IBM Haiti's spiritual support group, retaining his former title of grand houngan. John H Thompson has been named senior vice-president in charge of eliminating juniors. John I Thompson has been renamed. (C) Copyright 1995 Hesh Wiener. All rights reserved.

## BULL SEES 1995 PROFIT AFTER LOSS AT NINE-MONTHS

Compagnie des Machines Bull SA expects to attain the objective of a net profit for 1995 set by its board of directors early this year, said chief executive Jean-Marie Descarpentries on Thursday following the company's first board meeting with its new shareholder triumvirate - Motorola Inc, NEC Corp and France Telecom. In a communique, the company says it expects to report a "substantial" revenue for December. Marc Meyer, member of Bull's strategic management group led by Thierry Breton, told us that the impact from the three weeks of transport strikes in France will be limited - "we are still delivering and still billing sales." The biggest effect is on Bull France, where contracts should have been signed with three state bodies in the pensions and social security area at the beginning of December, and the client requested they be put back to early next year - representing \$50m to \$60m, 10% of the December total for Bull France. The Angers factory, making personal computer boards and finished machines, has been largely unaffected. Last year, France accounted for 37% of Bull's total sales. This year, says Meyer, the best region for Bull is "Europe, outside France," so that French business is forecast to fall to 30% of the total. The year-end result is to be announced in February.

## DEC LETS USERS TRY ALTA VISTA WEB SPIDER FOR FREE

Digital Equipment Corp has a piece of software called Alta Vista and described as a super spider for searching and indexing information on the World Wide Web. "Finding a cyber needle in an ever-growing cyber haystack has long been a dream of Web users," Sam Fuller, vice-president of corporate research told *Reuter*: "this technology is a major step in that direction." The Alta Vista software creates and dispatches a clutch of electronic spiders that crawl through the World Wide Web, searching for key-words. DEC says that it has taken the technology further than rival products by using its 64-bit Alpha and its networking technology to search more quickly and accurately. DEC says it has created an index of more than 8,000m words for 16.5m of the World Wide Web's 30m pages of text on about 200,000 Web sites. It plans to offer public use of Alta Vista for free at its site, which is <http://www.altavista.digital.com>.

## VIEWCALL ARM SET-TOP BOX LAUNCHED AS \$250 WEBSTER IN US

London-based ViewCall Europe Plc, the latest vehicle of 1970s investment whizz-kid John Bentley and the company that reckons it has the simple answer to the problems posed by on-line shopping (cut out the video and use stills - realises that its television set-top box is just the \$500 Internet access device everyone has been talking about - except that it costs only \$250. Accordingly, it has launched it as such in the US via a new ViewCall America. ViewCall America is a new Norcross, Georgia-based subsidiary of Colorocs Information Technology Inc and has announced the device as WEBster, describing it as a television set-top box that gives consumers direct access to the Internet and on-line services through their television sets. ViewCall expects to price the box below \$300 and promises a low monthly subscription fee to make the Internet affordable and accessible to all consumers. ViewCall America will go on trial next month with Northern Telecom Ltd. ViewCall has a Short-Cut interface for navigation guided by four buttons on the remote control. An infra-red keyboard is optional. ViewCall America says it is negotiating partnerships with content providers, on-line publishers and merchants concentrating in educational services, news, home shopping, home banking and on-line entertainment. In the UK, ViewCall Europe now plans to offer World Wide Web access alongside its own on-line shopping service, which will use a proprietary fractal-based image compression scheme. The set-top box, based on Advanced RISC Machines Ltd's ARM RISC and made by Acorn Computer Group Plc's Online Media Ltd, is designed for simplicity - one lead into the phone jack, another into the television. There's no keyboard - the user is given a infra-red remote instead. ViewCall has gone to Netscape Communications Corp for the Internet browser used in the box. The back-end interactive shopping service in the UK is being driven by technology from Sun Microsystems Inc. The shopping service is set to go here next month and ViewCall says it aims to bring the Internet to everyone, irrespective of technical inclination or of income.



### **POWERSOFT TOUTS "N-TIER" APPLICATION DEVELOPMENT FOR POWERBUILDER 5.0**

Powersoft Corp, Sybase Inc's Concorde, Massachusetts-based toolshop will add Solaris 2.5 (Sparc), HP-UX and AIX ports of its Powerbuilder 4.0 client-side application development code in the coming months following the debut of its first Unix attempt, Solaris 2.4 last month (UX No 565). "We don't discriminate against the Intel-challenged," says technical evangelist Richard Dill. The same platforms will be supported when Powersoft gets its 5.0 client/server code out of beta; Unix implementations of what's touted as Distributed Powerbuilder are promised by mid-year. Powersoft's pitching 5.0 - demo'd at DB/Expo a couple of weeks back - as cross-platform development tool providing "n-tier" distributed object processing with the emphasis on making server-based Powerbuilder objects available to multiple Unix/PC Powerbuilder applications across an organisation. It includes a management repository called ObjectCycle for storing version control information, project management data and other specs. 5.0 utilises a request broker-style TCP/IP-based interconnect - though it's not Corba. It moved its Windows-centric 4.0 code over to Unix using one of the Windows-on-Unix mechanisms, however the port lacks stuff like OLE, C++ class builders and VBX - and 4.0 only works against SQL Server 4.x, System 10 and Oracle 6 and 7. Powerbuilder 5.0 will come with ODBC support to access other databases. The company's currently evaluating technologies from Atlanta, Georgia-based ODBC house Intersolv Corp and Roger Sippl's Visigenics. Multithreading will arrive in dot releases of 5.0. Powersoft's working with Sybase on future object technology directions. Other object-style technologies expected to feature in Powerbuilder include multimedia viewers and mapping techniques. Meantime, Powersoft last week delivered on its promise of getting the Macintosh version of Powerbuilder out before the end of 1995. PowerBuilder for Macintosh includes a single-user version of Watcom SQL 4.0 for Macintosh, it's priced at \$3,295. In addition, Powersoft announced shipment of a Mac version of its data access and information management tool, InfoMaker, at from \$250.

### **LEGATO BUYS INNOVUS FOR HP-UX SKILLS, READIES STORAGE MANAGEMENT**

Legato Systems Inc, Palo Alto, California, will release version 4.2 of its NetWorker storage management software for Unix in the first quarter of 1996. Enhancements over the 4.1.3 release include faster restores, more administration tools, and the capacity to support hierarchical storage management applications the company says (UX 555). Legato last week paid \$6.5m to acquire its Hamilton, Ontario-based OEM Innovus Technologies Inc. It'll take a one-time \$1.9m hit against its first quarter of 1996 as a result. Innovus created a NetWorker-compatible version of Legato's software for HP-UX, which will now be offered as NetWorker for HP-UX version 4.1.3. A combined release will be offered early next year, the company says. Meantime the HSM for NetWorker storage management software Legato is developing in conjunction with Eastman Kodak's Imagery Software will be available for AIX, SunOS and Solaris in the spring with support for HP-UX and SCO due by mid-year. Legato hopes all of its 12 other OEM partners will take the software. NetWorker 4.2 will cost \$2,000 to \$8,000 depending on the platform.

### **PLATINUM ADDS CABLETRON NETWORK MANAGEMENT SUPPORT**

As anticipated (UX 568), Platinum Technology, Inc, Oakbrook Terrace, Illinois, plans to support Cabletron Systems Inc's Spectrum Enterprise Manager network management environment with a series of point product releases. Cabletron will offer a toolkit for use with Platinum enabling event passing, database information exchange and script integration. The companies say they will integrate the products in two ways to suit customer demand. They will use a set of common APIs or Spectrum's Platform External Interfaces (PEIs) and tools which Cabletron says allows other applications to plug into Spectrum without C or C++ coding (although they run slower than those integrated at the source code level). The companies plan to integrate the following Platinum products with Spectrum: the Apriori client/server help desk product; the Xfer software distribution tool for revising software across networks; the AutoSys client/server job management tool for scheduling jobs across an enterprise; and DBVision, a database performance management and monitoring tool. There is no time frame for the integration work. Alarm and knowledge-based integration may follow. Platinum may also integrate some of its database management tools for DB2, Sybase, Microsoft SQL Server, Oracle, and Informix, as Spectrum ports to these. Spectrum 4.0 can manage mixed Unix and NT networks. It includes an enterprise-wide alarm management tool, a policy-based alarm notification manager and a new CASE-based reasoning tool. It runs on HP-UX, AIX, Irix, SunOS, Solaris and Windows NT, and will ship in the first quarter of 1996 at \$15,000 for a one server version.

### **JAVA CUP TO PROMOTE APPLLET DEVELOPMENT, AVAILABILITY**

Although Sun Microsystems Inc's backing its Java Cup with up to \$1m kit and software as prizes, it's hoping the applet development 'competition' will recoup it much more in the long run. Entry categories include tools designed to provide interfaces to other applications, Internet/web agents; education applets; visual and developer tools, entertainment and games. Sun will use the Cup to get a slew of Java applets out - the entries will be offered as freeware - and Sun will get source. Sun will judge the applets on graphics, coding style, security, interactivity and innovation. The contest ends March 31 and winners will be announced in May 1996. Three winners per category will be chosen - two individual and one team prize - plus one overall winner. The grand prize winner will get a credit of \$200,000 for Sun Ultra and Sparc systems and peripherals. Other corporate sponsors include Netscape Communications Corp, Oracle Corp and SunSoft Inc. Sun's also been examining some of business models it thinks could be employed to make money on the net with Java. There are three it has hopes for, each which follow prevailing entertainment delivery mechanisms; subscription (for upgrade and other delivery via Java), the pay-per-view model and straight television metaphor where advertising is boot-strapped on to the front of Java applets.

### **TOP LOG SWALLOWED BY PERSONA UNKNOWN**

Persona Group plc, the UK distributor of PC networking and communications products, until now largely unheard of in the Unix community, is acquiring French Unix software distributor Financiere Top Log SA, Paris, for £19.9m. Persona is making a 17-for-20 rights issue at 225 pence a share to raise £21.1m net to fund the purchase, £13.6m of which will be paid in cash. The remaining £6.3m will come from the issue of 2.5m shares to Top Log at 253 pence per share, an 18 pence discount on the day's share price. At the companies' first meeting in September it appears to have been a classic case of love at first sight. Serge Van Gorkum, managing director of Top Log spoke yesterday of his excitement for the imminent "marriage," and Channon appeared only too happy to re-enforce the view of happy families and smiling faces all round. He said Persona had experienced difficulties in its attempts to expand the training division and although there is still substantial room for improvement, no advances have been made so far. He felt Top Log provided the perfect opportunity to expand the company's operations onto the continent, closing the gap on its main rival, Azlan Group Plc. Serge Van Gorkum and Minh Tran Chau will join Persona's board as managing director of continental Europe and group operations director. Top Log currently has offices in France, UK, Germany, Belgium, Spain and Morocco, and with all except Germany running at a profit, Channon believes the only way is up. It has 240 employees. By transferring management skills and experience gained by both companies he hopes to improve profit margins. Both companies reported profits of £2.7m to September 1995, but Top Log's sales were 20% above those at Persona. Minh Tran Chau explained the disappointing figures as being the result of costs related to operating in five countries in Europe. The overlap of both products and services is expected to be minimal, with the emphasis resting on complementary goods and customers in an already established European market. Persona said the acquisition will not result in job losses for either company. Additional acquisitions are under discussion but Channon refused to say more. further. Persona is forecasting pre-tax profits for the 1995 year of not less than £2.7m, 23% up on last year, and a final dividend of 3.36 pence a share is proposed. Formed in 1986 as part of Metrologie, a French distributor of computer products, Top Log initially focussed on the distribution of Unix-based database products before extending to include other Unix software. In 1992 Top Log International was purchased by Financiere Top Log in a management buyout led by Serge van Gorkhum and in August 1994 acquired Interquad, one of the largest distributors of Unix products in France. However in June of 1994, as part of a reorganisation of its distribution around value-added resellers, Informix Inc, which accounted for 18% of Top Log's sales, decided not to renew its distribution agreement with Top Log, resulting in a fall in operating profits (UX No 513).

### **SAS ADDS MULTIDIMENSIONAL DATAWAREHOUSE VIEWER**

SAS Institute Inc, Cary, North Carolina, has debuted a multidimensional data viewing module called SAS/Spectraview for use with its Orlando data warehousing management suite. It can be used to to compare and analyse sales performance by product, region, sales team, customer demographics or other characteristic; to compare responses between various groups in trials and identify the key differentiating parameters; and to examine the return on investments over time. Spectraview costs around \$1,000 for Orlando running on Unix.

## PREVIEW OF 1996

By Tim Palmer

## January

Playgrounds all over Europe are a cacophony of lurid retching sounds as schoolchildren, bombarded with cynical propaganda about the single currency disguised as educational materials recognise the unstoppably emetic sound of the meretricious name of Europe's brave new currency - the Euro. Apple revives the version of Mac OS that runs on iAPX-86, reports a quarterly loss much worse than expected. The Federal Reserve raids Chelsea's piggy bank to pay essential salaries as budget gridlock continues in Washington. US Telecommunications bill timed out.

## February

IBM, having committed to writing off \$3,200m of the \$3,500m it paid for Lotus, finds the carrying cost of the company on its books totals \$675m since acquisition, announces it will write it off. Novell sells Wordperfect to SoftKey, Softkey does promotional deal with Kellogs, which tapes a copy of Wordperfect for Windows95 to 20m cornflakes packets. President Clinton realises that he can get round the problem of not having a budget by paying Federal employees via the Internet, in cybercash. The Dow Jones Index plunges 750 points in a day; Netscape shares fall \$101 to \$14.50, rise to \$75.

## March

US Federal employees strike en masse after they discover that they can only buy virtual meals with their cybercash. Nintendo and Sega license Java, promise Internet access terminals at under \$100. IBM launches second generation of Power Personals in multimedia configurations - but no screen - for \$7,500 and up, says people will always pay for quality; Packard Bell launches similarly configured Pentium Pro machine at \$1,100 with screen. Microsoft launches the Windows95Extension Pak, recommends users install 512Mb to run it. Zilog comes out with a 100MHz Z80 at \$1.50, says it's just the thing on which to run newly-popular golden oldie Pong. IBM puts most PowePC AS AS/400s back to August.

## April

Nintendo Ultra 64 launched to universal acclaim, is found to calculate spreadsheets faster than the Pentium Pro. First lab tests show Windows95 Extension Pak needs 900Mb to run comfortably; testers recommend 1Gb main memory just to be on the safe side. Microsoft Gauliters are reported to be in occupation at DEC. All is said to be quiet in Maynard. Atari says its Jaguar software will run on 100MHz Z80s faster than on Jaguar 64; comes out with console for \$50. Russia is reported to have 97m regular Internet users. John Major's government falls after it is defeated in House of Commons. *Wired* magazine ceases publication on paper, switches to Flash memory.

## May

Atari licenses Java, Netscape Navigator, cuts price of its Jaguar Z80, offers it as \$35 Internet access terminal. John Major's government rises again. Richard Branson launches the Richard Branson Web Site devoted to the life and good works of Richard Branson. Access is free but you have to pay \$50 every time you log off. IBM announces new generation of monolithic mainframes, denies it ever said parallel CMOS machines would meet the needs of Big Iron users. *PC Week* gets to hear of a skunkworks project at Apple to put Mac OS on a future 250MHz version of the Zilog Z80. Early season visitors to France are non-plussed to observe that French farmers are not revolting. Nintendo licenses Navigator, offers Ultra as \$20 Internet device. Bill n' Melinda call their daughter Belinda.

## June

An Arndahl engineer finds a "Made in Japan" tag hidden inside IBM's new 390/370-9000 mainframe, suggests it is a Hitachi Skyline under the hood; IBM will say only that it has an IBM badge and IBM sticker on the outside. Escom abandons plans to put Amiga DOS on PowerPC, says it is working on a combination Z80-ARM RISC processor complex for the Amiga instead. First tale of a dog eating a Mondex card appears in the press. French farmers aren't revolting. US Federal employees get used to cybercash, boom times return as they create a parallel economy. Windows95 is found to run as fast on a Pentium Pro with 2Gb of memory as Windows 3.1 runs on a 20MHz 80386 with 1Mb.

## July

Richard Branson sues himself for libel over item he put up on the Richard Branson Web site. Chancellor Kohl complains that French farmers aren't revolting any more. US finally gets a telecommunications bill; Nynex, Bell Atlantic Pacific Telesis and Tele- Communications announce plans to merge

as Bells United. Time-Warner merges with BellSouth, Southwestern Bell and announces it will bid for IBM once the merger is complete. Don't worry, none of this is true, it's all a bad dream.

~~August~~

IBM cuts the price of Notes Server to \$50, Notes Client to \$1. Intel announces plans for a 500MHz 8088. Richard Branson decides to settle suit against himself out of court, but has to file bankruptcy papers after he gets both sides' lawyers' bills. Stephen Sondheim's latest musical, *Internetzo*, opens on Broadway to universal critical acclaim. The entire cast spends the whole piece dressed as Internet access devices, vying with each other to see which can be the cheapest. An IBM Butterfly notebook computer fetches \$75,000 when put up as a collector's item; gnarled old computer dealer who bought it says "I always wanted to see one."

## September

Apple kills iAPX-86 version of MacOS after discovering that the Z80 version runs twice as fast on a 100MHz part as the iAPX-86 version runs on a 500MHz 8088, five times as fast as it runs on a Pentium Pro. The unrevolving French farmer mystery is solved when it is found an acute shortage of Ultra 64s is caused by French peasants installing them as Internet access devices on their tractors. Intel responds to criticism of speed of Pentium Pro on 16-bit software with Pentium Pro Plus and the slogan "it's much peppier."

## October

Microsoft gauleiters order DEC to end manufacture of Alpha RISCs, switch to the P7: delighted, says Bob Palmer - I've been looking for an excuse to close the chip plant for ages. Bells United bid for IBM breaks down at the due diligence stage after it is found that another \$1,200m needs to be written off on Lotus. Rupert Murdoch steps in and buys IBM, merges it with MCI Communications. Robert Frankenberg sells NetWare to Hewlett-Packard. The BBC creates the Queen's Christmas Message in three-dimensional virtual reality on a Silicon Graphics machine as Her Majesty suns herself in Bermuda.

## November

An obscure clause in the telecommunications act is found to say that a former Australian may not own more than four radio stations and IBM: Rupert Murdoch sells IBM to Richard Branson. President Clinton, having survived a year without a budget, is triumphantly re-elected. Hewlett-Packard sells Net Ware back to Novell, buys Robert Frankenberg. IBM pays users to install Notes Server, gives Notes Client away free on the Internet. The first successful commercial venture on the Internet is reported: the US Postal Service sees profit selling postage stamps. Dow at 3,850; Netscape hits \$200.

## December

Richard Branson sells IBM to Kerry Packer. Sir Andrew Lloyd Webber writes a musical about the lawnmowers that cut the grass at Armonk. Motorola, revealing that it lost between \$30 and \$50 on every PowerPC it sold, abandons the part and licenses the latest - 500MHz - variant of the Z80 from Zilog. Kerry Packer sells IBM to RJR Nabisco and American Express. DEC changes its name to Digital Equipment Corp. Profits from its 10% stake in Camelot cancel out losses in rest of ICL's business as tax from Lottery enables government to cut threepence off income tax; \$100,000,000,000m has now been distributed to (fairly) good causes. Steve Jobs and John Sculley make a consortium bid to take Apple private. After convincing yourself it's just a bad dream, you awake and discover that it was all true.

### SCO CLIENT/SERVER UNIT ENVISAGES WEB-BASED PRODUCTS

The way Santa Cruz Operation Inc's client integration division sees it, organisations want to be able to hook up any desktop to the net and have them access applications running on any server, seamlessly. With that goal in mind the division (created out of the former IXI Ltd and VisionWare Ltd units) is working on new products that'll incorporate the Microsoft Corp Visual Basic Script Internet scripting language - which includes a Java API - Javascript, the X Consortium's Broadway and other web technologies (UX No 569). As of now, they'll be specifically geared towards Unix servers and Windows clients. One question in its mind is how acceptable Java engines become on PCs. It's current roster of ten Vision family products will likely be rationalised as a result. The division had planned to develop its own browser (it was one of the handful of NCSA Mosaic) until the emergence Netscape and other web explorers made its task unnecessary.

### SYMANTEC LAUNCHES JAVA TOOLS, SUN TO FOLLOW NEXT YEAR

Symantec Corp is offering Espresso, which it claims is the first Java development environment for Windows95 and NT. Espresso is said to be a fully integrated development environment, which seamlessly integrates Sun's Java Development Kit (JDK) with class and project management capabilities within a graphical development environment. It supports project and sub-project developments and the building of Java applets and Java console applications from within the development environment. It also includes Wizard-like tools to aid developers who are unfamiliar with the Java programming language, generating skeleton Java applets and applications that can then be extended. Developers with Symantec C++ 7.2 for Windows 95/NT can upgrade by downloading Espresso from Symantec's web site at [www.symantec.com](http://www.symantec.com). A version of Espresso for the Power Macintosh development environment is promised later this quarter. Meanwhile the development products division of Sun Microsystems is said to be working on its own integrated development environment for Java. This will be the equivalent of its Workshop development tools for C++, C, Fortran and Ada. Sun believes that Java programmers will require the functionality and structured development provided by its Workshop tools if they are to achieve fully controlled web applications. The first fruits should arrive in February or March this year.

### ART TECHNOLOGY GROUP OFFERS WEB PAGE GENERATOR FOR UNIX

Art Technology Group Inc, Boston, Massachusetts is offering a World Wide Web page generator that will supposedly enable developers to prototype, build and manage applications and content for enterprise networks and the Internet. Dubbed Dynamo, it supports Solaris and Linux 1.2 running Navigator, Open Market, Spyglass and other National Center for Supercomputing Research Mosaic-based browsers. Irix, HP-UX and OSF/1 implementations, plus SQL gateways and a C++ applications programming interface are due in January. The environment includes Dynamo Engine, a server-based application with an integrated object-oriented database, server-side Web objects, scripting environment and session tracking. Dynamo Web Objects are non-browser dependent mini-applications that will be provided free on a continual basis. The initial suite includes Discussion Threads, Dynamic Ads, Web-O-Grams, mail, Activity Monitor, People Watcher, Live Links, Annotation and Site Broadcast. New objects can be built via the Dynamo environment. Also included is Scheme-D, a scripting language that can integrate scripts written in other languages such as Perl, C++ and Java. Dynamo costs from \$5,000 per license.

### DEC DEMOS 100Mbps ENCORE MEMORY CHANNEL INTERCONNECT

As expected (UX No 557), DEC demonstrated the 100Mbps, 0.5 microsecond latency PCI bus Memory Channel interconnect from its Alpha partner Encore Computer Corp at Supercomputing '95 in San Diego. The company strung eight 12-way AlphaServer 8400s together in an array using the interconnect, claiming the combination delivers some 57.6 GFLOPS at a cost of \$4.5m. That buys the array, 4Gb RAM, 32Gb disk, the PC Memory Channel interconnect, Digital Unix, HPF high-performance Fortran, parallel software environment (the runtimes for HPF) and DEC's Parallel Virtual Machine implementation. A dual processor AlphaServer 2000 with 256Mb RAM, 4Gb disk, the interconnect and software costs from \$70,000. Meantime, DEC's cranking-up a new VLM64 marketing campaign around the AlphaServer 8400's ability to run optimised databases in large amounts of RAM.

### ADVERTISERS SPEND BIG BUCKS ON WWW

AT&T Corp, Netscape Communications Corp and Internet Shopping Network are the leading advertisers on the web whilst Netscape, Lycos Inc and InfoSeek are the sites that bring in the most ad money, according to a study of Internet ad spending by New York-based WebTrack Information Services Inc. The researcher calculated spending by advertisers for Web banners and links at \$12.4 million in the fourth quarter of 1995. WebTrack researched more than 175 commercial Web sites which solicit paid advertising and found some 250 active Web advertisers with media budgets for electronic ads ranging from \$5,000 to over \$500,000. Other top ten advertisers include MasterCard, American Airlines and MCI, while the top ten accessed web sites include Time Warner's Pathfinder, HotWired and ESPN SportZone. The top ten advertisers accounted for \$3.2 million (26% of total spending), with the top 20 advertisers accounting for \$5.1 million (41% of the total). The research found that 33 advertisers had fourth quarter commitments in excess of \$100,000.

### JSB COMPUTER SYSTEMS, WITH A NOD TO BILL, THINKS INTRANETS ARE MUST-HAVE ITEMS

Congleton, Cheshire-based JSB Computer Systems Ltd, the company that claims it was behind the introduction of the common TCP/IP interface Windows Socket, has refocused its business to aim at the corporate Intranet. The company, which is preparing to launch an integrated Intranet suite of programs next month, is delighted that Bill Gates used the word Intranet in his Internet strategy briefing last week. So powerful does it believe his word is that it reckons between now and the end of next month the world will have begun to clamour for Intranet products. Steve Purdham, managing director of JSB's European division said the biggest problem facing the company is in educating information technology people that the Intranet concept is simple, but very effective. He said many companies using internal electronic mail believe they already have an Intranet, but they are not harnessing the Internet-style technology to disseminate corporate information. For example, using ordinary electronic mail, the company would mail a document to all users, regardless of its use to them. Using Web technology, the company would merely mail users a message, telling them which Web page contains the relevant document. JSB's Intranet suite will consist of what the company calls an 'end-user comfortable' interface, as distinct from an icon-based graphical interface. Purdham says the icon-based interface was the best that could be done with low resolution screens and existing technology, but now there is no need to be bound by it as a standard. What JSB is offering is a multimedia kiosk-style interface, written using the Internet HyperText Mark-up Language. The kiosk approach enables users to see a photograph of their office, with doors leading to the accounts department for example, which they can click on to be taken in to the accounts system on the server. Within the accounts department, they may see photographs of an order book, an invoice book, a customer book, and then chose which book they wish to use. Each company can customise this interface by scanning in pictures or photographs appropriate to its own operation. Behind the kiosk, JSB has written its own Web browser using Mosaic Web software licensed from Spyglass Inc. The fully integrated suite also consists of electronic mail, and File Transfer Protocol.

#### Kiosk-style front end

However, JSB said that each of these is available as a component, and any company that already had a Netscape Communications Corp World Wide Web browser would still be able to use this, with other components from JSB's suite. It is also selling the kiosk-style front end as a separate entity. The kiosk, available in early January, will run under Windows 3.X, Windows95 and NT. The rest of the client suite, Web browser, mail and File Transfer Protocol, will be available for Windows95 and NT only, at the end of January. The company will also offer a server suite, for Santa Cruz Unix and AIX at present, which includes an alpha browser for users with dumb terminals. Prices will be available in January, but should be between £100 to £200 per user for the client software suite, and less than £1,000 for the server suite.

### VMARK DEBUTS STAROFFICE

VMark Software Inc, Westborough, Massachusetts, has introduced its promised StarOffice suite for linking data with front-end query and development environments. StarEmulator, is a GUI builder; StarView, a graphical point and click query builder; StarODBC, the multi-database ODBC driver; and StarDDE, a DDE-compatible server application. VMark says StarOffice allows developers to add GUI interfaces to character-based applications. DDE client and server support and bi-directional file transfer help provide Windows integration. Users can create ad-hoc queries without needing to know data location, network navigation or database-specific query languages, the company claims. StarOffice is built on VMark's HyperStar object messaging middleware, which has APIs for Unix, Windows and Macintosh clients (UX 564). There are StarOffice client components for Macintosh and Windows; and the suite costs from \$400. Database servers are priced separately and prices vary.

### FTP TO ACQUIRE HYPERDESK TO END THE ODYSSEY

Andover, Massachusetts-based FTP Software Inc has a letter of intent to acquire the assets of HyperDesk Corp, the object technology pioneer spun out from Data General Corp in 1990 for \$10m cash. Hyperdesk, Westborough, Massachusetts, abandoned object request brokers last year, and has been busy turning itself into a developer of personal groupware and workgroup management software. FTP Software will also establish a joint development and marketing relationship with HyperDesk's principal shareholder, ASCII Corp of Japan. HyperDesk will operate as part of FTP's New Ventures Business unit, which offers and develops Internet and Intranet applications and developing innovative technologies.

## NEWS ROUNDUP

The technology team behind the Euro 96 European football championships in England next year has revealed itself. **Sema Group Plc** leads the team as system integrator, **Microsoft Corp** will provide the software for **Digital Equipment Corp's** 500 personal computers and 32 servers, and **British Telecommunications Plc** will do the telecommunications infrastructure to link the eight grounds to the world's media, for what is the third largest sporting event in the world behind the World Cup and the Olympics; the companies will effectively lend the technology for the tournament, worth around £10m in total in return for media exposure and rights to use the logo.

**Checkpoint Systems Inc** is of course the company that develops radio frequency-based shoplifting prevention systems and other electronic security systems, not to be confused with Internet security house **Checkpoint Software Ltd** (UX No 569).

We understand **Sybase Inc's** been challenging **Oracle Corp's** claim of a four terabyte database saying that most of that isn't data and that it's including index sizes.

Portland, Oregon company **MCG Software Inc's** added a version of its Object Testing Framework framework for developing, editing and running objects created in IBM Corp VisualAge for Smalltalk on AIX, OS/2 and Windows. It's priced at from \$1,000 for a single user.

Stringing its open systems environment announcements out, **Hitachi Ltd** says its OSF/1-based Osiris mainframe environment now supports Oracle7, Informix OnLine Dynamic Server and Software Clearing House's Reel-manager tape backup subsystem.

Billerica, Massachusetts-based **UniKix Technologies Inc's** CICS-compatible UniKix OLTP monitor is now up on Digital Unix.

The **Object Management Group's** got Object Oriented Pty Ltd in Melbourne to represent it down under. Meantime CableLabs and its vendor group, the Cable/Information Technology Convergence forum, have swapped memberships with OMG.

**Software Research Associates Inc** will pay **NCD's Software Corp** \$290,000 plus royalties to resell a localised version of NCD's Mariner Windows-based Internet organiser and browser in Japan.

Flint Hill, Virginia-based Macintosh house **Blueridge Technologies' Optix** network document management system is now up on Sun and IBM Unices and supports Sybase and Oracle databases in addition to Informix.

Austin, Texas-based **UniSQL Inc** has joined the Object Database Management Group.

**CenterLine Software Inc**, Cambridge, Massachusetts, poached Jim Cannon from Ontos as its new VP sales and Gordon Leaman from Kanishka Systems PTE Ltd as VP international sales.

**W Quinn Associates Inc**, Reston, Virginia, will port its Q\*file PC-style Unix file management software to SCO Unix during the first quarter of 1996.

**Ematek Informatik GmbH**, Cologne, Germany, has a new X11 Print-Manager for its Unix, Windows and NT-based GSS\*GDT graphical kernel system/graphics development toolkit.

**Quality Software Products Inc's** Universal Accounts Payable software will be up on Informix databases by mid-1996.

**Spectra Logic Inc**, Boulder, Colorado, is offering Alexandria Backup and Archive Librarian software for backup, restore and management of Digital Unix systems. Alexandria already runs on most flavours of Unix. It backs up Unix file system data running on Oracle, Informix, and Sybase databases. Spectra promises tighter integration with Informix and Sybase and new support for SAP which will be introduced in the second quarter of 1996.

Austin, Texas-based **Haystack Labs Inc** is offering a new Motif-based version 2.0 of its Stalker system monitoring, auditing and intrusion detection system on SunOS, Solaris and AIX. HP-UX versions are set to follow next quarter with a NT release slated for mid-1996.

Chicago-based **Geodesic Systems Inc** is offering an automatic memory management tool for C and C++ code called Great Circle it says fixes memory bugs without programmer's intervention. Prices go from \$700 to \$1,200 on workstations.

**Kofax Image Products Inc**, Irvine, California, has introduced new versions of its Kipp Developers Toolkit document imaging processing tools and boards for Solaris, AIX, HP-UX, and SCO Open Server. Peabody Systems Inc, Orange, California, will sell the toolkits. The company's also added Unix and Windows NT compatibility in version 1.1 of its Ascent Capture document scanning and indexing software.

**Hewlett-Packard Co**, Palo Alto, California, is using ObjectSpace Inc's ObjectSpace STL Toolkit for internal product development and testing.

Tel Aviv, Israel-based **Memeco Software Inc** is offering CyberSafe Corp's Kerberos-based Challenger authentication system combined with its Security for Open Systems (SeOS) host security system at \$15,000.

**On Technology Corp**, Cambridge, Massachusetts, is offering a new version 3.1 of its cross-platform Meeting Maker XP group scheduling software including support for Sun and HP clients at from \$200 per user.

Former managing director of Forte Software Ltd, Steve Brenman, has turned up as managing director of DCE and second generation application development house, **Open Environment Corp**, Boston, Massachusetts.

Customer software developer **Vantive Corp**, Santa Clara, California says it's won new six companies - Portland, Oregon-based Benova Inc; Bethesda, Maryland-based I-Net; Siemens-Rolm; McQueen; and Anglo-French Sema Group - for its Vantive Enterprise customer information applications.

Sunnyvale, California **ParcPlace Systems Inc** has ported VisualWorks 2.0 to Digital Unix at from \$6,500 and put its MethodWorks 1.0 analysis tools up on AIX, HP-UX, Solaris and Macintosh.

**Evans & Sutherland's** Portable Graphics Inc, Austin, Texas, will develop and sell a hardware accelerated version of OpenGL for Hewlett-Packard Co workstations from the first quarter of 1996.

**Siemens Nixdorf Informationssysteme AG** is offering Marietta, Georgia-based UniComp Inc's Unibol 400 1.0. Release 1.0 migration software for AS/400 users looking to move to Unix.

**BMC Software Inc** has made the Patrolink graphical, event-driven application management system it acquired from Patrol Software available for use with CA-Unicenter under the pact it struck with **Computer Associates Inc** back in March (UX No 529). Prices start at \$1,500. BMC's Patrol manager now also supports the latest 1.1 release of CA-OpenIngres.

Version 2.1 of Palo Alto, California-based **DataTools Inc's** SQL Back-Track backup and recovery tool is available for use with Sybase on SunOS, Solaris, HP-UX, AIX and AT&T Unix boxes at from \$4,600.

Raleigh, North Carolina-based **Global Software Inc** has ported its Universal Financials general ledger, accounts payable and other financial management software to IBM DB2 for AIX (UX No 476). Prices start at \$130,000.

Geographic information systems house St Paul, Minnesota-based **Object/FX** will ship its version 3 of its Visual Companion Integrators Kit at the end of the month. It comes with an integrated Object Design Inc database, pre-defined query set embeddable compilers. It goes from \$1,000 for a single user licence, \$1,300 for a development licence.

**Persistence Software Inc**, San Mateo, California, says it's won a US patent on its Persistence 3.0 code generation technology that maps business objects to relational tables.

## INFORMIX REORGANISES WORLDWIDE SALES

Informix Software Inc has reorganized its worldwide sales operations into five areas: Japan, the Americas, international, telecom, and US federal operations, effective January 1 1996. After a decade of being represented in Japan by ASCII Corp, Informix has founded Informix ASCII KK, a joint venture 90% owned by Informix. In January, Informix's North America and Latin America sales organisations will be combined into one sales organisation. Ron Alvarez, currently VP of Latin America, will run the combined organization. Frank Bergandi, currently VP of North America sales, is leaving Informix at the end of January. Europe, Middle East and Africa sales are being combined with Asia Pacific for the International sales group, which will be run by Ken Coulter, currently senior VP of Europe, Middle East and Africa. Informix will create a line of business units to address the telecoms market which will also report to Coulter. The US federal operations group remains under the direction of Ed Hammersla.

## ILOG OVERCOMES BEING FRENCH IN THE US, SCORES CAR DESIGN WIN, CHRYSLER

Ilog Inc, US subsidiary of France's Ilog SA, has scored a win in Detroit. Chrysler Corp has announced success with an application for interior car ~~design, or occupant packaging as it is known in the trade, that was developed~~ using Ilog's Solver, Views and DB-Link components. Occupant packaging encompasses such interrelated design considerations as seat height and travel, knee blocker positioning, dashboard and door layout, and field of view. With its new Vehicle Occupant Packaging Program, VOPP, a Chrysler design engineer enters a proposed design change via a graphical user interface based on Ilog Views; then the Vehicle Occupant Program uses Ilog Solver to calculate the ramifications on other elements of the total package design, drawing on a database of design information via Ilog DB-Link, all in real time. "VOPP has brought about a qualitative change in the way we design occupant packaging" said John Mrozowski, design studio engineer at Chrysler. "Now, we can literally paper the wall with 10 or 15 iterations of a particular design, whereas before we had to choose from one or two. The biggest performance limitation of VOPP is how fast we can type at the keyboard. In terms of customer satisfaction and competitiveness, I'd say it puts us ahead." Adds Ross Maunders, supervisor of design office computer services at Chrysler, "We believe in a slender development process, with close collaboration between developers and users. Our engineering philosophy is to identify the best components on the market and pull them together to make solutions, using a small team of talented people. The sophistication, stability and performance of Ilog's components are a major part of what makes this possible."

### Apples and oranges

The Chrysler win reflects John Lynch's optimism about Ilog's continued success in the US market. Lynch, who was hired from SunSoft Inc as vice-president of North American sales, says the fact that Ilog is French is not an obstacle to selling to US developers. "If we were in a mass market, we would probably have more hurdles to climb, but the people who use our products are application developers, experts in C++, and the developer community is a real melting pot," he told our sister publication *Computergram*. "Besides, I think most people are over the US versus Europe thing. When I was at Sun, our most important network software was in Grenoble. Cisco does a lot of its software development in India. Customers look for solid technology and want to know that there is a good support network. If I had thought [being foreign] would be a problem, it would have been a deal killer," he said. He notes that the biggest improvement Ilog has made in the last year is its investment in the US. "Now people know we have consultants, technical support, and they don't have to get it long distance," he said. In the meantime, while some industry observers have suggested that Ilog's C++ tools could fill an important gap in the market by being linked to Java, Ilog chief executive Pierre Haren says the two are apples and oranges, at least for now. "There should be no confusing the difference between programming and extension languages. Java is halfway between Lisp and C++, and it is not for doing millions of lines of code, only applets," he explains. In order for Ilog's libraries to be useful to Java developers, "Java would first have to be linked to C++, which would pose the same problem we had linking Lisp to C++, that is, of linking a dynamic language to a static language." Although some of Haren's own developers, "who have been seduced by the idea that Java is a complete programming language," have proposed rewriting Ilog's libraries in Java, but he is not convinced. "I don't believe that the industrial case has yet been made for Java," he said.

## NEURON DATA EMBRACES WEB

Now re-cast as a three-tier application development company, Mountain View, California-based Neuron Data Inc last week revealed an anticipated internet strategy with a new module for its Elements Environment called Web Element. The company says it allows developers to embed Web browsers into Elements Environment-generated applications; Web Element Pro provides additional Web Control and C/C++ API resources. It can decompose HTML documents and provide graphical Web link visualisation. Developers can call-up browsers from within applications using an API call or use Web Control to drag a browser icon on to an application. Web Element also offers a Java-style applet environment; applets created with the company's Data Elements ObjectScript language can be embedded with HTML documents and downloaded to clients. Web Element currently supports OLE - a Corba release is planned, plus support for Java, Java Script and VisualBasic Script through 1996. It comes with the embeddable browser and a Web Link Navigator. Web Element pro includes the embeddable browser, Web Control and APIs. Both ship in March on Solaris x86, Windows and NT from \$45 per user, or \$22,500, for a 500-user licence.

## OVUM REPORT SUGGESTS WAYS TO AVOID CONFLICT WITH TRADITIONAL PUBLISHERS

Consumer multimedia will concede its dominance over education and commerce as long as media storehouses co-operate with publishers, according to ~~a new report from London's market consultants, Ovum Ltd. The report -~~ *Multimedia Publishing: The Market Opportunities* - tracks the convergence of the publishing and computing industries and explains how the two will need to ally to avoid conflicting standards. The former is more than 500 years old, deeply traditional and has its roots in European culture; the latter, less than 50 years old, has America's lively and pragmatic approach to business. Ovum's vision is one of open electronic publishing, where anyone may quote from, and publish links to, any already-published document. Authors will pay for works to be held at a central repository, receiving a royalty payment each time the document is requested. Newspapers will be sold by the story; video by the number of frames. It is this collection-and-payment mechanism that author Judith Jeffcoate considers the key to making electronic publishing work. Large publishers will sell their works directly, she said, while smaller publishers will rely on the brokerage of interim content sellers. "There will be a very interesting growth area at the interface of the publisher and the content owner," she said. At the meeting point of these two there will need to be an alignment of the standards as the market would not support "trillions of tiny publishers." The on-line medium becomes an important consideration "from 2000 or so," Jeffcoate said. Multimedia publishing now deserves particular attention because the market is grinding into action: powerful players are entering the marketplace; the balance towards electronic storage of written resources is tipping; investment in the networking infrastructure by phone and cable companies is at an all-time high; there is now a serious and active participation by world governments in this area. Jeffcoate is critical of companies who may be waiting around for the standards to be set. "We feel people ought to invest now to understand the market, understand the technology, make some mistakes and all the things you need to do to get in," she warned. "By 1998, it will be too late to start work." But a word of caution comes from the report: Gutenberg, who invented the printing press in the fifteenth century, was himself financially ruined while others went on to exploit his creation.

## SGI, UNIVERSITY OF MUNICH, BLACK SUN LAUNCH VRML CENTER

Silicon Graphics Inc, the Technical University of Munich and 3D multi-user Internet technology developer Black Sun Interactive Inc have launched the VRML EuroCentre for VRML (Virtual Reality Modeling Language). Set to be up and running next month, the center will offer users, researchers and commercial developers access to information on VRML technologies. The VRML EuroCentre will be linked directly to a new high-speed European bandwidth connecting Europe and US Internet users. This will be housed at the Technical University of Munich on a Silicon Graphics web server. Black Sun will manage and support the VRML EuroCentre content, which includes a mirror of the VRML Repository from the San Diego Supercomputer Center. This will comprise frequently updated copies of the content most of the repository's outbound links, a hypermail archive of the VRML mail lists sponsored by *Wired* magazine, a library of European VRML development work, and a forum for technical and cultural issues involved in creating websites for multilingual/multicultural communities. Black Sun makes VRML-based client/server systems for interactive, Internet-wide, multi-user information environments.

## IBM TO ADAPT TALIGENT APIs - MAKE THEM WORK WITH OPENDOC

Over the past four years Taligent has had an uneasy relationship with OpenDoc. Too similar to be complementary, too different to work together. Finally it looks as if IBM Corp might try to do something about it. Ian Simpson, IBM's programme director for application development in the Europe, Middle East and Asia told our sister publication *PowerPC News* that the new IBM-owned Taligent is going to try and get the two working together by amending some Taligent APIs. Taligent was always conceived as a "pure" object-orientated development system, whereas OpenDoc is more pragmatic - allowing more conventional code to be 'objectised' by encapsulating it within 'containers'. IBM hopes that it will be possible to embed Taligent object frameworks inside OpenDOC containers. This sounds like something of a bastardisation of Taligent's goals, but at least it means that objects could be deployed in a more phased way and integrated more easily with, say the OS/2 workplace. If the work goes as planned Simpson says it "is possible" that the resulting code will be of use to Apple Computer Inc, enabling it to use Taligent frameworks within Mac-based OpenDoc implementations. There's no word on how the API changes could affect existing Taligent users. (*see page 1*).

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**Oracle Corp** reported second quarter net profits up 45.8% at \$136.9m, on turnover up 44.3% at \$967.2m. Mid-term net profits rose 23.0% to \$190.7m, after charges totalling \$50.1m related to acquired in-process research and development, on turnover up 41.8% at \$1,739.0m. Oracle said it expects earnings to continue growing: "This was a quarter which was pretty consistent with most of the quarters in the past year-and-a-half and we don't see any slowdown," the company said. Software licence revenues overall grew 41% year-to-year, but gains varied across its three businesses - applications, servers and tools - licence revenue for applications grew 104%, database licence revenue 44%, but the tools business was weak, growing only about 9% year-on-year.

Roger Foster, the UK technology pioneer and founder of **ACT Group Plc**, is back in business. His new company, **Financial Objects Ltd**, is developing the Domino tool set for application development in the wholesale and retail banking sector. Domino is a C++, component-based tool set. Foster and senior management - all ex-ACT - hold the controlling interest, and they have backing from Schroder Ventures and Thompson Clive.

**Ing C Olivetti & Co SpA** is in talks with **IBM Corp**, **Sun Microsystems Inc** and **Oracle Corp** about their adopting the \$500 ARM RISC-based NetSurfer developed by its 58%-owned **Acorn Computer Group Plc**. *Bloomberg Business News* quotes Riccardo Ruggiero of Olivetti Telemedia saying: the new machines should be ready to ship by second quarter next year.

**Sun Microsystems Inc** says its HotJava World Wide Web browser is on schedule to beta in the first quarter - version 1.0 is on schedule for the second quarter. The company's problem is finding staff. Currently at 100-strong, the Java Products Group immediately needs 25%-30% more people, preferably folks who already know Java but the eminently trainable might suffice. By this time next year, the group should be at about 200.

**Red Brick Systems Inc's** Warehouse 4.0 database can now be used in conjunction with Hewlett-Packard Co optical drives via support for HP OpenView OmniStorage hierarchical storage management software. HP optical drives support 20Gb to 300Gb data and cost from \$6,870 to \$65,000. OmniStorage is priced from \$5,000. Red Brick's shipping 4.0 with its TargetIndex bit-map indexing (UX 565).

**Texas Instruments Inc's** software division has created a new business unit to develop versions of its Composer enterprise development tool for building Internet applications. The Internet Business unit joins TI's three other business units, and is being run by Tommy Fox. TI says it'll offer products enabling users to access Composer servers from any browser. Betas are due in January.

**Borland International Inc**, Scotts Valley, California, has tapped system integrator Rios Corp to distribute InterBase in Japan. InterBase 4.0 is up on SunOS and HP-UX - Solaris and AIX versions are due early next year.

**Computer Software Packages Inc**, formerly Prophecy International, Atlanta, Georgia, has introduced ProphecyOpen, a financial application created using **Computer Associates International Inc's** CA-OpenRoad development environment. It runs on most Unixes and supports CA-Ingres, Sybase, Oracle, SQL, Informix, and DB2. It comes with budgeting, costing, inventory, purchasing, accounts payable and receivable, sales analysis, and order entry modules. It will go to beta in the first quarter 1996.

**Platinum Technology Inc** will integrate its Forest & Trees database access and analysis software with Jobscope Corp's manufacturing software and Jobscope will market the result for accessing and analysing manufacturing process data. Platinum has signed **Interactive Business Information Systems Inc**, Norcross, Georgia to market Forest & Trees with its MXP Executive Information System manufacturing software.

**Excalibur Technologies Corp** has released Excalibur EFS WebFile, a Web-enabled version of its Excalibur EFS document image management system. It'll allow Web browsers to access EFS files on the Internet. It's due in April 1996. WebFile supports image viewers in TIFF and DDIF formats. It costs from \$5,000. Excalibur will also release EFS Web-Searcher, with a subset of WebFile features, in 10 packs for \$500 per user.

UK mobile phone network operator **Vodafone Ltd** has plumped for **ICL's** Dais object request broker to use in its VodaService administration services.

Product data management outfit **Sherpa Corp**, San Jose, California has appointed ex-Intergraph Corp and Cadence Design Systems Inc executive Michael Northwood as European VP and director of operations. He's responsible for direct sales operations.

**Platinum Technology Inc** has given Sam Jacobs from its **Trinzic Corp** acquisition the job of keeping all the Platinum partners happy. Jacobs managed Trinzic's distributor relationships in Europe, the Middle East, Africa and Latin America.

Meanwhile, **Platinum** has bought itself a Christmas present - Newcastle, California-based **BMS Inc**, which offers job accounting, cost analysis, resource utilisation reporting, capacity planning and resource monitoring applications that can process usage data from multiple platforms. CIMS will be sold separately and integrated with Platinum's own job management software. CIMS starts at \$25,000.

The Intel version of **Chorus Systemes SA's** Chorus/OS binary microkernel originally due by the end of 1995 has been put back to the second quarter of 1996. PowerPC, Sparc, 68k and Mips ports will follow. Chorus says its microkernel can be found under the hood of **Cray Research Inc's** Unicos/mk operating system which runs on the new Cray T3E parallel supercomputer (UX No 567).

**Prism Solutions Inc** is shipping Version 2.0 of its Directory Manager for importing and integrating metadata from CASE tools. Version 2.0 includes icon query tools and the exchange and sharing of metadata data among data warehouse components. Directory Manager, including information directory, and two builder seats costs \$60,000. Meantime, Prism says it has two big UK wins up its sleeve.

The **Metadata Council** is still working on its metadata interchange spec originally due by year-end, now set for the end of January.

US distributor **Merisel Inc** has formed a Technical Products Division to sell services and training to VARs in response to their demands for help with mass storage and connectivity tools. Merisel has also formed an Integrated Solutions Program and is creating an X-Change Desk for large-volume resellers who buy storage products in bulk.

Reports suggest that it might be **Intel Corp's** turn to worry about where this relationship it's got with Hewlett-Packard Co is going, and whether HP is sticking to the roadmap or going off on tangents of its own and developing multiple versions of the chip.

**Forte Software Inc**, Oakland, California has pushed the promised 1995 delivery of version 2.0 of its second generation application development environment into the new year

The **UnixWare Technology Group** has gotten Carl Zeigler from the **SAS Institute** to be its VP technology. He starts the first of the year.

**Hewlett-Packard Co** has completed the acquisition of **Convex Computer Corp** which will be operated as a wholly-owned subsidiary known the Convex Technology Center of HP.

**Netscape Communications' Netscape Internet Developers Conference** - a Java and JavaScript shindig - is set for March 5 to 7 at the Moscone Convention Center in San Francisco. Netscape founder Marc Andreessen; Sun CTO Eric Schmidt and Will Hearst CEO of @Home are keynoting.

*PC Week* believes the defection of a handful of former OpenDoc programmers to an Orem, Utah start-up called **CoreSoft Inc** represents a retreat not only from Novell/WordPerfect but from the architecture itself. The paper hears that they plan to build line-of-business object components not with OpenDoc but with OLE.

**Motorola Inc** and **Compagnie des Machines Bull SA** have a four-way 620 server with L2 cache up and running in Grenoble using AIX and 200MHz parts that reportedly outperform 200MHz 604s. The two are working on 64-bit channels and an eight-way is being readied. Nevertheless, **IBM Corp** thinks Apache will be the first 64-bit SMP unit to market. Apache, the enhanced AS/400 PowerPC AS part that'll figure in commercial RS/6000s, has been dubbed 625. RS/6000 assistant general manager Jeff Mason is apparently circulating a positioning document internally on 620 versus 625 versus 630. The 620 is apparently nine months off its schedule. We learn the PowerPC 620e uncovered last week is in fact just a shrink of the 620 (UX No 569).

Unigram.X is published by Apt Data News Ltd, 4th Floor, 12 Sutton Row, London W1V 5FH, UK. Telephone: +44 (0)171 208 4200 Fax: +44 (0)171 439 1105.

Editor: William Fellows. Editorial: Ray Hegarty, Alison Hawkings. Publisher: Simon Thompson. Circulation: James Franklin.

New York bureau: +1 (516) 759 7025, Tokyo bureau: +81 3 5232 0647 Annual subscription rates: Europe £395, Rest of World £405.

Unigram.X is also available electronically. E-mail address: info@unigram.globalnews.com

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