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NOORDA'S WILLOWS TO PUT ITS WINDOWS-ON-UNIX SOURCE ON TO NET

Fresh from its victory over Microsoft Corp last month at ECMA, the European Computer Manufacturers Association (UX No 569), the tiny Ray Noorda-financed start-up Willows Software has changed gears, plowing ahead with a move that is bound to irk the mighty Redmond empire. This week it'll detail a plan to distribute the source code to its ersatz Win32s operating environment, described as a subset of Windows 95, free on the Internet. It will also make its anticipated software development kit, the Twin Cross Platform Developers Kit (XPDK), similarly available for personal use. Noorda himself will brief the press. The source code will allow users of any flavour of Unix - followed in turn by Apple Macintosh, Novell NetWare and ultimately IBM OS/2 users - to run Windows binaries, particularly Microsoft's own highly popular Word, Excel and PowerPoint programs, on their systems. They will not have to pay any operating systems "taxes" to Microsoft. Saratoga, California-based Willows claims the move will create something of a paradigm shift - at least within the narrow confines of Unix - and spell the end of Sun Microsystems Inc's like-minded but limited product, Wabi, as well as Motif. Officially, Wabi only runs two dozen of the thousands of Windows programs available and to run some of them, like PowerPoint, requires the real Windows underneath, defeating one of Sun's purposes - to wit, depriving Microsoft of its revenue stream. Willows chief Rob Farnum says he will spend the next few weeks lobbying Wabi's greatest adherents, Sun and IBM, to abandon Wabi and license the Willows solution on favourable terms. He has utter confidence such an appeal will succeed and make Willows money. (Sun and IBM Corp did after all sit on the ECMA technical committee TC37 with Willows pushing the technology as a standard.) Farnum never wanted to distribute the source code, he says, because Willows doesn't have the financial wherewithal to support it. The decision to do it anyway was made over the holidays by Microsoft's old nemesis Ray Noorda and his henchmen. Farnum now believes that despite the fact the source code won't be supported it will attract tens of thousands of users. Outside interest in Willows technology, he said, has always focused almost exclusively on its ability to run binaries. It is unclear whether Noorda will also try to tie it in somehow with the Linux freeware-based Corsair Internet desktop his Caldera operation is pushing. Willows is also now willing to forego carving out what it estimates would be a modest little \$10m business selling its XPDK toolkit to a couple of thousand Unix developers a year. Any real money to be made, it figures, lies in what it calls "professional services," porting applications for people with its technology or helping them port them. It intends to announce such a program this week. It also intends to announce licensing schemes whereby pieces of its technology can be bundled with third-party programs. Willows will support its technology when applied to commercial purposes and apparently charge modest licensing fees of \$250 a platform despite the number of developers using it or run-times created. Farnum claims that when Willows this week announces the imminent arrival of its XPDK for the Mac - which like its NetWare kit is at the alpha stage - it will bring pressure to bear on Microsoft's new \$1,600 Visual C++ tool for the platform. Still he remains diffident, or perhaps cautious, about Willows impact on Microsoft - at one point calling it "mouse nuts" - and Microsoft's reaction to Willows' moves. He apparently expects Microsoft to denigrate Willows technology out of a perceived loss of control, loss of revenue and threat to Win95. At the same time, he admits it would take Willows 50 man-years just to catch up with Microsoft's OLE work which he knows he must emulate. Farnum leaves unarticulated or unadmitted - despite direct questions - Willows long-term purposes respecting Microsoft though perhaps he and Noorda now feel they will make more daunting foes by using the Internet to evolve their schemes.

SCO AND HP THRASH-OUT LAUNDRY LIST FOR 64-BIT UNIX

Well, as near as we can make out, the two Unix heirs, the Santa Cruz Operation and the Hewlett-Packard Company, have tried to get down to brass tacks the last four or five weeks over how to pursue this business of collaborating on a 64-bit Unix. We haven't got what we would describe as details yet but it seems they tried to list what would be important in a 1998 product. What they appear to have come away with is a laundry list of current buzzwords that encompass pretty much everything we can think of that touches on an operating system. To wit it includes: ease-of-use, mail and messaging, RAS, networking, routine systems management, advanced system s management, standards, Windows integration, binary compatibility, performance, scalability, security and internationalisation. Each of these words of course is fraught with meaning and so nothing escapes the other, both companies are working on detailed specs of what is involved in each of the categories. Along the way they are making decisions. For instance, under ease-of-use they've apparently settled on a desktop interface, an install procedure and an upgrade policy. They are also fussing over what is basic to the operating system and what constitutes a layered product. SCO's director of strategic planning Victor Krutel suggested there was some kind of "Best of Breed" guideline consisting of five or six criteria for settling disputes but it remains unclear how it works. Also still unclear is exactly how the two are dividing the work. Krutel said, however, that the two would own the 64-bit OS 50-50. Meanwhile, it seems the two have acted on their plans to recruit and hire those ex-Novell/ex-USL folks in Florham Park, New Jersey. SCO got 70-80 of the engineers and will be hiring another 20-30 from the outside. As anticipated they won't have to move far. Both SCO and HP are renting premises from Novell in the same building they've been since last July.

MIPS LIFTS VEIL ON GENERAL PURPOSE R5000 RISC

Mips Technologies Inc duly unveils its new mid-range 64-bit R-Series RISC processor as the R5000 this Monday the 8th January. Although R5000 is the evolution of the desktop and NT-centric 4600/4700 Orion part originally designed by Quantum Effect Design, Mips is talking-up R5000's floating-point performance and two-way superscalar design as a suitable platform for both Unix and NT personal workstations and entry-level servers running 3D OpenGL, VRML and CAD applications without dedicated image processing boards. It's a uniprocessor-only affair initially; executives said versions supporting four-way multiprocessing and modified exclusive shared invalid protocols (for distributed shared memory and non-uniform memory architecture support) would be announced in the second quarter. At 200MHz, the R5000 - the chip formerly identified as D1 (UX No 530) - is rated at 5.5 SPECint95 and 5.5 SPECfp95. The 3.3v, 3.6m transistor, 0.35 micron design is being fabricated by Integrated Device Technology, NEC Corp and NKK Corp in sizes between 80mm and 90mm square. It will be priced at around \$300 in quantity later this quarter. NEC is supposed to do an 0.25 micron 'system-on-a-chip derivative' sometime after. Based on the Mips IV instruction set - which also features in the floating-point intensive R8000 (TFP) and the delayed high-end R10000 - the part comes with 32Kb on-chip cache (4600 has 16Kb) and support for up to 2Mb secondary cache. The Mips IV architecture includes the company's multiply-add (MADD) instructions which accelerate geometry processing in 3D graphics applications. A planned 240MHz iteration has already been cranked to a 250MHz part due later in the year expected to reach 6.8 SPECint95 and 6.8 SPECfp95. An R5000A is slated for 1997; D2 has been seen for 1998. By comparison, Intel Corp's 133MHz Pentium is rated at 4.1 SPECint95 and 2.5 SPECfp95, the 200MHz PentiumPro at 8.1 SPECint95 and 6.0 SPECfp95, whilst the 166MHz PowerPC 604e is at 5.2 SPECint95 and 4.3 SPECfp95. Although the company would not comment, R5000 systems from Mips parent Silicon Graphics Inc are expected by mid-year - presumably for the space currently occupied by the low-end R4600-based Indy - and are likely to be announced later this quarter. Mips devotee Siemens Nixdorf Informationssysteme AG says it'll use the R5000 RISC in its low-end RM200 and 300 lines. Meantime Mips' R10000, the R4000/4400 follow-on destined for high-end workstations and servers originally slated for the end of 1995 is now expected to debut in a new series of SGI's high-end Onyx graphics subsystem at the end of this month. The 200MHz R10000 has been touted at 7.5 SPECint95 and 15.0 SPECfp95 and measures some 300mm square.

OBSYDIAN 2.0 FOR AS/400, UNIX BY MID-YEAR?

Although Synon Corp, Larkspur, California, rolled out version 2.0 of its Obsydian object development toolset with much fanfare last week, it is still far from having a Unix implementation ready for market. In fact, company sources admitted, the company has had to re-think its Unix plans from the ground up. Since Synon first promised a Unix version of Obsydian a year ago it has been pushing back the delivery date (UX Nos 518, 546). To get the thing working as originally envisaged the company had to incorporate new stored procedures and triggers, and buy-in class libraries and connectivity middleware. The company now promises to release a version with an HP-UX generator by mid-year; it has just been delivered to alpha customers. Synon will introduce versions for other flavours of Unix - probably starting with AIX - in late 1996 or early 1997. As well as a Unix code generator the environment provides ODBC to access Sybase, Oracle, Informix and other SQL databases. Meantime, the company says its relationship with Fairfax, Virginia-based James Martin & Co - which is developing an advanced version of its object methodology for Obsydian - hasn't stagnated; James Martin says it'll have the project finished in early March. The idea is that it'll help developers design enterprise-wide client-server systems for distributed networks. Meanwhile, Obsydian version 2.0 now includes support for AS/400 5250 with AS/400 servers, additional class libraries, data replication, a security framework, and calendaring. It costs from \$8,750 per seat.

EDS CLOSER TO BEING FREED TO MAKE ITS OWN WAY IN THE WORLD

Electronic Data Systems Corp, Plano, Texas could be an independent company again as soon as the end of next month now that the US Internal Revenue Service has given its confirmation that the proposed spin-off of the company to its Class E shareholders by General Motors Corp will be tax-free. The deal still needs shareholder approval, and that could prove a problem since General Motors Class E shareholders will see their shares converted into those of the stand-alone company, but General Motors, and Class H holders have to approve the deal as well. Electronic Data Systems' current market value is \$25,000m, 10 times the \$2,500m the General paid for it in 1984. To qualify for tax-free status, the Detroit firm had to convince the revenue men that the transaction has a legitimate business purpose.

MATISSE TARGETS LEADING EDGE TELECOMMUNICATIONS

Olivier Juvanon, sales manager at the Japanese office of ADB SA, part of the Euriware software and services group owned by the COGEMA French nuclear reprocessing group, is the lone representative of his company in Japan, supporting clients from within shareholder SGN's Japanese subsidiary. ADB is trying to redress its lack of visibility in the market, both in Japan and worldwide. Negotiations are currently being concluded with one value-added reseller - Japan Research Institute Ltd - whose channels will be used for approaching specific markets; ADB will sell and support big accounts directly. Further down the track the company expects to set up a Japanese subsidiary, possibly in concert with its reseller. Current users in Japan number 15, and include Japan's big corporates. The biggest of these is Nippon Telegraph & Telephone Corp, which is currently evaluating object-oriented technology for use in an undisclosed application. Others include Mitsubishi Heavy Industries and Tokyo Gas.

TOSHIBA SMARTSTREAMER SIMPLIFIES VIDEO SERVER

Toshiba Corp reckons the others in the industry have got the concept of the video server all wrong, and has come out with a device with much less processing power than rivals, which it says as a result costs a fifth as much as high-end video-on-demand servers using parallel processors. Called the SmartStreamer, it is designed to be used to create low-cost multimedia information distribution systems and combines solid state memory for staging with disk arrays and Toshiba's own Stream Switch Array built of application-specific circuits to transmit the video to as many as 250 user terminals. Toshiba expects to start volume shipments in the second half between \$200,000 and \$300,000.

EXPONENTIAL DOESN'T HAVE THE RIGHTS TO BUILD POWERPC YET

Both IBM Corp and Motorola Inc appear to be completely bemused by the appearance of Exponential Technologies, and its claims of a super-fast BiCMOS PowerPC in the pipeline. The only real fact forthcoming is that Exponential has yet to complete negotiations which would allow it to build its PowerPC compatible chip, says our sister publication *PowerPC News*. Phil Pompa, director of marketing at Motorola's RISC says that Exponential needs an architectural license (IBM owns the Power PC architecture) it also needs to get a manufacturing agreement from both IBM and Motorola before it can make the chips. Finally, Pompa says that Motorola has a number of patents tied up in the PowerPC design that it needs to protect. Everyone seems to agree that the big decision - that Exponential Technologies should be allowed to buy its chip - is a done deal. What remains is a process of dotting i's and crossing t's. Still, its cutting it a bit fine considering tape-out of the first products is due early next year. IBM's initial reaction to Exponential's entry into the field was complete silence. With a little pushing, the company issued a few platitudes about its desire to promote PowerPC widely. Both IBM and Motorola's Pompa say that they see Exponential's work as "complementary" to the work going on at Somerset, or as an IBM spokesperson put it: filling a niche at the high-end. But such assessments assume that the Exponential essentially fails in its claims that the new company produces a chip so expensive that it will only appeal to a tiny minority who desperately need the power. Of course, what Exponential hopes to do is capture the market for high-end 604e's and 620s. Though neither IBM nor Motorola want to say it, it appears clear that Apple has basically been throwing its commercial weight about to get Exponential a license. No wonder, given the component shortages that have beset it.

KEY INDUSTRY PLAYERS SCRAMBLE TO REALISE INTERNET ACCESS DEVICE DREAM

Several vendors are nearing the end of their efforts to produce low-cost Internet access boxes. LSI Logic Corp has described its ability to produce a Mips R3000-derived single-chip Internet client, and similar investigations are already under way at Sun Microsystems Inc, which hopes its ownership of the Java language will give it the lead in the Internet client market. Meanwhile, VLSI Technology Inc is working through its relationship with UK set-top box designer Online Media Ltd - a subsidiary of Acorn Computer Group Plc - to move the ARM7500 integrated media processor into the market, and Mitsubishi Electronic Device Group appears to be working towards the same objective. The aim is to create an Internet terminal, selling for well under \$500, that could not only support a net browser but could function as a full personal computer. Using Sun's Java language or something similar, the net client could browse Web sites. But it could also download portions of interactive applications, called applets, and execute them locally. Thus, a Web site could act as a mass storage device and could provide applets for, typically, word processing, spreadsheets and three-dimensional graphics, giving the diskless Internet client terminal the same capabilities as a full personal computer.

THREE-WAY SPLIT TO COST 40,000 AT&T JOBS, \$4,000m CHARGE

An army of employees has left AT&T Corp since the break-up of the Bell System in 1984, but the bloodletting is still far from over, and last week the company put numbers on the cost to employment of its planned subdivision into three companies - and it is not a pretty sight. It is to take a \$6,000m charge against its fourth quarter figures to cover the cost of its new break-up, which includes the cost of getting rid of nearly 40,000 more employees. About 30,000 of the job cuts will be compulsory redundancies after the disappointing response by employees to its voluntary buyout package at the end of last year. The axe will fall on about 70% of the positions by the end of this year with the rest within three years. The moves announced primarily affect the new AT&T company, which will be the telephone service company, and the new new systems and technology company, which will take in all AT&T's networking equipment, telephone exchanges and phones, and chips. AT&T Global Information Solutions, the former NCR, takes relatively light cuts because it sliced 8,500 people from the payroll in September, at a cost after tax to AT&T of \$1,170m. If the two new companies were launched today and included all force reductions contemplated, AT&T estimates that the new AT&T would have 110,000 employees, a cut of 17,000 and the systems and technology company would have 108,000 employees, after a cut of 23,000.

UMANG GUPTA TAKES HIS NAME WITH HIM; GUPTA CORP CUTS 50, BECOMES CENTURA...

Gupta Corp is to say farewell to co-founder Umang Gupta, fire 17% of its workforce, and hide its blushes over that by changing its name to Centura Software Inc, a name said to imply a new century of software that even its fans will find hard to remember. Chairman and chief executive Umang Gupta is retiring, handing full control over to Sam Inman, who has been president and chief operating officer since April. The Menlo Park company says the restructuring will result in a fourth quarter charge of about \$9m and will include consolidating facilities and operations as well as the layoffs. The company will also write down its fixed assets, capitalised software and other assets. The workforce reduction leaves the company with about 330 employees, down from about 380. The restructuring moves are designed to bring the company's costs in line with expected 1996 revenues. Over the nine months to September 30, Gupta lost \$0.71 a share, compared with a loss of \$1.51 a share in the first nine months in 1994; it's failed to make a profit in the last five quarters. "This announcement is a natural evolution of the plans we have had in place since Sam Inman joined the company last year," Gupta said. "He and I have been running this company jointly for the last nine months." The company says it'll be transitioning the from a technology vision-driven enterprise to one that's market-driven. Gupta claims that worldwide, over 100,000 developers at 20,000 customer sights have licensed its SQL Windows application development environment and over million have deployed its SQLBase database management system.

...HEADS FOR SECOND GENERATION APPLICATION DEVELOPMENT

Centura is also the name given to a new 32-bit product line the company will unveil in the third week of January, intended to provide customers with an evolution to second generation client-server computing. Centura, which has been integrated with SQL Windows and SQLBase, includes Gupta's own repository, partitioning and other software components, but will also be offered in conjunction with Boston, Massachusetts-based Open Environment Corp's Entera environment for Unix development. OEC owns Australian development management tool company Jarrah Technologies Pty Ltd, whose TeamWindows development tool is already resold by Gupta as part of SQL Windows (UX No 554). Versions of the Windows-based Centura development tools will be brought to Unix via the Mainsoft Corp MainWin Windows-to-Unix translator which Gupta has previously used to bring SQL Windows to Solaris (UX No 557). Solaris implementations of Centura will be followed by HP-UX and AIX ports. Centura has been out to beta for six months and will ship in March. It's not expected to impact the company's 1996 revenues significantly. With the second generation application development market already teaming with players, Gupta says it'll be working the low-end with Centura tags expected to be close to its existing \$3,500 developer pricing, and no runtime costs.

ESRI UPGRADES DESKTOP GIS SOFTWARE

Geographic information systems (GIS) software house Environmental Systems Research Institute Inc (ESRI), Redlands, California, has added version 2.1 of its ArcView desktop mapping and software tool for entry level GIS applications. ArcView 2.1 enables the selection and display of different combinations of data linking traditional data analysis tools such as spreadsheets and business graphics with maps, tables and charting capabilities for integrated systems. AutoCad drawings and interchange files can be integrated into ArcView. It can be used as a stand-alone system or extended into an entire department, says the company. 2.1 now comes packaged with Avenue, ESRI's object oriented programming language and development environment. ArcView is built upon Avenue and provides a library of scripts, and supports Dynamic Data Exchange, Remote Procedure Calls and Apple events for transferring data and instructions. Each ArcView document has its own graphical interface and uses a customised dialog box to enable menu and tool controls to be moved to various locations. ArcView applications include sales and market, real estate, transportation, land planning and environmental analysis. ESRI claims to have sold over 90,000 copies of ArcView since its launch in February. Up on DEC, Data General, HP, IBM, Silicon Graphics, Sun, PCs and Macs, prices go from \$2,000 for a single user license.

XVT MANAGEMENT TAKES REINS AT PEREGRINE

Taking the bull by the horns, JMI Equity Fund LP chairman and BMC Software Inc founder John Moores last month shook-up two of his other majority investments, throwing together GUI tool developer XVT Software Inc and network management and help desk outfit Peregrine Systems Inc in the hope they'll work some kind of magic (UX No 569). Specifically, the incumbent Peregrine management team has been swept aside and XVT president and CEO Alan Hunt and CFO David Farley installed to fulfill the same roles for both organisations. Although separate PNLs, company identities, locations, product lines and channels will remain in place for the foreseeable future (ie it's still being decided) practical details of the re-organisation mean Boulder, Colorado-based XVT becomes a wholly-owned subsidiary of Carlsbad, California-based Peregrine. Moores is chairman of both. XVT says the merger means it gets its hands on Peregrine cash and that there'll be an immediate synergy of the companies' consulting and training operations. XVT, which canned its DBAware (nee PowerObjects) database application toolset just a month after its launch last spring following a poor reception (UX No 537), now says it may be ready to try again in that area. Meantime it's working on a new release of its C++ development system. Peregrine will release a new version of its ServiceCenter help desk software applications suite on the 15th of this month. Version 1.3 includes new widgets and tools - some built with XVT technology - as well as network management products for managing Unix, Windows NT and Novell networks. Peregrine is working on APIs to support Tivoli, NetView for MVS, Cabletron Spectrum and Lotus, plus applications that interoperate with OpenView and NetView network management systems. For Novell NetWare, Peregrine is developing ServerView, a remote server management package also due this month. Peregrine recently span-off its March 1995 Bridge Technology Inc acquisition - a Boston, Massachusetts-based developer of database replication and monitoring tools - saying it "didn't want to be in the database tools business."

VERILOG OFFERS OBJECTGEODE DEVELOPMENT ENVIRONMENT

Toulouse, France-based Verilog SA is shipping a new object-oriented development environment for real-time and distributed applications called ObjectGeode. It's said to enable developers to analyse, design, and verify through the whole development lifecycle including simulation, code generation and testing. ObjectGeode is designed for use in telecommunications, aerospace, defence, process control and medical applications and supports Rumbaugh's Object Modeling Technique, Specification and Description Language-92 (SDL), Message Sequence Chart (MSC) and Abstract Syntax Notation 1. With ObjectGeode, OMT Class and Instance Diagrams are used to perform system requirements analysis, while SDL includes architecture diagrams for system structure and interconnection diagrams for system communication. MSC is used for charts in test case definition and function description. ObjectGeode tools consist of editors for creating and modifying the diagrams, a graphical verification and validation tool, automatic C and C++ code generation and associated APIs. Verilog, founded in 1984, is a subsidiary of Compagnie des Signaux SA, an industrial and military electronics firm with annual sales of some \$400m. ObjectGeode is up on Sun, HP, IBM and DEC Unices priced at from £7,000.

HUMMINGBIRD BEGINS INTRANET CAMPAIGN WITH COMMON GROUND BUY

PC X server market leader Hummingbird Communications Ltd, Ontario, Canada, is paying \$6m for one of its existing technology partners, Common Ground Software Inc, Redwood City, California, to kick-off its Intranet strategy, and says other acquisitions will follow. Hummingbird will develop Common Gound's suite of document conversion, authoring and management tools for use with its own Columbus PC-based Internet access software due this month, claiming an integrated solution will be able to access and convert data and documentation to HTML. Columbus includes a browser, FTP, Telnet, the Gather search tool and configuration software. Columbus 1.0 will cost \$200 to \$400 on Windows; it'll have Windows 95 and NT versions by summertime. Common Ground's AutoMaker batch file conversion software sells for \$2,500. Its Web Publishing System is priced at \$1,000.

IS IT A NEURAL NET? IS IT RULE-BASED? NEUROAGENT INTRIGUES HP, ANDERSEN

By Marsha Johnston

In the emerging market for data mining tools the better to understand what you've got in your data warehouse, new technology from a tiny French start-up is commanding the respect of the likes of Hewlett-Packard Co and Arthur Andersen & Co. Datamind SA's product, neurOagent, is a second-generation data analysis package. Unlike first-generation, rules-based software that uses a data verification model to implement system rules based on experience, neurOagent launches an automatic discovery process, using technologies like artificial intelligence, induction and neural networks to tell you what's interesting in the data and to predict tendencies, explains Khai Mihn Pham, founder and chairman of Datamind. Ramin Mikaili, business technology analyst for Andersen Consulting's emerging technology solutions group in Chicago, explains that rules-based products are "for users who have a clear picture of a market, such as stock brokers, who implement system rules according to their experience of when they want to buy or sell stocks. That is a saturated product area that has been around 10 to 15 years," he adds. In the second generation, he said, "so-called 'implicit' techniques are used where the expert doesn't know, but wants to determine the underlying patterns in the data to add to his existing knowledge and experience. It's an area that is just emerging."

Mikaili's group did a study that applied four technologies for implicit learning, or data-mining, to a car manufacturer's need to sift through warranty claims to determine their validity or fraudulence. The four were neural networks, inductive reasoning, statistical techniques (regression analysis) and Datamind's neurOagent. "Not only is Datamind capable of doing implicit learning on non-linear discrete data, like car warranties, but it enables you to do explicit knowledge description as well," says Mikaili. "That makes it very attractive; it's a cross of all four tools and knowledge-based tools. Also, it's agent-based technology, so an agent can be a neural network or a statistical technique or a knowledge-based network, so it allows you to bring in other technologies." Dr Pham's cross-breeding of technology is what interests Hewlett-Packard as well. "Their algorithms are interesting. What I find attractive is their mixing different algorithms together and taking the best of both. It's something I hadn't seen before, a fresh approach. I don't know yet how much of it is advanced thinking or just combining existing techniques, but that is in itself an advance, anyway," says Thierry Costa, international programme manager for Hewlett-Packard's data warehouse project OpenWarehouse in Cupertino. Dr Pham, a French citizen of Vietnamese origin, developed the technology in the course of acquiring his two degrees, in medicine and information systems engineering. "When I started out, I thought medical knowledge could easily be put into a computer, but when I was confronted with rule-based systems, I was shocked. It was too logical," he said.

Predictions

So, beginning in 1987, he began trying to develop a new technology by "putting myself into the skin of a doctor and determining how I reason." He says he didn't try consciously to marry neural net and rules-based technologies, but that "when I showed what I'd done to the artificial intelligence professors in Paris, they said, 'No, that's neural net stuff.' So I went to see the neural net people and they said, 'No, that's rule-based technology.'" He established the company in France in 1991 with the idea to "distribute a particular technology that unified the symbolic and neurologic aspects" of data analysis technology. Pham says most of the US companies with second-generation products have neural networks to predict and use rules to understand the data, but that they use two separate logic mechanisms, making it virtually impossible to connect the two. He says these companies will often say that rules allow users to make predictions, but says that in fact "you have to rework the rules to construct an operational prediction system." "The big difference is that our logic mechanism manages both explicit data and learning," he explains. Although the company has seen interest from Oracle, Informix and Sybase, it hasn't pushed ahead with them because "HP and Red Brick are the most active," Pham says. Hewlett-Packard has adopted Datamind into three of the four areas of its OpenWarehouse program: as a partner; in its consultancy, where Hewlett-Packard recommends Datamind's product and works with the company to determine the best way for a client to use it; and integrating its product into Hewlett-Packard's Intelligent Warehouse offering. "We have agreed in principle to do it, but we haven't started on the technology yet," Costa says, adding that testing will begin this month.

Enormous market

Pham says Hewlett-Packard presents the company to its clients who have data warehouses and that the two do joint communications on data mining. "All of the market players are pushing data warehousing because it's an enormous market. They realised quickly that people needed tools to really help them understand the data. IBM has lots of people working on data mining, but has no product out yet, so Hewlett-Packard wants very much to push ahead. We have started to port the product to their machines," he said. The company has officially had offices in California, mostly administrative, since July, 1994. In early March this year it brought over the majority of its research and development team. "We need strong R&D here to be able to carry out our partnerships," Pham said, adding that the company is also in the process of hiring the vice-president of marketing for

Red Brick Systems Inc, the number two data warehouse company after Oracle Corp. Stewart Schuster, a co-founder of Sybase Inc, has also joined the board of directors to assist with marketing strategy, for which it has just received \$3.4m in venture capital. Says Mikaili, "I like to learn new things, and this was real exciting, to see the development of a new technology, it was like being around when neural networks or the theory of relativity were discovered. It's innovative and applicable to many of today's problems."

ODI CLAIMS 43% OF JAPANESE OBJECT MARKET,

The Japanese subsidiary of Object Design Inc was set up in December 1991 through the initiative of current representative director of Object Design Japan Co Ltd Mike Verretto, a youngish Japan hand who approached Object Design's top management with the proposal. Given the size of the company at that time - it was doing just \$2m a year turnover, it was a bold step but one that has more than paid off, says Verretto. Object Design now claims to have 43% - on 1994 figures, of the market for object-oriented products in Japan, and is the only company in the industry with its own Japanese subsidiary. The two - a Japanese subsidiary and commitment to the Japanese market, and market share - go hand in hand, says Verretto, who emphasises the considerable consultancy - hand-holding - that is required to get companies actually to use object-oriented products. Echoing the impressions of Matisse's Juvanon, he says that getting the first license into the company is not difficult, but persuading the company to go beyond that and develop production systems takes longer. Object Design has between 250 and 300 sites using ObjectStore; most of these have been sold through three value-added resellers: Toyo Information Systems Ltd, Mitsui Shipbuilding & Engineering Co and IBM Japan Ltd. It also has two Solutions Partners: Nippon Steel Co's E&N Division and NK Exa, Nippon Mining Co's systems integration group, which supports companies such as Nippon Telegraph & Telephone Corp. The largest and, in business terms, most advanced user is the Japanese electronics design automation software developer Zuken Ltd, whose latest product family CR-5000 is based on ObjectStore. Run-time revenues are just beginning to kick in, said Verretto. In Japan the competition for ObjectStore is from other object-oriented products, primarily now Objectivity, said Verretto, thanks to the energy the Objectivity distributor, OGIS Research, the Osaka Gas software sales subsidiary, is putting into sales. OGIS is developing into a formidable competitor with a complete range of products, including in addition to Objectivity, development and analysis tools such as Rational Rose from Rational Software Corp, class library tool Galaxy from Visix Software Inc, and development environments such as VisualWorks and Forte.

Teller machines

Previously Versant, distributed by Nichimen Data Systems, was the main competitor, but Verretto said he was surprised that Nichimen did not even exhibit Versant at Object World. (Nichimen in response says that in the past five years it has garnered a considerable user base - over 200 sites - for Versant, and its current positioning of the product is more as a network management system for telecommunications suppliers rather than as a pure object-oriented database. Both Fujitsu Ltd and Hitachi Ltd have incorporated Versant in their software for telecommunications products such as automatic teller machines. For the future, Object Design plans to focus on the finance industry as a key market. Software for handling derivatives sales is especially suited to ObjectStore and Object Design has seen some big initial successes in that market, so much so that Verretto was inspired to hire his new sales manager - a woman, even - from the finance sector. He also plans to capitalise on what he sees as ObjectStore's two major strengths, its close affinity to C++ and high performance ratings compared with similar client-centric applications in both finance and telecommunications, and to expand consultancy as the means of ensuring that his object-oriented products get into the mainstream of Japanese corporate software usage.

SGI JOINS SWELLING CHORUS OF WOE ABOUT UNEXPECTEDLY WEAK QUARTER

It is becoming ever clearer that the computer and semiconductor sectors are heading into choppy water and that nasty surprises lurk in every thicket. If Escom AG's warning is anything to go by, the German market for personal computers in the fourth quarter was even worse than a rather soggy US one, and now from another surprising quarter comes a warning of unmet expectations. Silicon Graphics Inc, widely regarded as a super-high flyer by virtue of its dazzling multimedia technology, last week warned that net profits for its second quarter to December 31 will likely be only 30 cents a share, compared with 34 cents a year ago. Turnover growth has been running at around 40% year-on-year, and that is the culprit: Silicon Graphics does not expect sales of more than about \$675m, which represents something like a crash into the buffers, because it amounts to a growth rate of not 40% but just 22%. The company is blaming both the North American and European markets for the shortfall, although there is one special factor in the shape of the ridiculous posturing in Washington between the Administration and Congress over the budget: the company said there was a slowdown in sales to the US government, caused in part by the budget uncertainties. The company says that business with its OEM customers - Tandem Computers Inc is prominent among these - was also weak. European results were affected by slowdowns in the major economics of Germany, France and the UK, it said. The mean of analysts' forecasts for the quarter was \$0.42 a share, so the market took the announcement badly, and in trading on the day, the shares shed \$4.37 at \$23.25 - barely half the high of \$45.62 reached last July 13. "Despite these disappointments," said chief executive Ed McCracken, "We believe that our revenue growth rate indicates increasing market share and that our operating profitability compares favourably with that of our industry. Our fundamental competitive position remains favourable, and the response to new products like the Indigo2 Impact workstation, which shipped in volume in the second quarter, has been outstanding. We will also be announcing later this month new products that will underscore our leadership position in high performance computing. We have adjusted our planned expense growth while we ramp up these new products." All of which, while being true enough, will cut little ice with investors expecting more from the company.

Sympathy

And Silicon Graphics Inc's warning of a weaker than-expected second quarter seems to have brought out the *schadenfreude* in analysts, who rushed to downgrade their forecasts for Sun Microsystems Inc in sympathy: "They had been growing so strong, and then they get to the real world, and find they are not growing as fast as hoped," said George Elling at Merrill Lynch & Co - "they looked internally to grow a lot faster, and built a cost structure expecting 44% revenue growth;" David Wu at Chicago Corp added to *Reuter* that "I would have to say that it's not only glitch for the quarter, but for the year, as well;" he expects revenues to grow at about 30% for the year versus the original company forecast of about 45% - "they were gearing up for growth," Wu said; "they were too aggressive in their expectations, and hired a lot of people; it hasn't come as fast as they hoped."

Early test

Meantime, Congress managed to muster the two thirds majority in both houses of Congress needed to overturn President Clinton's veto of the Private Securities Litigation Reform Act of 1995 and the act has now passed into law despite the President's misgivings. Silicon Graphics Inc's profit and sales warning is being seen as an early test of the effect of the new law as under the old law, plaintiffs' attorneys have routinely sued high-tech companies within hours of announcements of disappointing quarters, alleging that management failed to warn investors soon enough; under the new law, lawyers have to point to specific facts that allegedly prove companies intended to defraud investors. William Kelly, Silicon Graphics' general counsel, told the *Wall Street Journal* that plaintiffs' lawyers would have had difficulty justifying a suit even before the new law, because the company has repeatedly warned in its regulatory filings that quarterly results couldn't be predicted - but that kind of defence seldom deterred frivolous, time-wasting and costly lawsuits under the old law.

UK GROUP PROMOTES RAPID APPLICATION DEVELOPMENT METHOD

Disgusted with the failure of existing system development methodologies a bunch of companies in the UK including IBM, Information Builders, Oracle, Software AG, Computer Associates, Olivetti and Cognos are participating in a not-for-profit consortium promoting a non-proprietary, user-centred Rapid Application Development (RAD) method. Called Dynamic Systems Development Method (DSDM), the method they've created emphasises active user/developer involvement, product-based approaches, iterative design, incremental and reversible development and testing. The group introduced DSDM version 1.0 in February 1994, stressing incremental prototyping. DSDM 2.0, launched last month, is said to assume that nothing will be built perfectly first time around. Emphasising re-use and maintainability, it includes two iterative prototyping lifecycles, one focusing on requirements the other on engineering. Nick Gill, manager of methods and tools, applications and systems integration services at Olivetti UK, is chairman of the DSDM promotional workgroup and says at least part of its aim is to address the limited functionality of the new breed of RAD tools which are often just re-badged versions of existing toolsets with few methodological improvements. An early adopter is said to be *The Boston Globe*, which has used the method to keep track of production through a system created for it by the Sysdeco Group AS. The group claims 600 members, 80% of them end users. It has affiliate organisations in Australia, France, Holland and Belgium and has plans to launch a similar initiative in Russia in February and in the US later in 1996.

FULCRUM TAKES A TRIP FOR ITS EUROPEAN CONNECTIONS

Looking to increase sales in Europe, text retrieval company Fulcrum Technologies Inc, Ottawa, Canada, has paid \$4.6m for its competitor Trip Systems International Inc, Brookfield, Connecticut, which is said to have strong sales channels and customer bases in Scandinavia, Germany, and the UK, plus a presence in Japan and China. Fulcrum president and CEO Eric Goodwin says the company will continue to support Trip products and customers but will migrate them to Fulcrum technologies over time. Fulcrum already has offices in Milan and Rome in Italy, and in France and Germany and says it'll establish a sales office in Japan this year. The company says it'll ship version 3.0 of its SearchSaver engine later this month with new document viewing functions, plus additional linguistics facilities provided by Inso Inc, Boston, Massachusetts. The company will also debut an enhanced version of its SearchBuilder toolkit for SearchSaver. Version 1.1 of the Surfboard Internet search and retrieval system will ship this quarter. Surfboard uses the core SearchServer indexing and retrieval engine with Internet access protocols, and is sold separately or bundled with SearchServer (UX 532). Surfboard will be ported to Windows NT this quarter. A 2.0 release of Surfboard is planned for the second or third quarter. Fulcrum's products run on most flavours of Unix. SearchServer costs \$800 per user, SearchBuilder costs \$1,000 per developer, and Surfboard costs \$10,000 per server.

TAIWAN'S UNITED MICRO SURRENDERS TO INTEL OVER ITS UMC486 CLONE

Intel Corp looks to have killed the threat to its microprocessor business from Taiwan by winning patent infringement suits over the only non-US cloner of the 80846, United Microelectronics Corp, which has agreed to stop making its UMC486 part. United, Taiwan's second-biggest semiconductor fabricator, also withdrew its challenges contesting the validity of Intel patents in several Asian and European countries, and paid Intel's expenses, which a spokesman said were less than \$5m. United effectively admitted that its clones would not stand up to close scrutiny by labelling them "not for sale in the United States," but it contested Intel's patents in Germany, France, the UK, Taiwan, Hong Kong and Singapore. Intel sued United Microelectronics and its distributors in Germany, the UK, Hong Kong and Singapore in June, and in July asked the US International Trade Commission to bar a United distributor from importing any UMC486s into the US. It looks as if the agreement ends United's involvement in the iAPX-86 market; it is not clear whether the company's microprocessor ambitions are exhausted, or whether it will seek to license a RISC design, such as PowerPC or Alpha.

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The weekly information newsletter for the UNIX™ community worldwide

Intel CEO Andy Grove, **Sun** CEO Scott McNealy, **Acer** CEO Stan Shih, **Microsoft** Consumer Division chief Patti Stonesifer, Fujitsu boss Tadashi Sekizawa, **HP** CEO Lew Platt and his hier apparent Richard Belluzzo were all picked for *Business Week's* list of the 25 best managers of 1995. It says the ones to watch are **3COM** CEO Eric Benhamou, **Siemens Nixdorf Informationssystemes** chief Gerhard Schulmeyer and the fate of **Apple** boss Mike Spindler.

UnixWare 2.1 is due February 12 or 13.

In the world-famous **Mondex UK Ltd** trial in Swindon, Wiltshire, only a paltry 9,000 people have signed for the cashless Smart Cards where Mondex had been hoping to get 40,000 of Swindon's 190,000 people to take a card. The company shot itself in the foot decreeing that despite all the benefits of cashless shopping being to the banks, with virtually none accruing to the shopper, it would nevertheless greedily make a charge for the cards. A pilot scheme is already under way in San Francisco, the people of Guelph in Canada will be trying out Mondex from mid-1996, and a Hong Kong trial is planned to start at about the same time.

Intel Corp released 166MHz and 150MHz versions of the Pentium last week at \$749 and \$547 respectively in volume: prices on existing Pentium's will be cut by around 20% later in the month. The company is expected to have a 180MHz version later this year, and the 120MHz version is likely to be the "low-end" Pentium by the end of the year, insiders at Intel suggest.

Object house **Expersoft Corp**, San Diego, has raised \$7.5m in its third round of venture capital financing from California-based investors Aspen Ventures West II LP, Crosspoint Venture Partners, Enterprise Partners, Indosuez Partners, and Trinity Ventures. The new funds will be used to finance the development of new engineering and marketing programmes.

And there we were thinking that eruption of over a dozen acquisitions was a strategy to flood the market with so many of its shares that no-one would even thinking of making a hostile bid for it. **Platinum Technology Inc's** board has adopted a shareholder rights plan.

Ray Kelly, the man who handled the colossal Walmart account for AT&T GIS and one of its highest paid employees, has left the company to head-up **Hewlett-Packard Co's** new retail sales and marketing organisation. His colleagues are upset that such talent is going to virulent opposition like HP. Kelly will work out of Arkansas, where he was stationed with GIS, and is seeking resumes to build his team with retail-experienced marketing people.

George Shaffner's first novel, *Mata Hari's Corollary*, a story of digital economic warfare, has been published on the net - and only the net. Chapter 1 of the 1.5Mb tome is gratis, the rest can be downloaded after purchase of an access password at <http://www.avamedia.com/mata-hari> Shaffner, former **X/Open Co Ltd** COO, is now CEO of **Computer Resources International's** US subsidiary.

Microprocessor Report publisher Michael Slater, frustrated by Intel Corp's refusal to put a name to its projects, has dubbed its future chips the P7a and the P7b. P7a, which Slater said could just as easily be called P6+, is an Intel-only, next-generation iAPX-86 chip. P7b is the VLIW-oriented architecture that HP and Intel are developing together. Both will be 64-bit affairs. Although the P7b has had more publicity, Slater says the P7a will be more important for the PC market and will sell more chips in the short term.

Chicago Corp analyst David Wu called an *Electronic News* item that design disagreements in the HP-Intel chip development might be leading to a rift between the two "the most ridiculous thing" he'd ever heard. He says a split is unlikely because HP has "bet the company" on the architecture, as has Intel. He repeated his claims that there will be at least two versions spinning from the architecture: the two companies have agreed on an architecture, not a chip, so they can design different chips at will, he said.

SAS Institute, Cary, North Carolina, has joined the MetaData Coalition.

Unisys Corp, Blue Bell, Pennsylvania, will appoint a senior VP, Edward Blechschmidt, as its chief financial officer, effective on January 20 to replace George Robson who's gone off to take a similar position with H&R Block, the US tax preparation concern which also runs the CompuServe on-line service. Unisys is still expected to reveal a restructuring later this month to bring it closer to its goal of becoming a computer services provider. *The Wall Street Journal* says it'll take a \$400m fourth quarter charge which will result in a loss for the year.

Now that Intel Corp's fired the starting gun **Unisys Corp** is able to offer 150MHz Pentium chips for its U6000/500 Model 80 servers, in which users can mix and match Pentium's of different clock speeds. It'll jump to 200MHz Pentium Pro models in the second quarter. The all-PCI designs are coming too. The company says it's doing more and more business on Windows NT, but that isn't overshadowing its Unix effort.

Meantime **Unisys** has been talking to Tandem Computers Inc about re-working its lines with the Tandem ServerNet interconnect but says talks are still very premature.

Oracle Corp achieved its 11,456 tpmC on one of the as-yet the unannounced 350MHz Alpha 21164-based TurboLasers expected to debut by the summer (UX No 570), specifically an eight-way Digital AlphaServer 8400 with 8Gb RAM running Digital Unix, Oracle7.3 and ITI Tuxedo (UX No 568).

Meantime **Sybase Inc's** achieved the highest performance on a currently shipping Unix box - 11,014 tpmC (\$222 per tpmC) on a 10-way 300MHz TurboLaser with 6Gb RAM. That bests Oracle's 9,414 tpmC performance on the same platform (albeit an eight-way 300MHz system with 8Gb RAM) by 17%, and beats it by 32% on price (\$316 per tpmC). It hasn't got its hands on a 350MHz box yet.

IBM Corp isn't happy with the performance it's getting from early versions of its ImagePlus VisualInfo Library Server for AIX and has put-off an announcement date until it can speed the thing up (UX No 514).

Mips Technologies Inc says it shifted 3.5m R3000 and R4000 processors in 1995, up from 1.67m in 1996. It hopes to double that number in the next 12 months.

Minnetonka, Minnesota-based **Software Moguls Inc** is offering a Database Backup Module which allows its SM-arch backup and retrieval system to work with the administration functions of database backup systems from a single interface. Part of SM-arch 3.2, the module works in conjunction with Oracle and Sybase initially and costs from \$1,000. It'll be incorporated into the NT version of SM-arch later in the year.

Pick Systems Inc has renamed its database D3 to reflect its multidimensional nature: D3 7.0 is due next month - an NT version is in August.

MKS Inc, Waterloo, Ontario, has appointed former Intersolv Inc product marketing director Tobi Moriarty director of marketing. She will head worldwide corporate and product marketing of software development tools.

India's **Centre for the Development of Advanced Computing** will use Sun Microsystems Inc's UltraSparc in a new generation of its Param 9000 supercomputers and 64-bit desktops. Param uses a self-routing switch to clusters systems in parallel configurations.

The integrated SunNet Manager/CA-Unicenter network and system management combine trumpeted by chiefs Scott McNealy and Charles Wang last autumn and due by the end of calendar 1995 is now expected later this quarter (UX No 551).

Hewlett-Packard Co's now touting its 64-bit PA-8000 at 9.5 SPECint95 and 17.5 SPECfp95 compared with the 8.6 and 15 numbers it was bandying about a couple of months ago (UX No 563). PA-8000 systems are due this quarter.

Having cancelled all future development of its 29000 embedded RISC, **Advanced Micro Devices Inc** now has the ARM, Motorola, Intel, Mips, PowerPC and Sparc camps chasing its customers; AMD shipped two million 29000s in 1995.

Jon Kannegaard, the **SunSoft Inc** executive who stepped into Ed Zander's shoes as president of Sun's software business last April but quit a few months later, has re-appeared as COO of the company's new Java products division.

Oracle's \$967m second quarter included a 36% increase in Unix revenues and a 64% increase in desktop products (Windows NT, OS/2 and NetWare). Its applications business (75% of its apps are now GUI-based) grew 104%.

Next Computer Inc's hardware business is long gone so it's changing its name to Next Software Inc.

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COM-TO-CORBA RFP GOES ON HOLD

Lack of a fully functional Network OLE specification from Microsoft Corp has put the Object Management Group's planned Part B Corba-to-COM Request for Proposal into a holding pattern. Moreover now that Microsoft says that it does not plan to respond to a Part B RFP directly - although it had previously said it would - the notion of Corba objects interoperating with Network OLE objects, let alone Network OLE becoming part of Corba seems distant. The Network OLE specification 'frozen' back in late October has already been described as "unworkable, deficient and full of holes." Although Microsoft did not attend OMG's technical committee meeting in San Diego last week, a list of problems with the spec submitted to Redmond left some at the meeting with the impression that Microsoft would be willing to fix the spec as it stands. There's also some indication that it would be willing to submit to Part B through a third party - presumably DEC or HP. OMG's next meeting is in Brisbane in March and if it gets the corrections from Microsoft better than three weeks before then it could set a date for the Part B RFP. However even at the earliest it would be four months from then - July - that it could receive submissions under its process. Microsoft's withdrawal from a direct response to Part B is understandable given the commercial availability requirements OMG's process entails. Naturally Microsoft, said by some to be three months away from a Network OLE beta, wouldn't likely submit a specification to OMG for technology that's it's not had bug reports back on. For all practical purposes it means that a Part B specification, describing how Corba objects can interoperate with Network OLE won't get done until Microsoft creates a product out of Network OLE. Because the spec is so low-level, down at the wire, it's also not feasible to create a Part B spec using the frozen spec and alter it later when Microsoft has a polished version. Meantime, OMG has now endorsed the revised joint submission to its Part A RFP for Corba-to-OLE interoperability (UX No 555). Even DEC which originally threatened to be a holdout or stumbling block has reportedly joined the party. The spec, apparently drawn up like a programmer's guide, does not standardise on any of the handful of originally proposed implementations, but describes in detail the calls which must be made to call say an OLE object from a Corba object, or visa versa, assuming there's a Corba network underneath. OMG also adopted the long-awaited security service specification - a 300 page tome - that object vendors say many of their large customers have been waiting for.

NEC TO BUILD ULTRASPARC-BASED MICROSPARC III

Seems like a kick in the teeth to its supposed Sparc buddy Fujitsu Ltd (UX No 484), but Sun Microsystems Inc has handed manufacture of a next-generation microSparc III based upon the 64-bit Sparc V9 architecture UltraSparc to Mips Technologies Inc foundry NEC Corp. Sun's Sparc Technology Business was forced to reveal its hand after Japanese sources began leaking to wire services in Tokyo. The general purpose uniprocessor expected in 1997 is expected to be used in low-end desktops and servers from Sun and others. NEC, which is getting Sparc design data and manufacturing technology from STB, won't be building its own UltraSparc-based systems. The NEC microSparc III is only one part of the microSparc III story however, the high-end feature. A lower-cost, lower-performance microSparc III - presumably the V8 version with an UltraSparc superset and pipe binary compatible with microSparc II (UX No 555) - will also appear around the same time. STB says it still hasn't chosen a foundry, though Fujitsu Ltd currently fabricates microSparc I and II. Other microSparcs are the 'e' embedded series. STB claims the NEC agreement won't affect its relationship with Texas Instruments Inc which currently manufactures all SuperSparcs and UltraSparcs. Meantime, realising it's getting beaten up all over the place, the company's expected to release SPEC95 numbers within 30 days.

ROEL PIEPER STEPS UP FROM UB NETWORKS TO TAKE TOP JOB "AND CHANGE THE CULTURE AT TANDEM"

After an extensive search Tandem Computers Inc has gone and done what had always seemed most natural in the first place - elevating Roel Pieper to the top job. He succeeds founder Jim Treybig as president and chief executive and moves up from head of the UB Networks subsidiary, which Tandem seems to be unable to sell, although Pieper says no decision has yet been made about cutting the unit loose. Pieper's elevation was apparently news even to Tandem insiders who recently dispelled the notion he'd get the job (UX No 569). The promotion was prefaced by the decision not to have Tandem co-founder Jim Treybig installed as company chairman as had previously been announced. Instead executive chairman Tom Perkins will fulfil both roles; Treybig will sit on the board. Pieper is charged with executing a business plan designed to "change the culture of Tandem to put technology into the hands of partners and to grow revenue from software," according to Perkins. It's said to include seeking new customers for "bite size" pieces of technology including parallel, database, ServerNet interconnect, OLTP and fault-tolerant mechanisms, which Tandem describes as its "ServerWare." Meantime, the company claims a slew of additional partners in the pipe (talks are still progressing with Unisys (UX No 571)); it just hasn't yet figured out how or when it'll name names. Pieper will get more specific about OEM and "bite size" technology plans in six to eight weeks, but it's unclear whether this will include the announcement of new partnerships. Industry veteran and Tandem senior VP worldwide sales and marketing Gerry Peterson is steering the third party relationships. Pieper was previously the high-profile head of AT&T Corp's Unix Systems Labs, and served at the height of the Unix Wars. Former UB CFO Chris Brennan steps up into the president and COO roles at the subsidiary.

ROELANDTS OUT AT HP

Wim Roelandts, the man who could have been president of Sun Microsystems Inc if he could have stomached having Scott McNealy as CEO, the Hewlett-Packard Co lord high muckamuck who could have written his own ticket anywhere, is going to quiet "fabless" little San Jose, California-based CMOS programmable logic house Xilinx Inc as CEO, the title he - and all of his ilk - seem to lust after. The move, precipitated by HP CEO Lew Platt ruling the affable 52-year-old Belgian out as his successor and installing a PC guy Richard Belluzzo as his heir presumptive - putting him over Roelandts - is an odd one for a man who consoled himself at the time with the thought that he really was a systems guy and didn't want to be bothered with the oscillators and printers HP produces in such abundance, something he would have had to worry about if he was running Hewlett-Packard. Shortly thereafter it became apparent to readers of *Unigram.X* - despite the naysaying - that Roelandts was a loose cannon. Roelandts' transition becomes effective Monday January 22. At press time it was unclear how HP would deal with the departure of its computer chief, the general manager of its Computer Systems Organization. Bernie Vonderschmitt, the 72-year-old founder of the 11-year-old Xilinx, will resign as chief executive officer to accommodate Roelandts though he will retain title - at least for the time being - to the board's chair. Xilinx, headquartered in San Jose, California, did \$355m in sales last year and has expectations of closing its current fiscal in March with better than \$550m in revenue. It produces some 40 varieties of programmable logic products, making making it the world's largest supplier, and does business in North America, Asia and Europe with a staff of 1,100.

MIPS ABI GROUP LACKS ASPEN VOICE

Whilst Tandem Computers Inc last week deferred all questions about its 64-bit Unix plans to the Mips ABI group, mirroring the experience of other vendors (UX No 570), the R-Series RISC supporters club says it's had no official participation in the Intel Corp-Hewlett-Packard Co-driven Unix API initiative known as the Aspen process. The group's goal was to have one of its people represent all of the Mips ABI member companies but that hasn't happened. "There have been conversations between various ABI members and Aspen," it says; "and one way or another, we hope that this matter is resolved shortly." Aspen folk could not be reached for comment.

MOTOROLA STUNNER UNSETTLES CELLULAR STOCKS, ENTIRE TECH SECTOR

We've been hearing anecdotal evidence for some time that Motorola Inc's cellular telephones were disappointingly unreliable compared with those from its Nordic rivals, and any shortcomings appear to have come home to roost in the company's fourth quarter 1995 earnings report. Net profits for the quarter slumped 15% to \$432m or 72 cents a share, on sales up 13% at \$7,300m, a sharp deceleration given that sales for the full year were up 22%. The news sent the markets into a tizwas over all cellular hardware stocks and technology stocks in general. The average analyst surveyed by Zacks Investment Research estimated Motorola would earn 90 cents a share for the quarter while the First Call poll turned up 88 cents. The results were announced after the formal market close but the shares fell 5.8%, dropping \$11.25 at \$45 in after-hours trading. The company said sales of cellular phones declined 5% in the final quarter compared with the fourth quarter of 1994, and prices for them fell 15% to 20% during the year. Profit margins in the quarter declined to 5.9% from 8% a year ago. "Wireless markets in the more developed economies continue to experience pricing pressures, which have had a negative impact on net earnings in 1995," said Motorola chief executive Gary Tooker.

Negative impact

"These conditions may continue to result in lower sales growth and difficult earnings comparisons for the next few quarters." He added that investments in technology and production capacity also had a negative impact on net earnings, but are setting the stage for long-term growth. President Christopher Galvin said, "As we stated at the end of the third quarter of 1995, fourth-quarter results would be adversely affected in their comparison with a year ago because last year's results benefited from a build-up of excess cellular phone inventories in the U.S. distribution channels. "In addition, continued pressure on average selling prices and costs associated with the introduction of new technologies have also had a negative impact on earnings." Aside from the cellular business, Semiconductor Products Sector sales rose 23% to \$8,500m during the year, while orders rose 22%. The unit remained capacity constrained for certain products and technologies at the end of 1995. Distribution, consumer and industrial orders were higher in the fourth quarter while personal computer, workstation and communications declined. Highest growth within product categories was seen for microprocessors, microcontrollers, sensors and fast static and dynamic random access memory chips. A major expansion in East Kilbride, Scotland, brought additional capacity for microcontrollers used in applications such as Smart Cards. Construction began on the submicron, 8" wafer fabrication facility located in Tianjin, China. Messaging, Information and Media sector segment sales rose 23% to \$3,700m for the year while orders increased 36%. Under agreements with four major cable television companies, Motorola will supply CyberSurfr modems for cable subscribers to access the Internet. Land Mobile Products sector segment sales rose 6% to \$3,600m while orders rose 2%; and Automotive group sales rose 15% but orders fell 11% and operating profit fell. Sales in the Government & Space technology group rose 51% but orders fell 17% compared with 1994.

CINCOM OFFERS NEW SALES MANAGEMENT SOFTWARE

Cincinnati, Ohio-based CinCom Systems Inc has introduced a sales management and bidding software application suite called ControlAcquire which supports product configuration, sales cycles, estimating and proposal development applications. It includes a Configurator Workbench which captures and stores companies' product and configuration rules and leads users through each step of the configuration process. It comes with an Estimating function that draws historical and current cost data, and automates the development of product cost estimates. It has a Proposal Management function that maintains contact information, and can pull in data from other applications. Finally, it has a WBS Planner that creates a graphical work breakdown structure from which the user can update project details and summarise information. ControlAcquire runs on Windows 3.1 and Windows for Workgroups 3.11 clients, and includes server components for AIX, HP-UX, Digital Unix, and OpenVMS. It costs from \$56,000, depending on configuration. As expected (UX 564), the company has begun shipping its Total FrameWork object-relational application development environment. Individual components are priced at from \$2,000, with integrated packages from \$6,000 per server including all three server components, plus \$700 for each client. The server runs on most Unix platforms and Windows NT, and the client runs on Windows. Next month Cincom will begin marketing Action Technologies' workflow framework for use with Total FrameWork, it'll work on an integrated product with Action to provide a 'virtual engineering environment' across the two companies for customers.

IDC: HIGH-PERFORMANCE COMPUTING TO EXPLODE

The worldwide market for high-performance computing will grow by 26% to be worth \$4,000m in 1996, up from \$3,100m in 1995, according to International Data Corp. The Framingham, Massachusetts-based research company says that growth will be especially strong in the high-performance midrange and commercial MPP/strategic business applications market areas, such as high-end commercial processing and multimedia databases. Revenue growth in the high-performance midrange market will rise by 31% in 1996 to \$2,100m, IDC says. This will be driven by continued network server sales and upgrades at the lower end, and applications drain from the supercomputing high-end of the high-performance midrange market. IDC expects the commercial MPP market to grow by 25% to \$866m this year. The supercomputing segment is expected to regain some momentum, as major suppliers such as Cray, Fujitsu and NEC reach volume shipments on their new product families. Revenues from technical MPP systems will vary greatly this year as the market continues its transition away from smaller systems to larger capability-oriented systems. IDC thinks the technical MPP market will rebound slightly overall to \$297m in revenue, driven by product sales and anticipated revenues from sales Cray Research Inc's new T3E scalable parallel processor (UX 563, 567). IDC expects revenues from Fujitsu's VPP300 and NEC's SX-4 scalable vector machines also will help this area.

Software

Meantime, the market for packaged software products grew by an estimated 15.7% to reach \$92,000m in 1995, and will increase to \$105,000m by the end of 1996, IDC says. It says the market for systems-level software grew more than 15% to \$25,300m in 1995, above its initial forecasts, due in part to the Microsoft Corp's juggernaut. The market for application development tools rose to \$26,100m last year. Worldwide, revenues from business applications sales rose less than development tools, by 15% last year to nearly \$40,000m, with most new spending on business process reengineering tools. Finally, IDC reports that shipments of office suite products have doubled each year since 1992, rising 72% to 13.6m units worth \$2,900m from 1994 to 1995, and will reach an estimated \$4,000m this year. Microsoft increased its hold on the office suite market last year, garnering 86.8% of total market revenues, up from 83% in 1994, IDC says. Internet may give Microsoft a run for its money, IDC says, as it requires applications previously unavailable but now deemed vital to office suites, such as web browsing, retrieval, search, and storage.

PRIMUS KK TO SELL SOLUTIONBUILDER IN JAPAN

Primus Communications Corp, Seattle, Washington, has established a joint venture in Japan with Tokyo-based integrator Trans Cosmos Inc. The new company, Primus KK, will market Primus' SolutionBuilder data capture client/server application software. SolutionBuilder accesses shared files and searches in databases for targeted data. Users can capture and reuse database components as they are created. SolutionBuilder is based on Versant Object Technology Corp's object-relational database and runs on Solaris 2.4. Primus will port the server to HP-UX and Windows NT before the summer. SolutionBuilder costs from \$5,000 per concurrent user. SupportBuilder is the first in a series of products Primus is building in conjunction with the Customer Support Consortium, an organisation of hardware and software vendors that develop support systems. Primus is also developing an online database support service.

ADABAS NOW AVAILABLE TO RUN IN RAM

Software AG has enhanced its Adabas D relational database with data distribution capabilities to support the 64-bit the VLM Very Large Memory option DEC's on AlphaServer 8000 series systems, according to Mike Schiff, director data management programme. It is unclear whether Adabas D will be ported to DEC's 2100 which now also supports VLM (UX 570), but Schiff noted that Software AG wants to be up on all Alpha machines. VLM enables a larger portion of the database - up to 10Gb - to reside in main memory. The enhanced version of Adabas D also includes database reorganisation technology, which reorganises data as it is deleted, added and changed. It includes has two-phase commit and synchronous and asynchronous database replication. Software AG is targeting the US federal government, VARs and system integrators, Schiff said. Adabas D costs \$2,500 per server and \$150 per user or client. Single user copy costs \$400. Software AG will supply a gateway for porting from Adabas C to D for an extra charge.

NO HOME FOR SOFTWARE AS DUN & BRADSTREET BREAKS UP

If in the 1980s, conglomerates were all the rage, in the 1990s, breaking the things up again is the height of fashion, and the latest to decide that the whole may be less than the sum of the parts is Wilton, Connecticut-based Dun & Bradstreet Corp. The company, owner of Dun & Bradstreet Software and the A C Nielsen television ratings and Dataquest market research services, has decided to split the 155-year-old business in three. But it seems that the software arm is on the block and won't figure in the three companies. Dun & Bradstreet will continue to exist and will be the name for the company that will provide the business information for which it has been known for a century and a half. Dun & Bradstreet Corp will consist of Dun & Bradstreet Information Services, the world's largest source of business-to-business marketing and commercial-credit information; Moody's Investors Service; and the Reuben H Donnelley provider of Yellow Pages marketing and publishing. It will have 1995 sales of \$2,000m, 16,000 employees and operations in 40 countries. A second company, Cognizant Corp, will offer advice and information to the health-care and technology industries. It will include Nielsen Media Research, Gartner Group Inc and Dataquest Inc. A third company, reverting to the A C Nielsen name, will be created to provide marketing data to companies that produce consumer packaged goods. The ramifications of the split will result in a fourth-quarter charge that will reduce the company's profits by \$448m pre-tax. Job cuts should amount to less than 2% of the 50,000 employees. US bank Morgan Stanley, which is working on the divestiture of Dun & Bradstreet Software (and has a list of potential suitors which it wouldn't reveal), admits it's "not the easiest of sales."

NOVELL EXECS FORM WEB COMPANY

Former Novell Inc executives Toby Corey (previously VP NetWare product marketing) and Joe Firmage (VP of NetWare strategic planning), have formed an Internet applications development company to build middleware tools and content related applications for the World Wide Web. Firmage is president of the new US Web Corp, based in Mountain View, California. Corey is executive VP marketing and Jim Heffernan is on board from Software Publishing Corp as CFO. The company's hopes to partner with technology suppliers, according to Corey, and will unveil a business strategy plus its Web-based technology in the next 60 days. Corey and Firmage have been working on the promised Web technology since last summer, while they were still at Novell. Both left Novell only in the last month. The company's now looking for third party technology to license, and is also talking acquisitions. Corey declined to comment on the size of the firm's bankroll, or who it intends to approach or what technology it is seeking. Corey also declined to specify exactly what type of application US Web will be selling, licensing or acquiring. It'll appoint a CTO and executive VP sales and marketing in the next couple of weeks. The venture is privately-financed, Corey said it's been talking to underwriters about going public within 12 to 18 months.

SUN CREATES JAVASOFT

Sun Microsystems Inc, Mountain View, California, has formally debuted its JavaSoft business unit which will handle all product development, support, marketing and sales of product lines based on the Java development language and the HotJava Web browser. JavaSoft will market and sell products worldwide both independently and through Sun's existing business units. It will develop products based on its own internally-developed technology and license third-party software to build applications, tools, systems platforms and services that augment Java. Alan Baratz, formerly president and CEO of Delphi Internet Services Corp, the on-line business unit of Rupert Murdoch's News Corp, and before that IBM director of strategic development, heads the unit. He told us that JavaSoft will initially focus on development tools, class libraries and applications. It will also work to extend the functionality of operating systems and microprocessors, he said. Later, JavaSoft will develop corporate Intranet products based on Java, for document sharing, spreadsheets, systems management and application maintenance. Baratz doesn't have a business plan yet.

INTEL DOESN'T SEE \$\$\$ IN INTERACTIVE VIDEO

Intel Corp says the decision not to go ahead with an integrated video server solution incorporating its Scalable Parallel Processing (SPP) server, Sequent Computer Systems Inc's Dynix/ptx Unix kernels and Oracle Corp Video Server - or the mooted spin-out that would have marketed the technology - was a "painful but simple" financial judgment (UX No 566). There's no plan to restart the project in the foreseeable future and the arrangement under which Sequent was to have OEMed the resulting solution is now defunct (UX No 534). Intel says the current crop of broadband interactive/multimedia trials couldn't have generated enough revenue to make the investment worthwhile and it cannot yet envisage when a real market for the stuff will develop. Intel claims to have a handful of companies OEMing SPP, though only Unisys Corp, which markets the systems as part of its Opus MPP/data warehouse solution has been publicly disclosed.

AMDAHL REORGANISES, ADDS CTO

After five years without a chief technical officer, Amdahl Corp has finally promoted former VP and general manager the compatible processor products division, David Anderson, "to better coordinate between lines of business." He's got two new unspecified projects on the go. Research and development has been run by the lines of business for the last few years. The Sunnyvale, California-based mainframe company made other organisational changes last week, forming an Operating Council to integrate daily operational activities across the various lines of business. Bruce Ryan, formerly senior VP and chief financial officer, will head the Council, and retain his financial duties. Amdahl has also tossed its mainframe and data storage product businesses into the newly-formed Enterprise Computing Group. It'll also handle compatible processor products, systems support, operational services, worldwide field sales serving large enterprise customers, and a new group that will direct sales through distributors and other alternative channels. Amdahl has promoted David Wright, formerly VP of field operations, to executive VP in charge of the group. Michael Poehner, formerly VP and general manager of the business solutions group, will serve as president and chief operating officer of DMR Group, the Canadian systems integrator and consultancy Amdahl acquired last November (UX 556). The Open Enterprise Systems Group markets Unix servers and systems management software; the Antares Alliance Group develops and markets software for applications development.

MERCURY ADDS WEBTEST MODULES

Mercury Interactive Corp, Sunnyvale, California, this week unveils a new set of technologies for testing world wide web-based application code called WebTest for use in conjunction with its existing client/server testing products. Mercury claims it's first to market with such a Web site product. Developers first create test scripts using Mercury's WinRunner or XRunner - Windows and X Windows - testing products. The scripts are created by recording user interactions with the browser and inserting verification points. Every time the site is recompiled, XRunner or WinRunner run the tests to detect functionality errors such as missing links or content. The developer can use LoadRunner to simulate HTML hits against the server and assess performance that a typical user might experience. The LoadRunner element includes a virtual Web user program to simulate loads and response times and produce graphs and reports. WebTest extensions will cost \$200 for WinRunner, \$500 for XRunner and \$1,000 for LoadRunner. WebTest is aimed at corporate and enterprise client/server web solutions and currently works with Netscape browsers. The company promises a separate testing tool for web-only developers within the year, plus Java language and browser editions. Mercury claims a 40.6% share of the GUI and client/server testing tool market based upon IDC's October 1995 numbers, which has AutoTester at 13.3%; the recently-quoted SQA at 12.2%, Segue 11.6%, Softbridge 8.2% and others at 14.1%. The figures don't make any mention of Mercury's long-time testing rival Pure Software Inc, the publicly-traded company with a similar run-rate to Mercury whose October 1995 Performix Software acquisition is currently suing Mercury for alleged copyright infringement, fraud, conversion, unfair competition, breach of contract and unjust enrichment. Although Mercury had expected a settlement by the end of last year, as of last week the litigation was still ongoing. Mercury claims \$90m in the bank; analysts expect it to turn in numbers of around \$38m for its year ended December 31st when it reports mid-February. Mercury, which started life on the back of an Israeli government grant has 150 developers in Israel and around 150 staff across the US including a small development team.

IDC INTERNET REPORT: FROM WEB SITE '95 TO GHOST SITE '96?

By Ray Hegarty

1995's internet "intoxication" will lead to something of a hangover as the ~~much-hyped customer base fails to materialise quite as anticipated~~, according to IDC senior VP research Frank Gens. He predicts that 20% of Website-owning Fortune 500 companies, discouraged by a lack of return on investment, will abandon their addresses, creating "ghost sites" on the Web. On-line numbers will continue to grow but there will be a high turnover as newbie Net surfers are "underwhelmed" by content quality and cancel their on-line subscription services. An unstable customer base and stretched Internet resources will impact the potential profits of suppliers such as Netscape Communication Corp, the report suggests. IDC reckons Internet access prices could drop as low as \$15 a month this year, and that on-line companies will derive most of their profits from providing on-ramp services. Without naming names, Gens predicts two of the big four on-line companies, America Online, Prodigy, Compuserve and Microsoft Network, will struggle to stay alive this year. He expects strategic investments to be paramount as seeds of new leadership positions are sown in advance of a shakeout of players. There'll be a certain amount of "revenge of the (Unix) nerds" effect as technologies such as Java and Netscape leap to prominence even on Microsoft Corp platforms and Unix servers drive Intranet development.

SECOND GENERATION DEVELOPMENT SHIFTS SERVER REQUIREMENTS

The new breed of so-called second generation application developer wannabes, including Forte Software Inc, Dynasty Technologies, Unify, Uniface, Neuron Data, are beginning to drive changes in the deployment of client/server architectures, says a new report from Newton, Massachusetts-based Business Research Group (BRG) called "Client/Server Database Servers." BRG's survey of 311 client/server database implementations explores the changes taking place in the client/server marketplace and their impact on server and database server procurement requirements. It claims two of the most significant infrastructure changes that'll flow from the take-up of second generation application development technologies will be the shift from servers performing multiple functions to be used as dedicated resources.

Key

The report says up to 38% of respondents were already implementing second generation client/server designs - including production applications, on-line transaction processing and distributed computing - while 33% were accessing databases for transactions in addition to query traffic that made up most of the early client/server database use. Key technical issues driving the move to second generation development include the reduction of process loads on database servers to aid performance; the isolation of management functions; the increasing separation of business rules from data; the reduction of database licensing costs by consolidating processes onto an applications server, (thereby reducing the number of clients) and the creation of distributed applications and databases. It says 63% of companies are using dedicated servers for client/server databases.

Horizon

Not surprisingly the report finds RISC platforms dominate: 21% of its respondents are using RS/6000s. Sun, HP and DEC boxes each accounted for 15%. Other Unix servers accounted for 4% and PC servers 24%. However there are a few black clouds on the horizon for the RISC vendors, the report concludes, with 80% of respondents believing the less-expensive Intel systems now have the robustness and functionality to run mission critical databases. RISC servers still win on recoverability, upgradability and scalability, the report says. At 47% of respondents using it, the report finds Unix the most popular operating system for client/server databases; only half that number are using NetWare or NT. In part that's because the database vendors have Unix versions of their software before other ports. According to the study NT is making inroads into the database market, with 26% of respondents admitting to significant NT plans and another 34% expecting to use it for departmental or development purposes. Much of this interest is attributed to cost, ease of implementation and product bundling, the report suggests. Users are also most likely to use the same operating system for databases and custom applications. The number one requirement for client/server database environments is security, BRG believes. The report costs \$1,000 and is available from BRG: +1 617 630 3900.

ENCORE USES 275MHz ALPHA RISC IN BOARD COMPUTER

Fort Lauderdale, Florida-based Encore Computer Corp claims to have the world's fastest single board computer system, using the 275MHz Alpha AXP RISC processor, and claims \$4m of orders for it. The new Alpha systems are available in both deskside and rack-mounted configurations, and are aimed at applications ranging from advanced weapons programmes to flight simulation. The Alpha AXP VME offers 2Mb cache and an 80960 co-processor to provide input-output and interrupt capabilities independent of CPU operation. Real-time clocks, directly connected interrupts, VME input-output device capability, Ethernet, four asynchronous ports and an SCSI-2 bus interface are included. The machines run Digital Equipment Corp's Digital Unix; prices go from \$100,000 to \$400,000.

CADIS OFFERS PARTS MANAGEMENT, READIES JAVA-BASED PUBLISHING

Privately-owned Boulder, Colorado-based Cadis Inc is offering a Cadis-PMX (Parts Management Expert) database and classification system for tracking the design, development, manufacture and management of parts. The system is designed around a part's attributes rather than part numbers. The system captures a customer's MRP or CAD part files into its classification system. Cadis has fifty-five employees, opened its first European office in London in October and claims 20 Fortune 500 customers including Tektronix Inc, General Electric Company, 3M Corp, Lexmark Inc and Ingersoll-Rand. Prices start at \$120,000 and it's up on Sun, HP, IBM, X11/Motif clients and Windows and most Unix server platforms. Cadis Inc is developing Cadis Krakatoa, a Web publishing and access control software written in Java, which will ship at the end of March. It says its already got National Semiconductor Corp signed for the thing.

FORGET CENTRALISED MANAGEMENT SYSTEMS, SAYS FORRESTER

Centralised management of distributed systems is doomed to fail, according to a report, "Managing Client/Server" out of Cambridge, Massachusetts-based Forrester Research Inc. The company says 86% of the 50 Fortune 1000 IT directors it spoke to believed they were fire-fighting the management of their client/server systems and suffering from a lack of executive support, skilled people, money and tools. Forrester found that business technology is concentrated on network management, with seventy-two per cent of those canvassed using network management tools and only twenty per cent having added systems and/or desktop management. Few are prepared to integrate the pieces, it found. Of those using network management tools 42% were using Hewlett-Packard Co OpenView, 26% IBM Corp NetView, 6% Sun Microsystems Inc SunNet Manager and 4% Cabletron Systems Inc Spectrum. The rest account for 12%.

Sphere management

The solution for managing client/server environment, says author, Waverly Deutsch, senior analyst with Forrester's Computing Strategy Service, does not lie with centralised management at all, but in a shift from network-dominated technology and centralised business practices to "sphere management" - which it explains as management by organisation or function - a strategy requiring the collection of and response to alerts across networks, servers, databases and applications. Management platforms should manage multiple technologies, with spheres or business functions controlling customised configurations and correlation agents to integrate management messages from multiple technologies. Deutsch applauds Computer Associates International Inc's AgentWorks framework and Tivoli Systems Inc's TME although it's sceptical of Tivoli's dismissal of Single Network Management in favour of its own proprietary protocol.

1994 SPANISH UNIX HARDWARE WORTH \$320m

According to data published by the Spanish consultant CB Consulting Mercado SA, revenue from 1994 sales of Unix hardware in Spain topped \$320m: 37,000 units were sold, a figure that also included mid-range and low-end equipment, personal computers and workstations. IBM Corp once again emerged as the leader of this market, with a share of more than 20% and sales of 7,856 units, closely followed by Hewlett-Packard Co with an 18% market share and 6,936 units. The rosy health of the Unix market was also underlined by consultant International Data Corp's predictions for the Southern European market, namely that the Unix hardware market would grow at an annual average of 11% to the year 2000, with sales of software increasing at a rate of 14% each year.

INTERNET USE AND OPPORTUNITIES WILL BALLOON, SAYS MORGAN STANLEY

By Nancy Stair

Spectacular growth in Internet usage means net-based companies, strategies ~~and the very structure of the Internet market are all up for grabs, according~~ to Morgan Stanley's US Investment Research Group report. The company divides Internet opportunities into enterprise and consumer markets. The enterprise market is dominated by information services designed for Intranet and external access, while the consumer market will remain dominated by online services. As the Internet evolves, the market and related opportunities for equipment and infrastructure providers will balloon, Morgan Stanley says.

Crucial

Although demand for Internet software and application is expected to explode, enterprise application vendors will have to decide how aggressively to re-architect applications to run on the Web, and whether to bet on largely untried and untested technologies such as Sun Microsystems Inc's Java programming language or wait for the likes of Microsoft Corp Internet Explorer. Early decisions will be crucial, the investment house believes. Companies which tie logic to the interface will have more trouble separating interface code from application logic and database management. Execution will be key, as will getting fully functional products to market, Morgan Stanley says. Systems management vendors will have enlarged opportunities, since greater complexity and distributed processing will give them more things to monitor, manage, schedule, connect and restore. Growth of Web-based electronic commerce and transactions will drive long-term database revenue growth. However, Morgan Stanley says, database and application vendors alike will have to move away from user-based pricing and adopt new pricing models.

Outpace

New generations of Internet software development will include interactive and easy to use applications that will enable desktop users to perform more advanced information-gathering tasks on their machines. VRML, Hot Java, utility agents such as those from FTP Software and communications applications such as Internet phone, real-time audio and video playback, MIME-enhanced mailers, secure mailers and notary mail will be hot items, the report says. Although currently dominated by HTML HyperText Markup Language-based tools, as the Web evolves from a text-only format to a more dynamic interactive environment, users will need new development tools. The report expects HTML to reign supreme among home and most desktop computer users, tools such as LiveWire for Netscape and Java for power users, RainMan for America Online users, and Macromedia Shockwave and Adobe Acrobat for publishers. Although it expects this market to gradually consolidate after a period of rapid and unstructured growth, it expects development tool technology to always outpace increase in bandwidth availability.

Ten second barrier

The Internet's distributed architecture requires less administration than a centrally-architected system, and system-wide administration issues will likely take a while to reconcile. Next-generation applications will require more data bandwidth, and consumers will be encouraged to buy new applications if more, and affordable, bandwidth becomes available. Conversely, an increase in bandwidth will boost demand for Internet connectivity. Transmission of graphics files is driving the demand for bandwidth. Morgan estimates that a typical user's bandwidth usage has grown between 16 and 55 times over the past three years. As more 3D, audio, video, and telephone applications for the Internet are launched, bandwidth requirements of these technologies will far exceed that available today. A reasonable benchmark for the Internet to be perceived as useful and efficient will require retrieval times of 10 seconds or faster for Web pages and interactive applications, the report believes. It believes the 14.4 kbps modem must be near extinction, with the 28.8 kbps modem likely to follow in one to two years, as it will be insufficient to download real-time sound and 3D graphics.

Lag

The report believes consumers will begin connecting to the Internet "in earnest" this year and next, and that the rate of growth in US Internet connections will rise 100% annually until the end of the millennium. Connecting users outside the US will continue to lag as applications require translation to international languages and connectivity charges remain high. However once overseas corporate connections accelerate, the overall growth rate of international connections will surpass the US connection rate by the late 1990s, Morgan Stanley believes. International connections will then accelerate as

overseas users find fewer technological hurdles to jump than did early US users. Morgan Stanley estimates there are presently 35m email users worldwide, and 10m users of the World Wide Web, 75% of them in the US. The report predicts there will be 200m email users worldwide by 2000, with 170m having Web access. It suggests there will be 178m PC users by the end of 1996 up from 150m now, 201m in 1997 and 252m by 2000. The main factor affecting these users uptake of Web connections will be the availability of cheap bandwidth.

RED BRICK LANDS RED HERRING

Data warehouse Red Brick Systems Inc has filed for an initial public offering. Its red herring says the company's looking to get 1.8m shares away at between \$8 to \$10 per share, which would net it around \$14.3m. The company's principal stockholders, present directors and executive officers will retain control of 72% of the company's stock, book value for which on September 30 1995 was \$3.53m. Although it has not had a profitable year out of the last five, Red Brick managed to paint its way out of the red by the third quarter of 1994 when business began to take off, showing a profit of \$14,000 on revenue of \$1.38m. It's had four consecutive quarters in the black since. It showed a loss of \$1.49m on \$4.79m turnover for the first three quarters of 1994 to the end of September 1994, and a loss of \$1.48m on revenue of \$8.50m for the year as a whole. The company showed a profit of \$180m on turnover of \$14.35m for the first three quarters of 1995. At that time its accumulated debt stood at \$12.5m. Most of its revenue is derived from Red Brick Warehouse licenses; research and development spending was \$1.6m, \$2.2m and \$2.8m - or 92.4%, 84.2% and 33.5% - as a percentage of total revenues in 1992, 1993 and 1994 respectively. There were no international sales in 1992 or 1993; less than 10% of sales (attributable to one customer, HP) were made overseas in 1994. The 10% of sales made internationally to the end of September 1995 were to nine customers.

Plans

Red Brick plans to establish additional foreign operations (it has one person at a UK sales operation), hire personnel (it has 296 employees) and recruit resellers and VARs to drive its international business up. Red Brick is still dependent on a small number of resellers and customers; 1992 sales to Sequent accounted for 59% of sales. Sales to NCR and HP accounted for 36% and 19.5% of revenue in 1993. 1994 sales to DEC and "efficient market services inc" - a Chicago-based point-of-sale data consolidation company that insists on spelling its name in lower case - accounted for 12% and 11% of revenue. Sales to Unisys up to the end of September 1995 accounted for 26% of revenue, AT&T GIS (NCR) 12% and Efficient Market Services a further 12%; 60% in total. The company expects the Unisys arrangement to account for a high percentage of revenue for the foreseeable future. Unisys' decision support group decided to make Red Brick the key data mining technology offering for its U6000 Unix servers and is currently porting the software to its Intel Corp SPP-based Opus MPP system. Red Brick says it will also expand its reseller channel. The company lists its chief competitors as Oracle, Informix, Sybase, IBM and AT&T GIS now, and fully expects other entrants to join this number. Its warehouse products are priced from \$11,000 to \$625,000; connectivity software from \$100 to \$70,000 and administration tools from \$4,000 to \$80,000. It offers Sybase Inc's Open Client gateway as a front-end to additional third party development tools, as well as an ODBC option. A Warehouse for the Web Toolkit is close to announcement which will include tools to access warehouse information from Web browsers. Morgan Stanley & Co Inc and Hambrecht & Quist will underwrite the offering. The 1986 Los Gatos, California-based start-up was reincorporated in Delaware on December 7. Chris Erickson is chairman, president and CEO; Phillip Fernandez is VP engineering. Red Brick has replaced former VP marketing AJ Brown with a former Avistar Systems Ltd VP Chris Grejtak, one-time president of IBM Corp's Metaphor Inc. The placing is expected to be complete by the 22nd.

IMI PLC LETS RUMP OF IMI COMPUTING GO FOR £4.6M IN A MANAGEMENT BUYOUT

Uniplex Ltd - or Redwood - and Brook Street Computers are gone, and now Midlands engineer IMI Plc is getting rid of the rump of IMI Computing Ltd in a management buyout. The unit has been sold for £4.65m cash, and TSB Plc's Lloyds Development Capital is taking a minority stake. The Birmingham-based software and systems integrator, which is changing its name to Icom Solutions Ltd, had net assets of £2.5m and made pre-tax profit of £700,000 in the year to December 31. It claims to be a leader in the provision of office, image and workflow implementations to the insurance and financial services sector, and says that it is in the throes of a recruitment drive to meet a strong order book.

ACORN CONFIRMS THAT ORACLE HAS TAPPED IT FOR INTERNET ACCESS BOX

It has been like drawing teeth getting Acorn Computer Group Plc or Oracle Corp to go beyond statements on network terminal computers but Oracle apparently told Dow Jones & Co that it is putting the finishing design touches to its first Internet terminal, which it expects to begin shipping in March. It implied that the thing was nothing to do with the Acorn deal, despite the fact that it uses the ARM 7500 RISC. The cost of manufacturing the thing will be under \$200, it estimates, including \$100 for 4Mb of memory and about \$30 for an ARM 7500 RISC microprocessor; the rest of the cost covers a keyboard, mouse and network interface. The device will be about 8" on each side and 2" high, and will attach to a television set or a monitor. Acorn Computer Group Plc shares jumped 32 pence to 245p in London last Wednesday on the day the company announced that it will indeed supply the basic design for Oracle Corp's proposed low-cost Internet access device. Acorn and Oracle both refused to comment on the marketing details of the planned computer, but it is expected to cost no more than \$500. Acorn, 58%-held by Ing C Olivetti & Co SpA, said it would be developing a reference design for "intelligent devices which are connected to networks at low cost," and acknowledged that it was "certainly the intention" that such machines would be able to link up to services such as the World Wide Web. It is not clear whether the operating environment will be Acorn's own, the Newton operating system Oracle had been looking at licensing from Apple Computer Inc - Oracle indicated that Acorn was not the only company involved in the effort, or what. Acorn confirmed that the reference design will use open standards such as Sun Microsystems Inc's Java Web language, and HyperText Mark-up Language.

COMPUTRON'S CLIENT-SERVER APPLICATIONS WORK AS WEB SERVER

Rutherford, New Jersey-based Computron Software Inc says it has successfully demonstrated and implemented its client-server financial and workflow applications as a World Wide Web server. Users were able to access a fully functional version of the latest release of the applications via a Netscape browser running on a personal computer. When implemented in a production environment, customers can access their Computron applications across the Web using standard HyperText Mark-up Language Internet browsers. The application will be available sometime this half. Computron Software claims its Internet implementations can dramatically improve information flow because software deployment and administration for remote users will require only an Internet browser, such as Netscape, to access the system. Remote users are able to access the system with or without Computron modules on their personal computers.

NEW IBM PC BOSS CREATES TWO NEW POSITIONS, PROMOTES OTHERS

According to *PC Week*, IBM Personal Computer Co's Robert Stephenson has made the first structural changes to since taking over last autumn, creating two new positions and shifting other executives to new posts within the division. The aim is to enable the company to respond more quickly to global fluctuations in the market and to forecast sales more accurately, it says. Bill Amelio, former vice-president of manufacturing engineering, becomes vice-president of re-engineering. David Hoyte becomes vice-president of cost management; both are new posts. Joe Formichelli, former general manager of mobile products, succeeds Hoyte as general manager of manufacturing, distribution, and procurement; Formichelli is succeeded by Steve Ward, former director of information technology.

ADOBE TO SPIN OFF ITS PREPRESS APPLICATIONS AS LUMINOUS

Adobe Systems Inc has been buying assiduously, but now it's time to get rid of something. It is creating, and plans to spin off, a new Seattle-based company, Luminous Corp, which will continue to develop, market and distribute Adobe prepress applications, but will retain an equity stake. It maintains ownership of some core technologies for Adobe prepress products, the company said; it has designated Luminous as the exclusive distributor of version 1.0 of the Adobe Virtual Network product. Financial terms of the agreement were not disclosed.

OBJECT-ORIENTED TECHNOLOGY BECOMES FASHIONABLE IN JAPAN

Recently a number of fora have been held in Tokyo at which the use of object-oriented technology in Japan was discussed. At a forum for journalists sponsored by Novell Inc and other Unix vendors, Tadashi Hirose, development manager in the Strategic Product Planning Department of the Information Systems Group in Hitachi Ltd, gave his assessment of where the object market was in Japan. The conditions for a viable object-oriented products market are gradually being fulfilled in Japan: there are class libraries becoming available; tools for using them are coming out; a viable market in objects is developing - the best example being in financial markets, although so far there are no Japanese companies offering a set of business objects for sale; and the interoperability aspects of the market will come together in the 1997 timeframe, he said. He refused to be drawn on what percentage of development work within Hitachi and for Hitachi customers used object technology, but he did say that use of object-oriented technology has reduced costs of software production and maintenance. Hitachi has its own suite of object-oriented products: the SEWB3 object-oriented analysis and design product; APPGallery, a visual application programming development environment, the ObjectIQ application development environment, the ObjectReuser object re-use support tool and object-oriented Object Cobol.

SPP INTERNATIONAL SPORTS GAMBLING ON JAPAN VIA THE INTERNET

Japan's penchant for gambling may successfully side-step national laws via the Internet - and deny the local Yakusa gangster fraternity a significant source of income. British bookmaker SSP International Sports Betting Ltd is to offer odds on the Internet to Japanese punters who, despite being keen on the odd flutter, are prohibited by anti-gambling laws from participating domestically. Japanese bets must presently be made by telephoning bookmakers elsewhere in the world. The potential for gambling on the Internet is vast, says Eamonn Wilmott, managing director for London-based Online Magic Ltd, which is developing a betting site for an unnamed client. The US industry alone is worth \$40,000m, most of which is illegal and run from off-shore dens. "Find a way to bet on the Net," he declares, "and you've got a goldmine." But Wilmott is uncertain whether Internet security is strong enough yet in an area where a disappointed punter will go to any lengths to prove he did not place the bet in the first place. "If someone hacks into your account, responsibility is a great grey area." But SSP's Japanese business development manager, Eric Sedensky, claims an in-house team developing its own firewall and security technology to run the system, which is to launch in March. SSP's telephone service already offers odds on international sporting events in 15 languages to 400,000 punters worldwide. The figure includes 4,000 in Japan who at present have to call London to place bets. SSP managing director Derek Greene expects the number of Japanese customers to rise to 12,000 within six months of the company's Internet debut this spring. Punters will be able to bet for the cost of a local Internet call on anything from soccer to sumo wrestling through the company's World Wide Web site, giving punters a legal route around the curbs. Resistance to the system will come from a mixed bag of opponents. In addition to the gambling industry, which will have to get its head around the technology, it has been pointed out that placing bets on the Internet will loosen the hold on Japan's illegal multi-million dollar gambling industry that is currently in the hands of the country's organised crime syndicates, the Yakuza. Two years ago another UK bookmaker that opened an office in Tokyo to relay bets to be placed in London was closed for violating laws that prohibit betting services within the private sector. SSP said it will face no such problem as all its operations are in London.

ASCII AND EDA TO BUILD ON-LINE COMPUTER PRODUCT MALL

Bethesda, Maryland-based ASCII Group Inc (nothing to do with ASCII Corp of Japan) a buying group for 1,075 independent computer dealers, has teamed with Plano, Texas-based Electronic Data Systems Corp to create an on-line distribution network and marketplace for computer products. The companies hope that within the first year the Web site will attract 10,000 resellers, distributors and manufactures to post their products for sale. ASCII will charge a small fee for posting. EDS is developing the site and security firewall for credit card ordering, and ASCII will organise sales and marketing, and sign on vendors. The site will target corporate and independent end-users, who will be able to order products and services from local dealers. The site will be rolled out in stages, beginning in two to three months.

TAKE FIVE BUILDS PARSER FOR JAVA, OFFERS NEW SNIFF+

TakeFive Software GmbH, Salzburg, Austria, is offering a new release 2.2 of its Sniff+ C and C++ development environment, and has built a parser for the Java programming language. The company already has parsers for C and C++, and is developing additions for Eiffel, Fortran and IDL for Corba 2. Free upgrades will be available for existing Sniff+ customers and will include a new parser API so that developers can integrate their own proprietary languages, and can serve more than one parser at a time. It includes a symbol table API, which enables developers to build custom applications by using the underlying symbol information stored in the table. It also has enhancements to browsing, documentation online, and a documentation editor that automatically generates documentation in HTML. TakeFive says users can mix and match development platforms, compiler, debugger and existing tools. Sniff+ 2.2 runs on SGI, Novell, SCO, Sun, IBM, DEC and HP Unix, and with the new release will be ported to Linux. These products will be available by the end of the first quarter. Prices are not yet available.

NCUBE NEAR TO NEW MEDIA SERVER OFFERINGS

Supercomputer company and multimedia wannabe nCube Corp, Foster City, California, has appointed Alan Beauchamp to chief financial officer and VP of finance and administration. He will oversee three departments: finance and accounting, contracts and legal, and facilities. Beauchamp was formerly corporate controller and treasurer at Case tools company Summit Design Inc, Beaverton, Oregon. He replaces Lee Kelly, who left in December 1994. nCube needs a CFO as it expects to be operating profitably, and may go public, albeit at an undetermined time. The company is instituting a new financial structure, and will return its focus to sales, as it has spent the last year or so doing product development. nCube has been working toward positioning itself entirely as a media and video server provider, moving away from its past as a supercomputer company. "Dramatic" changes are promised in the coming weeks as nCube rolls out a bevy of new products.

NCR TO BECOME NCR AGAIN

AT&T Corp has decided that the best new name for the old NCR Corp is - NCR Corp, a decision that means the surviving employees will be able to look back on their time as staff of AT&T Global Information Solutions as a bad dream. They have a long wait though - it seems it will take a full year for the spin-off to be effected. "The name NCR re-establishes in the marketplace the value, accomplishments and customer loyalty of our 112-year history," said Lars Nyberg, the unit's chief executive. The name change will take effect immediately, with a new logo to be incorporated into products gradually throughout the year. NCR lost \$412m at the operating level in the first nine months of 1995. In its present form, NCR is a \$7,000m a year business, with what AT&T styles market leadership in medium-size Unix-based computer systems, point of sale systems and massively parallel processors. It will continue to have access to Bell Laboratories research.

APPLICATION OBJECTS: SYBASE WINS VISUAL COMPONENTS

Sybase Inc has not by any means finished buying companies to enhance the value of its controversial Powersoft Corp acquisition, and the latest is Visual Components Inc, Lenexa, Kansas, one of the new breed of companies pioneering application objects that can be assembled into more complex applications. Sybase will pay new shares worth about \$28m. The exact number of shares to be paid will depend on the price at closing, which is expected to be by the end of February. Visual Components develops re-usable software components such as spreadsheets, charting tools and spell-checking modules for inclusion in larger software development tool systems, such as Sybase's PowerBuilder line. It will become a wholly-owned unit of Sybase, operating within the newly created Powersoft components unit. Sybase promises that the new unit will operate as an independent company and continue licensing its products for use in rival products such as Borland International Inc's Delphi and Microsoft Corp's Visual Basic.

FIRECREST PREPARES TWO INTERNET TELEPHONES

The \$200 to \$300 Internet Telephone is close to becoming reality. Entering the Internet access arena in a big way, London W-based marketing and promotions group Firecrest Plc is about to launch a prototype of its Internet Transphone, and Transphone 2 is on the way. The handsets are being developed in conjunction with Dionne Developments Ltd. Transphone is a telephone handset complete with magnetic and Smart Card facility which, coupled with software such as Camelot Corp's Digiphone, for which Firecrest has exclusive UK marketing rights, will enable users to make free or inexpensive phone calls worldwide to other subscribers over the Internet. The size of a slim mobile phone, it fits on the side of a personal computer monitor, enabling not just telephone calls but also all manner of home shopping and banking. Transphone 2, (both worldwide patents applied for) is a stand-alone telephone about the size of an office handset, which will have a small screen, alpha-numeric keypad and built-in modem, enabling Internet access, facsimile, and electronic mail in addition to the card facility. It plugs in to an ordinary telephone line, can be hooked up to a printer, and used as an ordinary phone as well. The company is looking to license worldwide distributors. At a target price of under £200, it looks as if the Transphone 2 could be a serious contender in the low-cost Internet access device race.

FUJITSU DECIDES TO DO PARALLEL PROCESSING RESEARCH IN THE UK

Japanese companies are steadily expanding the amount of research and development they do in the UK, and Fujitsu Ltd is to form a wholly-owned subsidiary, the Fujitsu Europe Centre for Information Technology. The new unit will be capitalised at \$3m and will start operations in late March with a staff of 20. The new company will focus mainly on parallel computing developments and support for Fujitsu's parallel computing-related businesses in Europe. Fujitsu sells its VPP vector-parallel machines in Europe and is allied with its affiliate ICL Plc on the Sparc-based parallel Goldrush Unix box.

INTEL, AMD BURY HATCHET

In an earnest move that suggests Intel Corp really has abandoned the litigious bludgeon in favour of even fiercer competition in the market, the company has signed a new patent cross-licence agreement with the company it previously pursued most fiercely through the courts, one-time partner Advanced Micro Devices Inc. The deal gives Intel and Advanced Micro rights to use each others' patents and some copyrights, but specifically excludes microprocessor microcode copyrights, which means that Advanced Micro must continue to clone Intel parts in a quarantined reverse engineering lab. The cross-licence is royalty-bearing for products that use some technologies although specific financial terms were not disclosed. Advanced Micro, a one-time iAPX-86 second source until Intel struck it off and sued it for failing to deliver original support chips, finally settled the litigation a year ago in an out-of-court deal. Under the settlement it paid Intel \$58m damages and Intel in turn agreed to pay the Sunnyvale, California-based chipmaker about \$18m for breach of contract.

CINCINNATI BELL'S SOFTWARE ARM TO BUY BILLING SOFTWARE VENTURE

Cincinnati Bell Inc's Information Systems unit has agreed to buy Information Systems Development Partnership, a provider of billing and customer management systems to the cable television industry. The former claimed itself to be the leading provider of customer care and billing systems to cellular and other wireless communications companies. Information Systems Development is a privately-held partnership of Cox Communications Inc, Comcast Corp and Information Systems Development's senior management. It serves nearly 7m homes and is the third largest cable billing firm in the US. The parties have signed a definitive purchase agreement and expect to complete the transaction near the end of this year; No details of the value and terms of the deal as yet. Cincinnati Bell recently began beta testing a Unix-based client-server customer care and billing system known as Precedent 2000. Information Systems Development's newest system, CableMaster 2000, is based on relational database technology, enabling cable company employees in different locations to see and retrieve the same information. Cincinnati Bell Information Systems will market it worldwide and will support current clients.

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Embarrassing - Intel Corp has found a bug in the beta compiler used in finding results for the old version of the SPEC benchmark, SPECint92, which is being phased out in favour of SPECint95, and as a result overstated results for some processors by about 10%: the beta compiler skewed performance results for 100MHz and higher Pentium processors reported from September 1 on, and for the new Pentium Pro chips.

Capitalising on the growing mountains of old computer equipment, Digital Equipment Corp is turning techno-trash into treasure through a recovery programme, and already has a \$15m to \$40m business in salvaging and recycling parts and materials from old computers including cost savings from not carrying old inventory, *Reuter* reports. In 1995 there were already 26m personal computers ready for scrap worldwide, and that could reach 37m units by 1998. DEC said that for every three computers bought today, one is turned in for disposal and the ratio will rise to one for one in ten years. Old computers used to be dumped into the ocean or waste sites but the Federal Superfund programme started in the 1980s to try to curtail build-up of harmful waste made manufacturers more environmentally conscious. DEC keeps an audit trail of dismembered parts that can protect manufacturers from Superfund liability, since it decrees that a company whose products are dumped illegally can be held liable if the parts are traced back to them. DEC recycled 30m lbs in weight of computer-related equipment in fiscal 1995 to June and expects that figure to rise 10% to 20% annually until the year 2000.

Rumours round the Valley say OpenVision Inc, funded to the tune of \$70m-plus, is preparing to go public, to which founder Michael Fields would only reply, "No comment." He did say, however, that the start-up, which gobbled up a bunch of systems management firms then suffered severe indigestion, is now profitable and did around \$7.5m in the fourth calendar quarter. It's fiscal year ends in July. Business has changed substantially, he said, with distribution actually moving and people buying. He claims not to compete with Tivoli Systems Inc which he says is in a different space.

From the "Where Are They Now" department: Richard Bohdanowicz, once VP of marketing at Novell Inc's Unix Systems Group, has found a home at MathSoft Inc's newly created Data Analysis Products Division in Seattle.

The next version of Netware, due to be unveiled at Brainshare '96 in Nice this April, is apparently codenamed Green River.

We hear they've coined a new word in the Valley. Since there's little venture money involved and all the guys really need is beer, Valley-ites feel uncomfortable calling tiny one- and two-man efforts to write Java applets start-ups, so they've taken to calling them "sprout-ups."

Sun Microsystems Inc may be having its share of difficulties with a project called Sunfire. Anyway, SMCC is off trying to upgrade its 1000 and 2000 servers with UltraSparcs and may not make its target dates of March, some observers claim, because things aren't going as smooth as silk with the backplane bus. For the record, Sun says there's been no slippage in the intended schedule.

Sun Microsystems Computer Company has promoted Greg Papadopoulos to CTO of the hardware group.

Next Computer Inc, the non-computer company that's about to change its name to Next Software Inc, is shipping the promised Windows NT versions of its Portable Distributed Objects 3.5 object engine and ORB as Distributed OLE, plus version 1.1 of its Enterprise Object Framework for creating persistent objects from relational database elements. PDO 4.0, which provide will support for Corba 2 mechanisms, is due in the second half. An enhanced version of EOF, version 2.0, due in the third quarter is expected to relieve some of the requirement to hand-code objects from relational data types.

Data General Corp's Clariion RAID unit says it's now shipping 4,000-plus storage units a quarter. 70% of its third-party Open Clariion sales are to OEMs, the rest goes through distributors and private labeling concerns. 15% of its business is to DG AViiON customers. The unit says its low-end C150 offering is a tactical product and that the majority of installations are in the 80Gb to 400Gb range. In hand are new performance marks, Fibre Channel technologies, and techniques to support NUMA and other clustering mechanisms. Clariion sales amounted to \$170m in DG's 1995 fiscal year.

Open Software Foundation will announce its promised Common Desktop Environment (CDE) maintenance release in a couple of weeks. CDE 1.0.10 incorporates all of the bug fixes from the ten sponsors the code's been out with. Meantime, despite all of the interest in the ECMA-endorsed Application Programming Interface for Windows (APIW) specification, OSF's shelved any notion of doing one of its Pre-Structured Technology processes around it.

Meantime, as any kind of test suite for APIW is still eons away, an interesting notion being entertained by one of OSF's sponsor members is the possibility of creating a test suite environment which could embrace APIW, CDE, maybe Java and other stuff too. Possibly through a PST. Certainly something like the Sun Microsystems Inc/Japan Information technology Promotion Agency-derived Assertion Definition Language might be pressed into use. After all, the sponsor says, "test suites are the greatest inhibitor to open systems development."

Saratoga, California-based Willows Software, the folks with the ersatz Win32s operating environment (UX No 571), figure to have their APIW-based Twin technology for Unix out on the Internet in both source and binary form by January 31. Last week they set up the professional service program on which they are heavily depending for revenue and divided it into four tiers. Software developers will be offered aid in using Willows technology for \$250 for a basic subscription, \$1,000 for standard support and \$5,000 for premium support. It left the price of its startegic consulting service open to negotiation. It remains unclear what the differences are. It looks like everybody gets upgrades four times a year.

Sun Microsystems Computer Company has promoted Greg Papadopoulos to CTO of the hardware group.

Siemens Nixdorf Informationssysteme AG and subsidiary Pyramid Technology Corp have formed a service unit in the Pyramid Professional Services group called Smart Transitions. It will provide application re-hosting, porting and process re-engineering services to help companies convert legacy applications to Pyramid servers.

IBM Corp won 1,383 patents from the US Patent and Trademark Office in 1995, the most US patents won by any company for the third year running, Big Blue says. Canon KK had 1,088, Motorola 1,012, and NEC 1,005.

As part of its Unix acquisition agreement, the Santa Cruz Operation has put senior VP of Novell Inc's Corporate Development Group Duff Thompson on its board.

Morgan Stanley has a hunch that part of the reason for Silicon Graphics Inc's pre-announced revenue shortfall (UX No 571) is that it's been pre-selling R10000-based systems to compete with Sun and HP. Meantime with SGI and Tandem having played the pre-announcement shortfall card, the US investment bank's technology group suggests Auspex, Data General, DEC, Stratus, Unisys and Xerox are most likely to come in ahead of earnings expectations, with IBM and Sun close to consensus.

Sybase Inc's European marketing director, John Spiers, has jumped ship to join Oracle Corp as marketing director of server technologies for Europe, Middle East and Africa (EMEA). Almost the same job he held once before, we understand. Former Ross Systems president of international operations, Michael Hunt, joins as VP applications at Oracle EMEA.

Hewlett-Packard Co says its Windows-under-Unix solution, the HP 500 Windows Application Server, now supports enhanced mode Windows applications and will run Windows 95 applications from mid-year. HP 500 includes Locus Computing Merge running on an HP Vectra PC networked to a Unix workstation or X terminal. Offering 33MHz, 80486 performance currently, the combination will offer 50MHz 80486 (and SMP) application performance next quarter and 66MHz performance later in the year. HP 500 is priced at around \$300 per seat.

Object Management Group has signed New York consultancy Fusion Systems as a charter Domain Contributing member. Fusion can vote on vertical domain specific technology being considered in OMG's Technical Committee.

Ericsson AB is to use Dublin-based Iona Technologies Ltd Orbix as its object request broker. Ericsson Radio Systems AB's Cellular Systems-American Standards is using Orbix to develop a Cellular Management Operations System (CMOS) based on the Telecommunications Management Network (TMN) architecture. Other Orbix-based projects are expected.

Tatung Science & Technology Inc has two Ultra-Sparc-based workstations; the Compstation U series models U140 and U170, compatible with Sun's recently-introduced Ultra systems. The 143MHz U140 is priced at from \$15,450, the 167MHz U170 at from \$18,000, compared with Sun's \$16,500 Model 140 and \$23,000 Model 170. The Tatung units come with 32Mb RAM, 1Gb disk, TurboGX graphics and 20" colour screen. The U140 is available now, the U170 next month.

Hewlett-Packard Co says its next-generation 64-bit PA-8000 RISC will appear first in new models of K-Class and high performance graphics workstations and servers in the second quarter. The multi-threaded/Spec 1170-based HP-UX 10.x release is now set for the beginning of February.

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SUN READIES 64-WAY CLUSTERING USING DOLPHIN SCI

Following news that Sun Microsystems Inc is testing Dolphin Interconnect A/S Scalable Coherent Interface-based interconnect (SCI) for clustering its commercial servers (UX No 568), the Mountain View, California company now says it will deliver SCI-based products for clustering up to 64 Sparc-Server 1000E and SparcCentre 2000E systems together as database servers from July. Sun's existing SparcCluster 1000 and 2000 Parallel Database (PDB) option runs Oracle Parallel Server and Sybase Navigation Server across up to two 1000Es or 2000Es nodes. Jamie Enns, manager of high-performance computing product marketing, says SCI will allow Sun to scale up to 64 nodes in the short term, and up to 500 further down the road. Enns claims Sun has the products "ready to go" but is still sorting through its positioning and marketing issues. He expects it to play rather like IBM Corp's SP2 configurations. Sun has other potential clustering mechanisms in hand, including the S3.MP serial link (UX No 552) - though there is no clear route to market for that yet; there's also the Fibre Channel and ATM GlobalWorks parallel software Thinking Machines Corp has fitted to its Ultra Sparc servers. Enns expects Sun to "ride multiple horses" until a clear winner is apparent.

BULL TAKES PEGAKID TO UNIFORM

Hoping to dispel some of the mythology that already shrouds PowerPC 620, Compagnie des Machines Bull SA will put its four-way Pegakid board into people's hands at UniForum next month, although it won't be the system implementation running AIX that it's got back in Grenoble (UX No 571). Bull says it'll deliver uniprocessor 620 boxes by year-end with 620-based SMP Escala units now due in the first quarter of 1997. General production of eight-way 150MHz PowerPC 604e Escalas is set for next quarter. Escala (formerly Pegasus) is the PowerScale I architecture-, Micro Channel Architecture-based server line that IBM Corp OEMs in its RS/6000 series. Eight-way 601-based Escala servers are already available, as are the one-to-four way 604 minitowers plus the PowerCluster (Mississippi) technology for clustering up to four 601 SMP nodes. Whether IBM will make use of the PowerScale II architecture-based PCI/MCA Pegakid technology in its own products remains under discussion. Bull has high hopes of commoditising PegaKid against Intel Corp's four-way Standard high Volume (SHV) motherboards. At the low-end Bull says it's defined a roadmap with Motorola Inc for the entry-level, PCI bus, 604 Estrella servers which are built around the guts of Motorola's PowerStack architecture and currently run AIX. A 150MHz 604e entry-level system is due initially, followed by a two-way system in the second half, then 200MHz 604++ versions of both. By next quarter it says it'll be ready to detail a multiple operating system strategy for the line that'll add NT and Solaris-on-PowerPC. Following the release of its 1995 financial results next month, Bull will also detail an ambitious Internet and Intranet strategy around Escala and Estrella running Netscape Communication Corp products to capitalise on the Internet server wave now breaking across Europe. Bull, which says it shipped over 5,000 Escalas in the year (most with two or more CPUs), expects its fourth quarter open systems business to show a positive operating margin and creep into the black for the first time, though it'll show a loss for the year overall. It says it's experiencing impressive gains against the current leader in European Unix server shipments, Hewlett-Packard Co. Bull expects to report a 40% growth in its overall Unix business in 1995 and a 71% growth in European indirect sales. It's now dotting the i's and crossing the t's on a new US distribution strategy - its Zenith Data Systems unit is responsible for indirect business there - including deals with new resellers such as Milpitas, California-based high-performance file server company Maximum Strategy Inc. Robert Kelly's now running the Bull HN Information Systems subsidiary in the US following Axel Leblois' departure.

FASTEST MIPS CHIP MAKES ITS LONG-AWAITED DEBUT

Mips Technologies Inc first came out into the open about its high-end R10000 successor to the R4400 chip at the Microprocessor Forum back in October 1994 (UX No 509). The project, under the codename T5, had been under development even before Silicon Graphics bought Mips two years earlier. Then they hoped the first samples would emerge during the first half of 1995, with systems by year-end. In the event the first samples began in August, and a somewhat low-key launch last week focused in on things still to come rather than things here and now. For instance, an unanticipated, but still non-existent 275MHz version of the part due out later this year was the lead item: it will apparently perform at 12 SPECint95 and 24 SPECfp95. Back in the real world, performance of the 200MHz has been tweaked and tweaked so that Mips is finally prepared to stake its performance at 9 SPECint95 and 19 SPECfp95, but there are many caveats: they are peak, not average numbers, based on system designs not yet out and compilers that won't be ready until mid-year. By comparison, the 333MHz Alpha 21164, the current leader, does 7.5 SPECint95 and 11 SPECfp95. Mips says that the real gains will be best shown on real applications, with database performance expected to improve between 1.5 and 2 times over the 250MHz R4400, a clock speed that's the end of the road for that chip. (Continued on page 7).

HP ADDS D-CLASS GENERAL PURPOSE SERVERS

Hewlett-Packard Co this week introduces a new series of point products in the low-to-mid-range commercial Unix server space which come in below its K-Class technical servers. The five D-Class models, which use HP's 960Mbps runway bus, will be offered as lead products in the space currently occupied by the older, entry-level PA-7100LC-based E-Class and mid-range 7100-based G, H and I servers, all running HP-UX 10.0.1. They're targeted at database, Internet/Intranet, network and systems management and messaging server application markets. At the high-end of the new range is the two-way, 100MHz PA-7200-based Model 350 which performs 2,280 tpmC - \$204 per tpmC - at 64.5 SPECrate_int95 and 97.4 SPECrate_fp95. HP puts this up against a Compaq Proliant 4500 quad running Windows NT at 2,454 tpmC or \$242 per tpmC. With 128Mb RAM and 1Gb disk the D350 is priced from \$30,140. It can accommodate up to 768Mb RAM (1.3Gb from next quarter), 5Tb disk, eight EISA/HP-High-Speed System Connection (HSC) I/O slots and five SCSI-2 bays. The uniprocessor version costs from \$16,900 with 32Mb RAM and 1Gb disk and performs at 3.61 SPECint95 and 6.12 SPECfp95. The Model D310 has a single 100MHz 7100LC and is priced from \$13,600 with 32Mb RAM and 1Gb disk. It's rated at 2.94 SPECint95 and 3.7 SPECfp95. It supports up to 512Mb RAM, 3.8Tb disk, eight EISA/HP-HSC I/O slots and two SCSI-2 bays. The Model D250 has one or two 100MHz 7200s, up to 768Mb RAM, 5Tb disk, five EISA/HP-HSC I/O slots and two SCSI-2 bays. With 128Mb RAM and 1Gb disk it costs from \$27,600, or \$14,350 with 32Mb RAM and 1Gb disks as a uniprocessor. The 100MHz 7100LC Model D210 uniprocessor costs from \$11,050 with 32Mb RAM and 1Gb disk. It can accommodate up to 512Mb RAM, 5Tb disk, five EISA/HP-HSC I/O slots and 2 SCSI bays. The Model D200, a 75MHz 7100LC uniprocessor is rated at 2.1 SPECint95 and 2.9 SPECfp95 and costs from \$8,050 with 32Mb RAM and 1Gb disk. It can be configured with up to 512Mb RAM, 5Tb disk, five EISA/HP-HSC slots and 2 SCSI-2 bays. 2D colour graphics is available only on the Model D350. The D-Class models can be upgraded to other configurations in the series and to the forthcoming PA-7300 with on-board cache, or the 64-bit PA-8000 due next quarter. It comes in a new tower cabinet which means HP has five different packages across the E, D, G/H/I, K and T class servers. It decided against reviving the now-defunct F-Class product name for the new models, even though they come in above the E-Class. UK pricing for the D-Class models range from £6,500 to £26,316.

FTP DITCHES OWN BROWSER EFFORT, BUYING NCD MARINER FOR \$10m; ACQUIRES FIREFOX FOR \$80m

FTP Software Inc of Andover, Massachusetts, is dumping its Spyglass Inc Mosaic front-end Web tools which it says it's not happy with, and taking Network Computing Devices Inc's Windows-based front-end Mariner Internet access business off its hands for \$10m. The sale is a good one for NCD; it said Mariner "is not generating the substantial revenues required to justify an ongoing annual investment of \$2m to \$3m for product development and marketing programmes." NCD will pay FTP a one-time fee of \$2.5m for rights to Mariner and all future versions, half of that sum being paid now and the rest due when the next version of Mariner emerges toward year-end. NCD will retain all licensing fees gained to this point, essentially the \$290,000 it got from Japan's Software Research Associates, but all future revenue streams will go to FTP. Mariner's development team, source code and pending patents will transfer to an FTP development site in Santa Clara, California. Mariner is a \$100 integrated Internet access tool claimed to allow users to access all Internet resources from a single application. It's not a package of products but a single interface to services aia/Pacific.ws, FTP, relay chat, Gopher and Telnet, and includes an API set and development toolkit. NCD is also licensing FTP's NFS client and server software for use in its Windows NT- and Windows 95-based products under a separate agreement. FTP recently created a dedicated Internet unit and uses Open Market Inc back-end WebServer technology and last week inked US and Canadian distribution agreement with Merisel Inc for its Internet and Intranet software (UX No 549). NCD says the deal will enable it to focus on its core products, particularly its Z-Mail messaging and PC-Xware server software, while still being able to incorporate Mariner into upcoming products, particularly its Internet-based messaging product line. The deal is expected to close during the first quarter.

White elephant

NCD co-founder and VP marketing Mike Harrigan said FTP had licensed Mosaic source code from Spyglass, but found Mariner more to its liking. Mosaic-based browsers such as Netscape and Spyglass are written for the lowest common denominator, he said, whereas Mariner was written with Microsoft Foundation Classes (MFCs) and Visual C++, making it a more attractive Windows-based application. NCD strayed from its core email and messaging business to do Mariner, lured by the promise of a huge contract - which eventually fell through - to build a browser for AT&T GIS. It found itself left with something of a white elephant because Mariner didn't interest NCD's enterprise customers, for whom, he said, email is mission critical whilst Web surfing is a novelty. AT&T, which had originally approached NCD in search of as many as four million TCP stacks for Internet access and wanted to supply Internet browsers to each of its 80 million customers, renegotiated the 1994 \$15 million agreement with NCD and decided not sell a branded AT&T browser. NCD was supposed to receive \$10 for each registered copy of the browser, but Harrigan said given the way the market has developed since 1994, that was probably too much to ask per copy and it would have had to renegotiate the contract anyway. NCD had put about \$3 million into R&D for the browser. In perspective NCD did well in cutting Mariner loose: the \$9m development funding NCD did receive from AT&T combined with \$7.5 million from FTP is more revenue than most Internet companies, including Netscape, stand to get from their browsers anytime soon.

ORACLE HINTS AT A FEW MORE DETAILS ON ITS ORACLE NETWORK COMPUTER

Continuing its dance of the seven veils, Oracle Corp gave *Reuter* a few more details of the prototype of its Internet computer it plans to show within the next 90 days. The Oracle Network Computer will include an ARM 7500 RISC coming from Advanced RISC Machines Ltd, 8Mb memory, a keyboard, mouse and modem, Oracle Internet browser, communications software and basic word processor. It will attach to a television set and enable users to send electronic mail and access services such as banking, shopping and video on demand. An Oracle sketch shows an 8" by 10" motherboard made by Acorn Computer Group Plc, set vertically onto a square base with optional stereo speakers on either side. It has ports for printer, microphone and peripherals such as CD-ROM drive.

Acquires Firefox

British-born Firefox Communications Inc, lately of Solihull in the West Midlands, ~~latterly of San Jose, did not last long as a quoted~~ US company. Floated on Nasdaq last year, it has agreed to be acquired by hungry Andover, Massachusetts-based FTP Software Inc in a one-for-one share exchange valued at between \$80m and a maximum of \$100m, above which the share ratio will be adjusted. \$100 represents a \$14.50 share price; FTP is currently trading at \$12.125, all of which makes TCP/IP software specialist the first big Internet disappointment: it got its initial public offering away at \$18 a share on the back of Internet hype, having originally set a \$10 to \$12 target. The combination plans to develop products in the areas of communications groupware, collaborative applications and messaging systems. John Kimberley, chairman and chief executive of Firefox, will join the FTP board and serve as vice chairman of FTP Software and executive vice-president of the Firefox Business Unit.

As Spyglass licenses to TriTeal

Spyglass Inc, until Microsoft Corp's revamped Internet strategy the most potent competitor to fellow Web high-flier Netscape Communications Corp, has inked what it claims is a multi-million dollar licensing agreement with Unix CDE developer TriTeal Corp for the first supported commercial version of Spyglass' Internet technology. Spyglass also announced a software development kit for its Web server, which thanks to a revamped http engine is reportedly three-to-ten times faster than its competitors. The deal, said to be worth around \$2m, calls for TriTeal to use the technology in its \$200 TEDserver enterprise offering. It has already licensed Spyglass for its flagship CDE implementation, the TED desktop, and has plans to use it in the TEDvision Internet browser. TriTeal plans to add Web-aware applications such as calendars, information managers and a customer database to the browser and server, which will be specifically targeted at its installed base in Fortune 1000 companies seeking to create an Intranet. The package will come in much cheaper than chief competitor Netscape, which costs \$1,300.

Releases SDK

Besides the licensing announcement, Spyglass said it will release a software development kit for its Web Server - to the tune of \$75,000. Spyglass says it's increased its HTTP engine performance in three areas: throughput, or data transfer rate; latency, or the amount of waiting time for connection and connect rate; and the number of users that can be accessing the server at any given second. These are helped by what Spyglass calls a "keep alive" function, which downloads all information as one connection, rather than connecting and disconnecting for each link as other Web servers do. The company benchmarked its product using Silicon Graphics Inc's WebStone against five Web servers: Brand X, Apache, NCSA, CERN and Netscape and claimed it outperformed each by three-to-ten times. While Spyglass said it beat Netscape by at least that margin, Netscape has a licensing agreement prohibiting details of the benchmark. The server was benchmarked at 210 users, but Spyglass claims that it could allow far more users to connect simultaneously. Spyglass is offering a free Web server for download on its home site, but it's available for now only on Unix platforms. Spyglass last week reported first quarter net profits up 144.7% at \$722,000, on turnover that rose 90.5% to \$3.8m. Net per share was up 50% to \$0.06.

COMPUWARE BUYS THREE MORE

Farmington Hills, Michigan software development tools company Compuware Corp is shaping up as a mini-Platinum Technology Inc. Its biggest buy so far was Uniface BV, but there have been several others, and has added three more. It went to Minneapolis for Technalysis Corp and will pay \$14 a share, valuing the applications developer at \$32.2m. And it has a intent to buy Born Information Services Group, also Minneapolis, on undisclosed terms. The \$21m-a-year Born offers client-server professional services from offices in Minneapolis and Milwaukee. Compuware also has an agreement to acquire Icons GmbH, a professional services company in Dusseldorf: the company will become part of Compuware GmbH, but terms of the buy have not been disclosed.

SUN'S Q2 AHEAD OF EXPECTATIONS; US GOVERNMENT SHUTDOWN A DRAG

Sun Microsystems Inc's results for the fourth calendar quarter, its second fiscal, were a pip. Revenues came in at \$1,750m up nearly 19%; net profit was \$126m (\$0.65 a share), up 54%, slightly ahead of analysts' expectations. That gave them net income of \$210.7m (\$1.07 a share), for the half, up a whopping 76%, on revenues of \$3,237m up 18%. UltraSparc sales in the quarter accounted for 10%-15%, a happy proportion; Wall Street estimates put UltraSparc shipments at 10,000 in the past two months. Servers account for some 35% of sales. The company has ceased to break out the units shipped and there was no word of SunSoft Inc. Bookings were up 29.6% to \$1,840m; backlogs 34% ahead of last year at \$378m. Gross margins came in at 43.8% versus 41.6% and operating margins equalled 10.2%, up from 7.9%. US revenues were up 12% in the quarter to \$836m, representing 49.2% of revenue, significantly below expectations, mainly due, it said to government shutdown. European revenue gained 25% to \$864.2m, or 26.7% of total revenue. Strongest growth was the rest-of-the-world business which increased 29% to \$779.4m, or 24.1% of total revenue. The company expects a strong recovery in the third quarter. In a prepared statement, Sun CEO Scott McNealy claimed the company has "numerous strategies to make money directly from Java," which it's now giving away free to salt the market. He may be deluding himself but he contends all programming could be done in Java. Privately, he claimed to be taking business away from Silicon Graphics Inc, which is not expected to meet expectations for the same calendar quarter. Outsiders consider that Sun's new UltraSparc machines, in a effort to safeguard their installed base if nothing else, are priced at such a point it's hard for companies like SGI and HP to match. McNealy vowed to continue the assault on the 2D/3D market among other "animalistic" effort he might put in train. He seemed concerned with how many different battlefields he could engage on while maintaining sound fiscal practices. The company has added some 2,300 new staff over the last year.

SUN BUILDS HOT-PLUG CONNECTOR ON TO OEM UNISYS DRIVES

Sun Microsystems Inc's building next-generation, high-end disk storage systems around Unisys Corp drives in an OEM deal expected to be worth \$10m to Unisys in the first year. Sun's developed a new self-mating connector that plugs into the backplane which it says will deliver hot plug and redundant power/cooling features not currently available in conventional drive assemblies. Presently all hot-plug SCSI implementations for adding devices require a canister to be built on to the drive separating the drive from the bus, adding cabling and parts and reducing reliability. Sun says its existing SparcStorage Array RAID subsystems don't include hot-plug or redundant power/cooling features. Sun says it will fit its microSparc I-based SparStorage RAID 210 controller plus the new connector on to Unisys drives in a rack-mount package. The company will licence the connector design to all-comers. The drives and connector are due at the end of this quarter or beginning of next. It claims Unisys has the best drive technology.

AXIL DEBUTS ULTRA 1-COMPATIBLES

Following the rest of the Sparc-compatible community, Hyundai Electronic America Inc's Santa Clara, California-based Sparc-compatible builder Axil Workstations Inc this week debuts two Sun Microsystems Inc Ultra 1 clones as the Ultima 1 Model U140 and U170 (UX No 566). Its 143MHz offering is priced at from \$15,230 with 32Mb RAM, 1Gb disk, TGX graphics and 17" colour screen. The 170MHz unit costs from \$20,735 with from 64Mb RAM, 2Gb disk and 21" monitor. Both run Solaris 2.5 Application Server (formerly the Workgroup Server release). The company's now working on ASICs and other modifications for future UltraSparc models it claims will differentiate its systems from the compatible pack, including the provision of additional upgrade support. It declines to comment on when the new systems would be available. Meantime the company's added a workstation version of its S/420 server that comes with up to four 100MHz HyperSparc or two SuperSparc II RISCs. Uniprocessors are priced at from \$44,450 with 512Mb RAM. \$49,200 buys a uniprocessor HyperSparc model with 512Mb RAM, 2Gb disk and a 21" screen.

PC VP IN CHARGE OF HP WORKSTATIONS, SERVERS AND MAINFRAMES

Hewlett-Packard Co's given Richard Watts, VP and general manager of the Personal Information Products Group (PPG), the reins of its Computer Systems Organisation following Wim Roelandts departure to Xilinx Inc (UX No 572). Watts got PPG when Bob Frankenberg went off to run Novell Inc (UX No 484). Duane Zitner, currently general manager of the Networked Systems Business Unit of PPG gets Watts' job. Former commercial systems division general manager Olivier Helleboid will run the network and systems management division in Fort Collins, Colorado. Meantime, senior VP and general manager of Worldwide Customer Support Operations (WCISO) James Arthur is retiring; Ann Livermore, currently VP sales and marketing steps into his shoes. Watts, Zitner and Livermore report to Computer Organisation boss and CEO Lew Platt's presumptive heir Richard Belluzo, formerly head of the pre-reorg Computer Products PC and printer group to which PPG reported.

OBJECTIVITY ADDS REPLICATION MODULE

Objectivity Inc, Mountain View, California, one of the shrinking band of object-oriented database purists, begins delivery of a data replication option for the new 4.0 'Kilimanjaro' version of its Objectivity/DB database plus other schema evaluation facilities, from next quarter. In Objectivity's synchronous data replication model any number of data replicas can be defined; there's no master-slave framework enforced. Key to ensuring that inconsistent data is not written to different replicas if a node or the network goes down is the use of a 'quorum' in which the database determines if a majority of replicas are available to write to. Administrators can adjust the quorum level to suite parallel/SMP or hub and hierarchical (master-slave) replication topologies. Replicas reconnected to the quorum - the majority of replicas still up after node or network failure - are automatically updated and resynchronised.

Pseudo-replica

Crucial in Objectivity's view is its use of a tie-breaking pseudo-replica on the network in the instance when there are only two databases and therefore no quorum possible. If one node goes down the other can look out across the network and see the pseudo replica still in operation. If it is, and counting two out of three databases still up, it can continue writing global changes, updating the other node when it comes back up. In the instance where a node cannot see either the other node or the pseudo-replica it does not have a quorum and therefore only writes local changes. Objectivity claims its use of a pseudo-replica overcomes problems inherent in other replication techniques such as those already offered by the likes of Versant Object Technology Corp which employ a hot failover mechanism risking corruption when network faults occur. Version 4.0 of the Objectivity/DB database includes support for schema changes to deployed databases without interrupting read or write access to data. On-demand modes for converting data from old to new schemas means data is only converted as it is accessed rather than interrupting user access by converting data in batch. The company says it's got patents pending on its data migration techniques. 4.0 includes new Motif, NT and Mac look-and-feel toolsets and is claimed to be 15% faster than previous versions. It also supports Object Database Management Group's ODMG-93 version 1.2 C++ standard. Up on most Unixes, NT, Windows, VMS and Mac, the replication option is priced at from \$750. Although still a self-described object database company rather than second generation application development, object-relational or tools hose, Objectivity says its escape route from the conventional view of the object database world is its distributed (and Internet) capabilities, and promised support for Java. It's now working on a Java runtime that'll run applets against its database. The privately-held company claims 100,000 licenses deployed, 70 employees and says revenue will grow 70% this year.

PLATINUM SCARFS OLAPER

Insatiable Platinum Technology Inc, Oakbrook Terrace, Illinois is acquiring online analytical processing house Prodea Software Corp for \$36m of its common stock. Eden Prairie, Minnesota-based Prodea's Beacon OLAP solution offers the usual gamut of drill-down, pivoting, ranging, ratios and complex exception analysis running on top of Sybase, Oracle and Informix. Platinum describes Beacon as a three-tier client/server solution consisting of relational database, analytical processing against the database and Beacon client providing the multidimensional view of the data.

TANDEM ADDS WAREHOUSE ANALYSIS TOOLS

Tandem Computers Inc, Cupertino, California has added a three tier OLAP tools set to its Tandem Alliance Program. Tandem will bundle Microstrategy Inc's DSS Agent and DSS Server with its NonStop SQL data warehouse. The two have already collaborated on two data warehousing solutions, one in the UK for retailer Woolworths' real-time stock tracking system and the second for US military personnel insurance outfit USSA. 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. DSS Server is a relational OLAP server that resides between the client and a large data source, in Tandem's case a data warehouse, asynchronously processing user requests. It includes an SQL engine generating DBMS optimised queries and an OLAP engine processing and cross tabulating data for long term trend forecasts. Tandem and Microstrategy are also offering a program - QuickStrike - to evaluate the capabilities and benefits of an agent-based decision support system before committing to purchase.

INTERLEAF SUPPORTS SGML PUBLISHING

Interleaf Inc, Waltham, Massachusetts-based document management software maker is staking a claim in Internet publishing with its Cyberleaf 1.0 Web translation environment (UX No 528) and has extended its Interleaf 6 publishing environment to enable creation, assembly and publishing of SGML (Standardised Generalised Markup Language) information. Interleaf claims the new version simplifies SGML authoring and compliance, enabling users to manage both SGML and non-SGML documents, convert SGML to HTML, to paper or to an SGML viewer. New features include a Motif user interface, review files through Toronto, Canada-based SoftQuad Inc's Panorama Pro's viewer, automatic support for CALS table model in the SGML Toolkit, enhanced SGML compliance checking, initial formatting template and dynamic text updating. Interleaf 6 SGML is shipping for \$5000. The toolkit goes for \$15,000. It's up on Digital Unix, AIX, HP-UX and Sun.

PLATINUM DELIVERS BACKUP ANALYSIS FOR SQL SERVER

Platinum Technology Inc, Oakbrook Terrace, Illinois has released Image Analyzer, a backup analysis tool for Sybase and Microsoft SQL Server which enables database administrators (DBA) to examine the content of backup to ensure integrity, recover data from tables lost or corrupted and audit data modifications. Previously users relied on Sybase and Microsoft's Database Consistency Checker (DBCC) prior to backup, says the company, but this proved to be time consuming and processing intensive. Image Analyzer provides two features not available in SQL Server; off-line verification of backup integrity and the ability to recover data from individual tables. Image Analyzer supports Microsoft SQL Server 6.0 and Sybase SQL Server 4.2 through to System 10. Its up on Windows, NT, OS/2, Solaris, AIX and HP-UX. Prices start at \$1,300.

VERITY PUBLISHING SYSTEM GETS SGML VIEWER FROM SOFTQUAD

Toronto, Canada-based SoftQuad Inc is integrating its Panorama Pro SGML viewer with Mountain View, California-based Verity Inc's Topic Client and Topic CD-based publishing and test retrieval products. Verity's Topic Client acts as a smart filter to internal and Internet content, with agents set up to monitor incoming data from other sources and perform simultaneous searches. Topic CD uses Web browsers to search CDs as well as the Web and provide text-indexing of CD-ROMs and Web servers. The two companies will bundle Verity's topic search engine with future generations of Panorama Pro and HotMetal Pro. HotMetal Pro is an HTML publishing tool with pre-built templates, keyboard macros, a spell checker, and a Boolean search and replace tool. Panorama Pro with Topic Search and HotMetal Pro with Topic Search will be available in the third quarter. Meantime Luxembourg-based Europe Online and Sausalito, California-based McKinley Group have licensed Verity's Topic search engine for their multi-lingual, multimedia online service and Magellan online Internet directory. Europe Online will integrate Verity's search engine with its service in the second quarter.

TECHNOLOGY STOCKS RALLY DESPITE EARLY CONCERN

Despite some dire predictions for technology stocks early on last week following Intel Corp's lower-than-expected earnings report and Apple Computer Inc's results and layoffs, Intel's losses were contained and many technology issues even managed to advance as Sun Microsystems Inc, IBM Corp, Computer Associates International Inc and then Microsoft Corp turned in better-than-expected figures at the end of the week. Analysts reckoned strong earnings reports for Sun and Computer Associates on Wednesday especially helped prevent losses from spreading into the broader market. When computer chip giant Intel reported that its fourth quarter earnings had more than doubled to \$867 million, or 98 cents per share, the issue plunged by 10.3% and closed at \$50.12 in Nasdaq trading on Wednesday, since analysts had expected the company to report per share net income of \$1.09. (By the end of play on Thursday it had regained some ground, closing at \$51.00 even). Like a number of brokerage houses, UBS Securities analyst Jonathan Joseph then downgraded the issue, recommending that investors hold Intel stock. Joseph also said he was worried about a weaker outlook for personal computer sales. Sun reported its profits jumped 54 percent to \$126 million, or 65 cents a share, from \$81.6 million, or 42 cents a share, in the year-ago period. This report came in well above market expectations of 58 cents per share. Then, Computer Associates announced a 30 percent jump in its third quarter net income to \$227.18 million, or 90 cents a share, from \$174.21 million, or 69 cents a share, in 1994. After Intel took a \$5.12 point hit when the session began on Wednesday, analysts began to think investors had over-sold technology issues.

Dust

When all the dust settled on Wednesday, the Nasdaq composite index closed 2.43 points higher at 998.30. Nevertheless, market-watchers have expressed concern about weak computer demand for weeks. In anticipation of lower earnings, investors have been selling off technology stocks; the technology-laden Nasdaq Composite index had lost 60.35 points, or 5.7 percent of its value, since the beginning of the month. "People are washed out. They're tired of selling," Joseph added. Other analysts thought Wednesday marked the start of a technical rebound. A positive research report from Morgan Stanley analyst Barton Briggs, indicating technology issues are over-sold was credited by analysts with supporting the market. Thursday's news that IBM Corp's fourth quarter net earnings climbed 64.7% to \$2,027m apparently wasn't enough to encourage the market makers further, although IBM stock rose \$8.75 on the day's trading to close at \$96.12. The Nasdaq composite index closed 8.94 points higher at 1007.24. Microsoft Corp's second quarter results came too late for Thursday's market, however on the back of profits up 54% at \$575m, revenue up 48% at \$2,200m, and earnings per share a few cents ahead of analysts' expectation at \$0.90, grey market trading had pushed the stock up to around \$90.00 by press time.

RED PEPPER OFFERS REAL-TIME PLANNING FOR SALES

Red Pepper Software Co, maker of real-time planning and scheduling software for manufacturing companies has announced Version 2.0 of its Sales ResponseAgent for optimising rapid, real-time product delivery schedules and costs based on supply chain capabilities. It can be integrated into existing Enterprise Planning Resource systems with Red Pepper's intelligent agent, DataBridge. Sales ResponseAgent uses object-oriented design to evaluate material and capacity constraints in the supply chain network as well as transportation options of interplant shipments. Red Pepper, based in Mountain View, California says Sales ResponseAgent is an extension of its first intelligent agent Production ResponseAgent which has been picked up by 3COM and Sun. Up on most Unix with Motif, its available from the end of the first quarter. Prices start at \$200,000.

ORACLE JOINS OLAPERS

The OLAP Council has been adding new members in dribs and drabs since its inception at the beginning of last year (UX No 522) and last week landed the big one, signing Oracle Corp as a general member. Formed by four on-line analytical processing software tool suppliers Arbor Software Corp, Comshare Inc, IRI Software Inc and Pilot Software Corp the OLAP Council now counts eight companies on its roster, including Oakbrook Terrace, Illinois-based Platinum Technology Inc; Planning Sciences Inc, London; Holistic Systems, London; Cognos Inc, Ottawa; plus four associate members, KPMG Peat Marwick LLP; Kenan Technologies, Cambridge, Massachusetts; Sinper Corp, Warren, New Jersey; and Speedware Corp of Montreal, Quebec. Oracle will participate in the Council's specifications for its application programming interface for accessing multidimensional data.(UX No 562).

AMDAHL TO RESELL ICL GOLDRUSH IN NEW RETAIL JOINT VENTURE

Fujitsu Ltd siblings ICL Plc and Amdahl Corp have found another synergy, this time in the retail industry, and in the US Amdahl will begin selling ICL's massively parallel Goldrush MegaServer as the platform component of a PrecisionRetailing programme it has created in conjunction with ICL's Dallas, Texas-based Retail Systems operation. A PrecisionRetailing centre based at ICL's Santa Clara, California-based development centre will provide consulting, hardware, software and project management specifically tailored for data warehousing and data discovery services in the retail industry. Data discovery includes recording, storing and analysing all transaction data for buying trends and patterns across chains with hundreds of stores; information that organisations have not traditionally retained or been able to analyse. Retailers can use the results for affinity marketing programmes such as the now classic in-store product layout displaying beer next to diapers, or specific mailshot and advertising campaigns. It can also compare the results from different stores campaigns and set-ups. Using warehoused data, applications can assist strategic planning of merchandise assortment at the store level, determine cross-selling relationships, improve customer loyalty and reach best customers through targeted advertising and promotions, ICL says, holding out the promise that retailers can thereby reduce inventory carrying costs and price mark-downs, and increase sales of those goods that produce the highest margins. It is pitched at supermarkets, speciality stores, department stores and hardware and home centre stores.

Possibilities

The venture will recommend Goldrush where a solution is required for storing more than 200-300Gb data, they'll provide Amdahl's OEMed Sun Microsystems Inc SMP servers for smaller installs, plus a range of PC and networking options. Englewood, Colorado-based SSDS Inc (the outfit that tapped former Sun systems and network management chief Denis Yaro as executive VP marketing (UX No 549)) will provide network integration, design and development services to the programme. ICL, which doesn't sell its Unix servers or VME mainframes in the US but has an extensive point-of-sale presence, will rely on Amdahl for high-end and precision marketing skills. The two companies, which began talks on the venture around nine months ago, are already providing snapshot services to a four retailers from the centre, examining data from a selection of a company's stores over a period of weeks to show what the possibilities of such a solution are. They've got a bunch of ex-Teradata Corp folk in the PrecisionRetailing programme putting the stuff together for retailers, regarded as the most advanced data warehouse users (judged by the amounts of data processed) if not the most sophisticated.

Critical cost

ICL's Goldrush utilises up to 127 HyperSparc RISCs connected by the 1.2Gbps DeltaNet but developed by Siemens Nixdorf Informationssysteme AG as part of a European Commission Esprit project. ICL says the critical cost consideration is not the system itself but storage, where gigabytes and terabytes of disk run into hundreds of thousands or millions of dollars alone. Informix Software Inc's OnLine Extended Parallel Server 8.0 (OnLine XPS) database XPS parallel database is currently in beta on Goldrush and is due to ship later this quarter or next. ICL expects its XPS business on Goldrush to be "huge." ICL continues to resell Pyramid Technology Corp's high-end Nile Unix SMP servers in the UK and some other countries (including India) even though Pyramid parent Siemens Nixdorf Informationssysteme AG is ostensibly its competitor in Unix servers up to MPP. It says it's now got a bunch of customers looking to add MPP to their SMP Nile solutions which will swing either for SNI's MPP Reliant system or the Merlin Goldrush/Nile combination ICL and Pyramid teamed on before the latter's acquisition by SNI. ICL has less than a dozen customers for Goldrush; none so far for Merlin. Meantime ICL Retail Systems plans to offer its general retail customers the option to buy IBM equipment in addition to ICL products and services, and claims to be the first retail systems manufacturer to sell the equipment of a competitor. The company says it completed its first sale of ICL software combined with IBM equipment last quarter at an initial pilot project in three Kansas City area Helzberg Diamonds stores.

NAC ADDS WORKGROUP, PC-NFS NETWORK FILE SYSTEM SERVER

With the trend towards pressing general purpose servers into use as appliances for routing, file, terminal and print serving Mountain View, California-based Network Appliance Corp (NAC) is taking its Network File System server technology further downstream, introducing an entry-level model in its Filer series as the NetApp F220 supporting from 20 to 70 NFS client. The rack-mount, stripped down version of the recently-introduced F330 departmental server (for between 50 to 150 users) is aimed at the workgroup and PC-NFS space. It performs 700 NFS operations per second (NFSops) at 10 milliseconds access times versus F330's 1210 NFSops at 8.7 milliseconds. It comes with a PCI expansion bus and SCSI/SCSI-2 interfaces, two FDDI interfaces, nine 10BaseT Ethernet and three 100Mbps Fast Ethernet slots.

Reconstruction

The F220 runs a new version 3.1 of the company's transport-independent NetApp 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 52Gb (now 108Gb on the F330). This eliminates the complexities of partitioning disks, the company says, 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 and provides four times faster RAID reconstruction plus conjunction with RAID disk scrubbing. Also supported in 3.1 is remote tape backup, multiple subtree directory support, and extended MIB for SNMP, NFS statistics for network clients, NFS over TCP and PCNFS. 3.1 provides a system administration shell with 33 commands, compared to Unix's 1,200 and is also available for NAC's other servers. The F220 is based upon off-the shelf 75MHz Intel Corp Pentium-based hardware (although it's designed its own motherboard), as opposed to F330's 90MHz CPU. It's priced from \$28,000 and replaces the 80486-based FAServer 1400.

Godzilla

Although it's still selling the low-end FAServer 450 (which doesn't include hot-swapping), NAC's got an F series replacement up its sleeve. To address the high-end, it's readying an enterprise-level F series server for introduction at Interop in March. NAC is also now porting its WAFL services and software (its crown jewels) to Windows NT for a server product code-named Godzilla it's readying for the end of this year, or beginning of 1997, which will support NT's System Message Block (NFS-equivalent) protocol over TCP/IP. The company says this box will allow both NFS and NT clients to be supported on one device. It's also working on a Web-oriented server fitted for HTTP. The company says it still plans to license its software to other vendors (and create other networking appliance beyond NFS servers) but will target the VAR, integrator and reseller market rather than OEMs after watching the likes of Veritas Software Corp disappear under a tidal wave of OEM deals. It hasn't got anyone signed-up as yet. NAC came onto the scene around three years ago to challenge established NFS file server vendor Auspex Inc, although it now puts Auspex at the high end of its vision. Its recent IPO got away at \$13.50 and its stock, which has climbed as high as \$41.75, now sits at around \$27.00. Estimated revenue for the company's financial year to April is between \$40m and \$45m; it plans to double that run rate by April 1997. It claims some 1,200 installations. It says it's trying to emulate the Cisco Systems Inc model of exploiting the market demand for fast data access with low-cost technology and value-added software rather than large-scale, proprietary and costly solutions.

TADPOLE ADDS 166MHz PENTIUM MODEL

Cambridge, UK-based Tadpole Technology Plc has added the 166MHz Pentium Tadpole P1700 portable to its P1000 Series. It comes with 340Mb, 520Mb or 810Mb drives, 8Mb to 128Mb RAM, 256K second level cache, removable 2.5" SCSI-2 disk storage up to 1.2GB and 10.4" colour active matrix TFT display. The P1750 supports Windows 95, Windows for Workgroups 3.11 preloaded and NT, OS/2 Warp, NextStep, Solaris x86 and Linux. Weighing 7.5lbs with internal battery, prices start at \$7,000. Both the P1000 and P1300 can be upgraded to the P1700 for \$1,750. The models ship now.

INTEL'S FIGURES SO GOOD THAT MARKET COMPLAINS THEY'RE NOT QUITE PERFECT

With everything going so terribly well in the technology sector, the market is undergoing an acute anxiety crisis, and when a bellwether company like Intel Corp reports, the patient's vital signs have to be examined in painstaking detail, and any slight twinge, momentary tick or sunshine sneeze is taken as incipient double pneumonia at the very least. So it was that late on Tuesday, Intel announced superb figures, the market took a good hard look at them and decided they were terrible. Intel's earnings were just slightly below analysts' super-gung-ho expectations for its fourth quarter, but the company fed their hungry angst by pointing to slower-than-expected growth in personal computer sales as well as an unexpected write-down in inventory related to falling component prices. The pessimists hugged themselves with delight and gave each other "I told you so" grins when Intel predicted that turnover this quarter would be flat and announced that it was forced to write about \$50m to \$70m of the value of its inventory in the fourth quarter because of a big drop in prices for the most widely-used kind of memory chips - 4M-bit dynamics.

Moderation

People in the industry doubt that a major slowdown is occurring in the personal computer business, but they do agree that a little moderation in the chip industry is due, with turnover growing at "only" 26% this year compared with 44% in 1995. Intel's sales in North America were flat in the fourth quarter while sales grew in Europe, Japan and the rest of Asia. Fourth quarter turnover rose a whopping 42% to \$4,580m, on which it did \$867m net, more than double last year's figure. Turnover for the full year soared 41% to \$16,200m. The company said the 75MHz Pentium was its unit volume leader in the fourth quarter, but the market is quickly shifting to 100MHz. Intel said its capital expenditures will rise to about \$4,100m in 1996 from \$3,600m in 1995 and it expects depreciation in 1996 to be about \$1,900m, up from \$1,400m in 1995. Its own internal book-to-bill ratio exceeded 1.0 in the fourth quarter. Shipments of motherboards increased at about the same rate as shipments of Pentium processors compared with the third quarter. Japan and the Asia-Pacific regions were its strongest growth areas in the quarter. The company's gross margin slipped to 48% in the fourth quarter, compared with 52% in the third quarter. Intel's shares plunged \$5, or 9%, to \$50.75 on volume of 12m shares within minutes of opening. Average daily volume for the company is 9.3m.

DATAMIND (THE CALIFORNIAN) READIES NEW DATA MINING SOFTWARE FOR APRIL

Former Red Brick Systems Inc VP marketing AJ Brown has turned up as VP marketing at Redwood City, California-based data mining wannabe Datamind Inc. The 14-person company is readying a data mining tool called Datamind for introduction on April 8th. AJ's main claim for the software is that it will be "understandable," compared to the crop of university-derived neural net or expert reasoning-type data mining products now on the market. He claims the software can be used against all types of files, including flat files, DB2 data and relational tables, but will work best in conjunction with warehousing environments. The company's working on a couple of partner deals and says it hasn't set a price point yet. The Datamind toolset was created in France in 1991 and garnered 25 customers there. The company was re-invented stateside in 1994; the data mining software will be its first product. It could have an interesting ride given its apparent unawareness of Winterthur, Switzerland-based data processing and software development company Datamind Services AG. The 200-person, \$35m company resells Oracle and SAP as well as its own personnel management, software configuration and change management tools called Syntos. Datamind AG sells through Long Beach, California-based Ace Inc and is a Siemens Nixdorf Informationssysteme AG partner.

NOW FILENET IS IN TALKS TO ACQUIRE SAROS - WORTH \$150m?

Costa Mesa, California-based FileNet Corp says it is in negotiations to acquire Saros Corp, a privately held document management software developer in Bellevue, Washington. The acquisition, expected to be worth about \$150m in either cash or shares, will give the electronic document storage and retrieval systems specialist an entry into the Windows NT and the mid-range-to-low-end document storage market for the first time. Saros has just announced @Mezzanine, a Web-enabled addition to its Mezzanine enterprise library services. FileNet bought imaging software developer Watermark Software Inc in July.

IBM LOOKS CLOSE TO HIGH WATER MARK AS IT ACHIEVES BLOW-OUT '95 PERFORMANCE

The fourth quarter of 1995 is looking very like the high water mark of Louis Gerstner's tenure at IBM Corp, and the company was determined to blow the bears away in style. Net earnings per share of \$3.66 before exceptional charges outran even the most optimistic forecasts - the consensus average had been for \$3.45 a share, but while the mainframe shipments boom had been expected, the secret ingredient lay in what in accounting terms is one of the slipperiest of IBM's businesses - services. Services were up a whopping 25% in the fourth quarter at \$4,100m - actually a slowdown compared with earlier 1995 quarters, but the problem with that assessing turnover and profit in the services business is like deciding how long is a piece of string. If IBM lands a seven-year \$500m facilities management contract that involves buying equipment and some programming in the first 18 months, and that cost and effort amounts to 40% of the value of the contract, IBM books that 40% of revenue and profit in that first 18 months, which leaves little or nothing for anything that may go wrong in the shape of programming delays and so forth in subsequent years. And in its present form the IBM services business is simply too young for any but a handful of the very first contracts to begin casting doubt on the accounting assumptions. Elsewhere, overall gross margin is still not quite up at the Intel Corp level, but IBM did manage a gain of more than a point to an enviable 41.9%. Overall profit before charges was \$2,000m before a charge of \$663m, partially offset by a one-time gain of \$175m related to the 1994 sale of the Federal Systems Co to Loral Corp. Fourth-quarter 1995 earnings, after the two special items, were \$1,700m or \$3.09 per share. Fourth quarter sales of hardware rose by 7.9% to \$11,500m, software revenues rose 9.0% to \$3,600m - all those new CMOS mainframes and to a lesser extent placeholding AS/400s going out and attracting new software licenses. Overall fourth quarter turnover rose 10% to \$21,900m. IBM is at last out of the 60s - billions of turnover, that is - with turnover for the year up 12% at \$71,900m. For all 1995, hardware revenues grew 10% to \$35,600m, services revenues in 1995 soared 31% to \$12,700m, overtaking software to become the second largest business segment. Software revenues grew 12% to \$12,600m. Gross margins for the full year were 42.3% against 39.9% in 1994.

Strategies are working

North American business rose 11% in the quarter to \$8,600m; for Europe/Middle East/Africa, sales were up 7% at \$8,100m, Asia-Pacific business jumped 19% to \$4,100m but Latin America slipped 3% to \$1,100m. Currency had a 2% favourable effect on turnover in the fourth quarter compared with the same period a year-ago. Louis Gerstner has lost most of his "must try harder" caution and crowed that "the breadth of our product and geographic portfolio once again paid off," adding that hardware rebounded from the product shortfalls of the third quarter, personal computers and servers were strong with 80% more System/390 MIPS shipped than in the year-ago period. Lotus Notes added 1.2m individual Notes users in the quarter. "Most important, our quarterly and full-year results indicate that our fundamental strategies are working," Gerstner asserted. AS/400 revenues, as expected, declined against last year.

Numbers

IBM reported fourth quarter net profits up 38.2% at \$1,700m after pre-tax charges of \$633m for workforce and asset reductions and a pre-tax gain of \$175m on sale of the Federal Systems Co, on turnover that rose 10.7% at \$21,920m. Net profit for the year to December 31 was up 42.2% after the \$1,840m charge to write off purchased in-process research and development at Lotus Development Corp and the pre-tax charge and gain, on turnover that rose 12.3% at \$71,940m. Net per share rose 50% to \$3.09 in the quarter, 44% to \$7.23 in the year.

TADPOLE'S ENCOURAGING Q1 SNAPSHOT

Tadpole Technology Plc, Cambridge gave a very hopeful first quarter snapshot last week, saying that sales for the period were up a whopping 62% on the year earlier period to £7m, and that it made an unaudited loss of £750,000 for the period compared with a loss of £2.5m this time last year. Group expenses in the quarter were £3.1m, down 22% from the first quarter of fiscal 1995, and sales of the mainstream Sparcbook product line of portables jumped 45% from a year ago and 89% from the previous quarter. "We expect to continue to demonstrate improving performance over the coming periods, and profitable growth remains our primary objective," said the chastened firm's chairman, Richard King.

SLOWING US MARKET, UB HURT "TECHNICALLY RICH, IMAGE POOR" TANDEM

Tandem Computers Inc has reported that first quarter net profits ~~slumped 94.4% at \$2.0m against a period that included a gain of \$30.6m~~ from sale of its stake in Network Inc on turnover that fell 8.3% at \$400.8m. It's predicting no better than break-even, and more probably another loss for the second quarter. It expects to see modest growth for the year as a whole to between \$2,300 and \$2,350m. It attributed its revenue shortfall to weakness primarily in the US, a slower than expected take-up of decision support systems, sluggish sales of high-end Himalayas (which it admits are 10% to 20% over-priced), an increased number of upgrade rather than new system sales and higher sales of lower margin products. It said its sales also diminished in part because of management succession uncertainty lengthened the sales cycle, but it also encountered some customer resistance to its discontinuing some trade-in and discount deals. Tandem, which newly-installed president and CEO Roel Pieper described as "ostensibly not a Unix company," is now doing around 20% of its system business on Unix, or around \$200m a year. 80% is accounted for by NonStop Kernel system sales. Systems account for 80% of overall revenue, UB Networks around 20%. Sales at UB for the quarter were \$94m - about the figure it seems to report every quarter - but a significant number of orders booked in the quarter were unable to ship so it saw an operating loss. It says it won't now seek a buyer for UB and expects to transfer some of Tandem's Internet software over to the unit. It foresees double-digit growth for UB now that its GeoLAN 500 system is shipping into a potential \$2,000m upgrade base. R&D spend in the quarter was \$82.6m, less than expected; the company has \$104m cash, \$142m total debt, a headcount of 8,423, up a handful in the quarter, and claims 55 new accounts won during the period. Geographic revenue distribution was 47% US; 3% Canada and Latin America; 26% Europe; 15% Japan and 8% Asia/Pacific. The UK, Netherlands and Japan turned in better-than-expected results. Telco companies accounted for 29% of revenue; financial institutions 45%; the distribution industry 5%; government 3%; manufacturing 5%; services 7%, transportation 7% and 7% others.

Puma, Whitney

Although Tandem's R4400-based S4000 uniprocessor has now gone out to 40 or 50 sites, shipments of the two-way Puma units with the first incarnation of the company's ServerNet interconnect have been held up a further two or three weeks for additional testing apparently required by telco customers. (It was just three weeks ago that bug fixes outpaced bug finds). Four-way units are now scheduled for next quarter. Himalaya implementation of ServerNet (Whitney) will ship early in Tandem's fiscal fourth quarter, calendar third. It claims to have 24 ServerNet-based NonStop Kernel Himalayas in different configurations now up and running internally. The Windows NT-based ServerNet systems being co-developed with NEC Corp are due late summer, with first revenue ships expected to kick in to Tandem's first financial quarter (calendar fourth quarter). The PCI-based ServerNet implementation for Compaq Computer Corp is still on track for the end of the year. Pieper, given room by founder Jim Treybig's detachment from the chair, to make Tandem his company, says he's seeking new board members with commodity, client/server and NT experience to turn around the "technically rich, image poor" company. Pieper promises to implement out a new cost plan in a couple of weeks followed by a strategic statement of direction in six to eight weeks time.

MIPS' R10000 DEBUTS

(Continued from front page) Mips chip partners NEC and Toshiba are now moving into volume production on the R10000, and should have them there in the March/April timeframe. Both were reluctant to discuss pricing, which naturally hinges on such variables as yield, another taboo subject. It seems they might start at around \$3,000 each in annual orders of 10,000. Toshiba, without being any more specific, was prepared to say that the R10000 would bring out a new class-of wins for the Mips architecture. Silicon Graphics is due to bring out its first R10000 box this Monday. NT systems maker NetPower, Sony and NEC are due to follow, while Tandem (which has deals with both NetPower and NEC) and Siemens-Nixdorf have also committed to using the chip for forthcoming boxes.

NAVIGATOR 2.0 UNDER STARTER'S ORDERS

Netscape Communications Corp is expected to debut the production version of its Navigator 2.0 browser personal edition over the next week or so. The software - nominally a \$50 item - will be available for Macintosh, Unix, and Windows systems. ~~A beta version of Navigator 2.0 has been available for download on the company's Web site for several months. The beta - like all of the previous Navigator betas - times out 90 days after being downloaded, and requires the user to download the full production version. 2.0 will be free to download and use for a 90 day evaluation period. Licensing terms which are downloaded along with the evaluation copy call for the user to send \$50 to Netscape for the browser's use after the 90 days, although it's difficult to believe that anyone's going to do this given the software does not prompt the user for payment, it doesn't time-out like the betas and the company doesn't appear to have any plans to proactively pursue the 15m-odd Internet users currently using Navigator. The retail version of 2.0 Personal Edition will cost \$50 though it's not yet clear when or from where it'll be available. The upgraded version of Navigator will feature support on all three platforms for online applications created with Sun Microsystems' Java programming language. Navigator 2.0 will include email and built-in security features.~~

Goodies

Meantime Netscape says 15 companies have created software components that extend the capabilities of Navigator using plug-in APIs which are now available on the Netscape Web site. The goodies appear as additional features of Navigator, adding multimedia capability such as streaming audio and video, VRML-based 3-D graphics and animation to Web sites. The plug-ins also enable Microsoft OLE objects, VBXs, and OCXs to be embedded in Navigator. The plug-ins include Macromedia's Shockwave for Director allowing 250,000 Macromedia developers to bring multimedia to the Web; VDOlive's VDOLive video compression, claimed to run 10 to 15 frames per second without loss of quality; Voxware ToolVox for The Web, allowing content creators to stream high quality, high compression (53:1) speech audio from their Web pages without the need for an audio server; Paper Software's WebFX, a 3D VRML platform allowing users to 'fly' through VRML worlds on the Web and run interactive, multi-user VRML applications written in Java; Chaco Communications' VR Scout VRML viewer; Corel Vector Graphics' CMX Viewer, which allows content creators to use high resolution graphics files; and Iion Corp's Lightning Strike, which is a compression-decompression algorithm. The first business-related plug-ins are Adobe Acrobat "Amber" Reader, a free version of Adobe's Acrobat document viewing software. Tumbleweed Software's Envoy allows users to view documents on the Internet exactly as they were designed. Visual Components' Formula One/NET is an Excel-compatible spreadsheet with built-in Internet functionality; and Starfish Software's EarthTime allows users tell time around the world. Other plug-in utilities include Object Power's OpenScape Toolkit - a rapid application development module for building applications for both the Internet and corporate networks or Intranets. Applications can contain OCXs and OLE objects. NCompass' OLE Control allows users to embed OLE controls as applets created using Visual C++, Visual Basic and Microsoft Windows Game SDK tools.

SYBASE TAPS PERSISTENCE FOR OBJECT-RELATIONAL LINKS

Sybase Inc will this week begin marketing Persistence Software Inc's object-to-relational tools for integrating object applications with its relational database. It'll offer the vanilla ODMG-compliant Persistence product initially, until the San Mateo, California-based company gets a Sybase-centric version out of the door which'll support some of the other object mechanisms Sybase is promising for its database and tools lines. Persistence swears it began negotiations with Sybase Inc before it got the database company's former executive VP marketing Stu Schuster on to its board (UX No 558), but said the appointment did nothing to harm its prospects there. The agreement's a tactical one for Sybase, and apparently unrelated to the other object technology developments it supposedly got up its sleeve. Although Sybase will be later than Informix, Oracle and CA-Ingres to the object waters, Persistence argues the other three don't really offer object development, just beefed-up servers with object querying which returns back a messy data structure. The agreement is also quite separate from the Powersoft side of Sybase, though Persistence hopes it can get its foot under that door by dint of this agreement. Persistence's pointing its development resources at supporting what it calls the 'intelligent cache' incorporated in three-tier application development solutions, plus the multi-threaded database client and server architectures now coming to market. It says SunSoft Inc's still on schedule to begin delivering the object-to-relational link as part of its Neo object environment this quarter.

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Silicon Graphics Inc has reported second quarter net profits down 11.3% at \$52.4m, after a \$561,000 merger-related charge, on turnover up 22.2% at \$671.7m. Mid-term net profits rose 6.3% to \$110.7m, after a \$1.3m merger-related charge, on turnover up 26.9% at \$1,267.0m. Net per share fell 11.8% to \$0.30 in the quarter, 3.3% to \$0.62 in the half.

It looks as if **IBM's PowerPC** dream could be nearly all over - instead of going on general release OS/2 for PowerPC is being offered as a Program Request Price Quotation item - on which basis who will be interested in it apart from ambulance chasers and kindred ghouls, plus those that curate museums of the computer equivalents of the Ford Edsel. IBM says that the future of the thing is being "reassessed".

A specification for an embedded version of the PCI architecture has been published by the **PCI Industrial Computer Manufacturers Group**: Compact-PCI is based on the PCI specification, but uses a Eurocard rack and board form factor, and a high-density, 2mm pin and socket connector; it defines 3U and 6U board formats for modular, rack-based systems; an optional mezzanine board format provides add-on functions to other small form factor boards needing PCI expansion.

Computer Associates International Inc has reported third quarter net profits up 30.4% at \$227.2m, on turnover up 39.3% at \$1,004.4m; nine month net losses were \$321.5m, against \$219.0m profits last time, on turnover up 31.5% at \$2,394.2m. Net earnings per share rose 30.4% to \$0.90 in the quarter.

Thinking Machines Corp has secured a \$10.6m convertible bridging loan from Ladenburg, Thalmann Capital Corp. The loan will be made to TMCA Corp, formed to invest in Thinking Machines when it emerges from bankruptcy. The loan, expected to close next month, is for product development and marketing.

Internet access in Britain is to become a £1,000m business within five years, according to a report from City brokers **Durlacher & Co Ltd**, and the main sectors to be hit will be telecoms companies. This compares with spending by UK companies and individuals of £35m for access and related services in 1995.

French C++ tools specialist **Ilog SA** has appointed Steve Lacey as MD of its UK subsidiary.

Santa Cruz Operation Inc and **Hewlett-Packard Co** say they'll preview their technology development roadmap, specifications, Novell integration work and other 64-bit Unix plans at UniForum next month.

According to the *Wall Street Journal* **Apple Computer Inc** and **Sun Microsystems Inc** were in merger talks as recently as two weeks ago; abandoned once the issue of price reared its ugly head. It also reported that Hewlett-Packard and Oracle have also been approached.

Oracle Corp's achieved 5,124 tpmC - \$295 per tpmC - on a 16-way Sun SparcCenter 2000E running Oracle7 7.3, besting Sybase Inc's 4,544 tpmC - \$396 per tpmC - recorded on a 16-way 2000E a couple of months ago (UX No 559).

SunSoft Inc's now offering French, Italian, German, Swedish and Spanish versions of Wabi 2.1.

Santa Cruz Operation Inc's splitting its Europe-International operations in two. It's created an Asia/Pacific sales and marketing group that'll be run by senior VP Geoff Seabrook, along with senior VP and CFO John Jarvis during a transition period. Bernard Hulme, formerly head of Europe-International business gets a new position; VP competitive projects. SCO's seeking a VP operations for Europe, Middle East and Africa.

Privately held **Persistence Software Inc** (see page 7), says it'll seek an IPO by the end of next year - if it doesn't get bought first. It has 30 employees, claims to have gone into the black last year and says it has 2,000 users of its software at 100 customer sites.

Rogue Wave Software Inc has opened a sales and support office in Aschaffenburg, Germany, to cover Austrian, German and Swiss markets and anticipates another office in Europe later in the year. Rogue Wave is promising a set of development tools for Java and the Web in the second quarter. The Corvallis, Oregon-based company has just gone through its second round of venture capital financing which landed it \$3.5m and says it may initiate an IPO by year end.

The first of **Tivoli Systems Inc's** Application Management Specification (AMS) modules is now available for use in managing SAP AG R/3 systems. The module is a set of management objects integrated with the Tivoli Management Environment to augment existing R/3 management facilities for event and client management as well as operations automation (UX No 568). Tivoli says it will offer a packaged consulting service including deployment and installation from the end of the month. Bundled with TME the module costs from \$50,000.

US distributor **Ingram Micro D** is to market **Open Environment Corp's** Entera three-tier development system and Internet application launcher to VARs and retailers.

Multi-vendor network integrator **Trellis Network Services Inc**, Princeton, New Jersey, is to resell Stratus Computer Inc's entry-level PC Cluster Server (Radio), which uses its Isis Distributed Systems Inc subsidiary's software.

Oakbrook Terrace, Illinois-based **Platinum Technology Inc** has ported its database management tools, including the TSReorg database table reorganisation tool, to ICL Plc's Teamserver and Superserver systems.

Adobe Systems Inc is shipping what it's claiming is the first cross platform visual SGML (Standardized Generalized Markup Language) tool for authoring and electronic publishing. Adobe Framemaker+SGML is the first joint product out of the door since Adobe acquired technical authoring house Frame Technology Corp back in June (UX No 544). It combines page composition, text editing, graphics, structure validation, visual support for native SGML in a single environment. Up on Sun, IBM and HP it goes from \$2,000 for a personal licence, \$4,000 for a shared license. Framebuilder upgrades are from \$500.

Business Objects Inc has tapped Symantec Corp director of market development Matthew DiMaria as its VP marketing North America.

Unison Inc, headquartered in Santa Clara, California has released Version 4.3 of its workload distribution software Load Balancer. New features include specification of program or scripts before starting an application, expanded day of week and day range for configuration options, queue status and application specific reports. Pricing starts at \$3,500 and is shipping now.

Maximized Software Inc, Irvine, California has released LogoMax which replaces Netscape's Navigator 'busy box' - the status windowing showing a white N - with a customised graphical animation and sound. The company hopes it'll be viewed as a unique marketing opportunity.

The handful of MPP exhibitors we canvassed at last week's National Retail Federation show in New York each said they expect to do a lot of business on **Informix Software Inc's** forthcoming OnLine Extended Parallel Server 8.0 (OnLine XPS) database, apparently re-designed from ground up to support large-scale data warehousing sites. Most agreed the biggest drag on the warehousing market has been **Oracle Corp's** inability to support large amounts of data. The show, cooped-up in The New York Hilton (we like the CNN monitors in the elevators) and The Sheraton round the corner, will move to larger premises in the Javits Centre next year.

As well as bundling Solaris x86 2.5 and Java with its shrink-wrapped InterOffice suite from next spring (UX No 568), **Oracle Corp's** putting its Microsoft Corp BackOffice competitor up on Sun Sparc systems immediately.

Former HP big-wig Wim Roelandts' arrival at **Xilinx Inc** as CEO (UX No 572) has put the squeeze on Xilinx president Curt Wozniak, the hockey-playing ex-director of marketing for Sun Microsystems Computer Company and a long-time Scott McNealy buddy. It's not exactly what Wozniak had in mind when he moved over but he figures he's pretty resilient.

Computervision Corp, Bedford, Massachusetts, will be offering Auspex Systems Inc's NFS NetServers as part of its capacity planning and optimisation service solution.

Former **Informix Software Inc** UK marketing director Andy Smith has jumped ship to mainframe systems administration house **BMC Software Inc** where he takes on a newly created role as European marketing director.

We missed this one but Andrew Allison at *Inside the New Computer Industry* picked it up. Apple Fellow Guy Kawasaki defining the Internet for *Forbes*: "30 million nerds communicating with people they don't know about things they don't understand for reasons they can't explain."

Sun Microsystems Inc's new JavaSoft unit, which its biggest cheerleader Scott McNealy described as "dangerously close to profitability already," put one "want ad" in the *San Jose Mercury News* and got a thousand responses. Last week Java rated a three-page spread in *Time* of all places. The magazine said more than 100,000 copies have been downloaded by developers.

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TUXEDO CHANGES HANDS

Novell Inc, which has been shopping its Tuxedo TP monitor around (UX No 551), whilst it tried to unload WordPerfect, has cut a deal with an EM Warburg, Pincus & Co Inc-backed start-up called BEA Systems Inc out of Palo Alto, California founded by ex-Sun VP now CEO Bill Coleman, ex-Pyramid executive VP now sales and marketing boss Ed Scott and ex-Sun exec now CTO Alfred Chuang. The name BEA comes from the initials of their first names. BEA hasn't exactly bought Tuxedo, which Novell wants to continue to use to enhance its NetWare Directory Services (NDS), but it has acquired all distribution, development, source code and trademark rights so that even Novell can't use the Tuxedo brand. It's also getting some of Novell's Tuxedo people including Joe Menard, who's headed up Tuxedo from time to time depending on what reorganisation it was in. BEA will collaborate with Novell on NDS enhancements and take over all its other interests be they on Unix or NT. BEA, which for a time called itself BEA Enterprises Inc, kicked off last September and subsequently acquired the top two Tuxedo houses Edison, New Jersey-based Information Management Company (IMC), the front-runner, and Fremont, California Independence Technologies Inc as well as the VIS/TP assets of Dallas, Texas-based CICS-compatible shop VI Systems. It was Unisys Corp that tapped IMC as worldwide distributor of its NT version of Tuxedo. BEA seems to understand the potentials of Tuxedo beyond simply the OLTP market and its ultimate use as the distributed framework for developing the majority of three-tier client/server applications as well as its use as their actual infrastructure. However, if Tuxedo isn't man enough for the job then apparently BEA, playing both sides of the street, can fall back on Tuxedo's chief rival Top End, which sources say BEA has a source license to. BEA believes it has a little lion cub by the tail which will soon grow up to rival the size of any self-respecting database firm, which when last we looked at Oracle Corp's financials was mighty indeed. It estimates its revenues this year will exceed \$25m. What BEA doesn't acquire in the way of OLTP providers and software it will develop, such as object orientation. Its target audience is the Fortune 500 which is collectively spending \$70bn a year running and maintaining mainframe OLTP systems and will need to migrate to distributed environments. Warburg, Pincus is putting \$50m into the company over three years. The first \$25m is already in. Rivals reckon BEA has its work cut out for it with Tuxedo. Neither Novell nor Tuxedo's previous owner AT&T Unix System Labs ever made the capital investment to bring it out of the 1970s. It should have been cranked every five years and wasn't. Making Tuxedo an integral part of NDS could obliterate its market. BEA will have to fire the distributor network that sells 90% of Tuxedo unless it wants to live on the same 40 cents on the dollar that Novell did, yet its maintenance and support operation is reportedly not in place. Novell derived no maintenance, support or training revenues from the thing - and it created no pull-through for other Novell products - so what looked like a \$22m business last year was actually worth \$4m - which is why Novell is taking measures. There were no revenues there to pay the \$15m-a-year it would take to modernise it and build more volume. Rivals also claim BEA will have problems retaining Tuxedo's large accounts. You can bet your boots companies like Transarc are concerned about getting a new competitor, claiming to have the critical mass to drive OLTP's technical direction. Tuxedo claims a 40% market share.

PRAXIS SEEKS LIFEVEST FOR OMNIWAREHOUSE

Facing competition from Oracle Express, Informix MetaCube and other OLAP solutions, Cambridge, Massachusetts-based Praxis International Inc looks set to dump most of its multidimensional/data warehouse aspirations into the arms of a someone more capable of holding its own in the major leagues - if it can find one - and will instead play to its own data replication strengths. Praxis is seeking a partner to take its OmniWarehouse to market, saying it wants to retain development and ownership of the data store, which looks stillborn otherwise. The warehouse is designed to hold information captured from databases through OmniReplicator, the first piece of its OmniArchitecture warehouse, OLAP and replication environment. A planned second quarter release of the OmniWarehouse multidimensional database will be a late third quarter release at best. The OmniInfo warehouse query mechanism has been tossed into OmniWarehouse. Meantime, the OmniReplicator bi-directional data tool is now out at ten beta accounts. It supports bi-directional data replication between Oracle, Sybase and Informix, with support for DB2 and its own Model 204 database due in March. It supports one-way replication from Ingres, Rdb, Teradata and its own 1032. OmniReplicator 2.0 is due this summer with new data aggregation and summary features and support for flat file databases. It's currently priced from \$20,000.

INTEL BUILDING 64-BIT MERC

Company sources confirm Intel's implementation of the IA-64 64-bit instruction set created by its partnership with Hewlett-Packard Co is code-named Merced. There's a lake of that name near San Francisco. HP says its own implementations will differ only in packaging. *Microprocessor Report* notes Merced is being designed entirely by Intel engineers and that HP helped define the instruction set and interfaces. It reports Intel saying all IA-64 chips will be built and sold by Intel regardless of which company designs them, reportedly to ensure a level playing field between HP and Intel's other customers. Merced will be fully compatible with iAPX-86 binaries although performance will be slower than native IA-64 mode. It'll also execute PA-RISC code with, the *Report* notes, some software assistance.

ASPEN IS DEAD, LONG LIVE ASPEN

According to what we heard last week, the Intel-policed Aspen 64-bit Unix API process will either die from the beginning of February or live on, albeit in a different form - or both. By all accounts it is set to declare a victory on its main August 1995 goals to define 64-bit Unix APIs and C data-types - it may have added as many as 850 API's to the original 1170 suite making it Spec2020 - and turn them out to the industry and ISVs for review within weeks. With some technical issues resolved (but 32-bit technologies that don't lend themselves to 64-bitness apparently still on the table) Aspen's inner development circle - HP, SCO, Novell DEC, NCR, IBM and Sun, plus Intel - are at the point where they need to make some serious business decisions. The issue's not what's on the list, which they have in hand, but how much time it'll take and how many turns of the technology they can get: what will customers be willing to pay and what exactly are they going to get, and when. Other Unix industry technologies such as DCE, OpenDoc, Taligent, even CDE/Motif, although appropriately funded, were destroyed by the fact they didn't have a guy with a clipboard and a whistle ensuring the stuff made it out of the door on time. Unix System Lab's System V development cycle cranked every 18 to 22 months. In hindsight it should have been nine. By contrast Microsoft Corp has shipped whatever it has of Windows and NT ready and then improved it in the market with dot releases.

Open Group

Meanwhile, Aspen's work has supposedly uncovered and corrected some but not all of the problems that the Unix Spec 1170 has with 64-bits. These, plus wider Unix API considerations are being turned over to the merged Open Software Foundation-X/Open Co Ltd organisation - which may or may not be called the Open Group - that was meeting as we went to press to decide its genesis. Reportedly at issue is whether the API work - considering vendors' business requirements - goes forward as a general Unix API framework around which the industry can rally, including Spec 1170 enhanced for 64-bits, plus technology such as CDE/Motif, DCE, systems management and objects, or whether there's a modular approach which leaves those other technologies to one side. (There's still the question of those technologies not disposed towards 64-bitness). Technically it's said to be a no-brainer. The issue's down to marketing and how vendors can position their strategies accordingly. DCE supporters want DCE included, the other side of the house, of course, is saying no.

IN STARTLING CLIMB-DOWN, COMPAQ KISSES AND MAKES UP WITH INTEL

In what looks like a humiliating climbdown after all the aggressive and bitter noises Eckhard Pfeiffer was making on the record about Intel Corp and its practices in late 1994, Compaq Computer Corp has swallowed its pride, ~~signed a comprehensive patent cross-license agreement with Intel, to run for 10 years, and agreed to put the "Intel Inside" stickers on its machines again.~~ Under the new agreement, Compaq is entitled to discounts on its advertising by agreeing to put the Intel Inside logo on its computers and in its ads. Intel pays part of the bill for Intel Inside ads. The cross-license agreement means Intel can avoid being drawn into Compaq's patent lawsuit against Packard Bell Electronics Corp: many of Packard Bell's machines use Intel motherboards so Compaq would have been in the position of suing Intel in the Packard Bell trial. The other big complaint about Intel was the fact that Intel was helping Compaq competitors by selling them motherboards; that looks a little specious now Compaq itself is buying Pentium Pro boards from Intel.

BAY NETWORKS ENHANCES MANAGEMENT OF ANNEX PRODUCTS

Santa Clara, California-based Bay Networks Inc has enhanced its network management software to improve the management of the remote access products it picked up with its recent acquisition of Xylogics Inc. By integrating Xylogics's Annex Manager management software into its Optivity management system, says Bay, it has consolidated control of its hubs, switches and routers and Xylogics's Remote Annex products into a single point of management. Through Bay's Optivity Enterprise software, network managers can view and configure Xylogics's stand-alone remote access products and Bay's 5390 remote access hub modules for the System 5000 using Annex Manager. The company has also announced version 2.0 of Annex Manager, including menu-driven screens for easier set-up and configuration of remote access servers. The integration of Annex Manager into Optivity Enterprise will be available during the first quarter at no extra cost. Annex Manager 2.0 is out now for systems including SunOS, Solaris, HP-UX, RS/6000 AIX and Santa Cruz Unix, with prices starting at \$495.

SUN, ELSI TECH WIN NATIONAL BANK

Sun Microsystems Inc and its main partner in Kazakhstan, Almaty-based Elsi Tech Ltd (see page 6), have won a tender organised by the National Bank of Kazakhstan to supply a system to the bank's systems analysis department. Six companies participated in the tender: Hewlett-Packard Co through its partner, Scan-East, Digital Equipment Corp directly, Compagnie des Machines Bull SA through its main local partner Bulak, Dell Computer Corp through its local distributor, Comel Ltd, Intel Corp through Intel distributor Tokrau Ltd and Sun Microsystems through Elsi Tech Ltd. The tender was called the "Computerisation of the Department of System Analysis of National Bank of Kazakhstan" and specified a Unix server, some workstations, system software and other software. Sun Microsystems successful proposal was an implementation including one Sparcserver 20712 and 10 workstations (two Sun Sparcstation 5, Model 85s and eight Sun Sparcstation 4, Model 85s). The total value of the contract is believed to be around \$100,000.

JOB LOSSES AFFLICT ITALY'S SOFTWARE AND SERVICES SECTOR

Italy's software and services industry suffered a decline of 3% in its employment, or about 1,800 jobs last year. Market research firm Nomos SpA has just published a study of employment prospects in the sector conducted for Anasin, the branch of Confindustria that represents 400 software, services and systems engineering companies. The study, which polled 25 software and hardware vendors, said the reasons for the drop include a reduction in government contracts, the stagnation and reduction in services ordered by large banks and industrial groups, and "the total inattention of the government to the need for an industrial policy in this sector." The report noted, however, that the decline was only a third of the 9.2% drop in the hardware sector.

CISCO PAYS \$115m IN SHARES FOR TGV TO GROW INTERNET ARM

Another little company hoovered up by bigger trawlers, is Santa Cruz, California TCP/IP implementations specialist TGV Software Inc, which enables Cisco Systems Inc to put another tick on its lengthy shopping list of infill companies specialising in ancillary technologies it needs. Cisco is paying one new share for every five TGV out, valuing TGV at \$115m. It wants the acquisition to enhance the ability of its Internet Business Unit to provide network applications and services used to build corporate intranets and support corporate use of the Internet.

NOVELL RUSHES TO EMBRACE WEB

Novell Inc is expected to ship new and upgraded products in the next two to three months to bring on-line capabilities to its product line, according to a report in *US PC Week*. Novell confirmed that launches are imminent, but gave no further details. According to the report, first up will be a GroupWise ~~Web Hypertext Transport Protocol server, letting users access GroupWise~~ from any Internet browser, to be followed by products designed to make information stored in NetWare Directory Services accessible over the Internet. Sun Microsystems Inc's Java will also be licensed, and Novell will bundle its Web server with NetWare. By accessing GroupWise directly from a Web browser, remote users will be able to access their GroupWise mailboxes. The GroupWise Web server will render all GroupWise information as HyperText Mark-up Language documents and is expected to be directly integrated with Novell's Web Server. Also planned is a new version of NetWare Web Server that will link Novell's NetWare Directory Services to the Web. Corporate intranet users would then be able to use NetWare Directory Services to find information and store frequently-accessed Web sites, and use NetWare Directory Services as a repository for applications. According to *US PC Week*, Novell is evaluating three options for integrating NetWare Web Server with NetWare itself. It may bundle the Web server with all versions of NetWare 4.X, bundle it with NetWare Connect, or include it within the version of NetWare 4.X that is shipped by hardware OEM customers.

INTERNET COMMERCE: MANZI TO RUN INDUSTRY.NET CORP

After New York, any other town may be Pittsburgh, but former Lotus Development Corp chief Jim Manzi was never going to stay out of the industry for long, and having found the corporate culture at IBM Corp too alien, he had to satisfy his urges, even if it did mean joining a firm in the Pennsylvania steel town. He will stay in Boston as president and chief executive of privately-held Industry.Net Corp, which he says really does have a "model for making money" on the Internet. Its business will be secure electronic commerce using existing Electronic Data Interchange standards and it aims to launch its service in a few months. It claims it has as members 200,000 buyers with potential purchasing power of \$165,000m and about 4,000 companies listing products and services, ranging from computer-related equipment to industrial supplies. Companies listing products will pay a fee ranging from several thousand to several hundred thousand dollars.

STAR DIVISION INSISTS IBM COUNTRY OPERATIONS STILL KEEN ON STAR OFFICE

Hamburg-based Star Division GmbH's dreams of stardom met an unhappy end when IBM Corp decided to buy Lotus Development Corp and not incorporate Star's object-oriented technology into IBM's word processing products, but that doesn't mean that the chapter is closed. IBM subsidiaries around the globe, including those in Germany, the UK and New Zealand, continue to show interest in the tiny German software house. After all, Star product manager Uwe Fasterling said, Star's Star Office product is the "only OS/2 package of its type and... the only one that can take on Microsoft's Office." IBM, Fasterling says, is still interested in Star (no matter what headquarters decides) because it is dedicated to getting more applications up under OS/2. Star has recently released a new version of Star Office, known as Star Office 3.0, markedly enhanced and aggressively priced at almost half the cost of Microsoft Corp's competing offering. The package consists primarily of three modules - word processing, spreadsheet and calculations and graphics. Among the newest features, code sharing is the most important, Fasterling maintains. Star Office 3.0, unlike Microsoft Office, requires only 33Mb on the hard disk and 8Mb main memory. Another difference: Star runs under Windows 3.1, Windows95, NT, OS/2 Warp, Power Mac and a variety of Unix environments including Solaris and AIX. Plans are in the Star Division pipeline to release versions of the product in nine languages by the end of 1996.

SPYGLASS MOBILISES BUYING POWER TO LAND STONEHAND

Spyglass Inc realises that with its share price vastly inflated by Internet hype, there is no time like the present to make acquisitions, and has been telling anyone that will listen that it is in the market for companies with new technologies aimed at managing all the information contained on the World Wide Web. And yesterday, the Naperville, Illinois-based Mosaic Web browser marketer announced that it is to pay \$9.5m in shares for Stonehand Inc, a privately-held Cambridge, Massachusetts developer of Internet text formatting software. Operations and its 10 employees will form the core of Spyglass's East Coast research and development arm.

ODI READIES FAILOVER, PERFORMANCE MONITORING

Tracking the current trend for high-availability solutions in the object database market, Object Design Inc, Burlington, Massachusetts, says it's almost ready with its anticipated asynchronous replication technologies that'll provide failover, with reading and limited writing facilities, plus extended RAID support for its ObjectStore database (UX No 564). The RAID/failover software will ship next quarter as an add-on to existing ObjectStore implementations or as a packaged high-availability solution. ODI says it's not going the whole hog and doing synchronous replication a la Objectivity Inc (UX No 573), claiming those tasks are more suited to through-and-through fault-tolerant concerns such as its Stratus Computer Inc's Isis Distributed Systems Inc partner rather than "database vendors masquerading as fault-tolerant vendors." Isis is currently building a version of its high-availability replication software for use with ObjectStore. The expected performance monitoring tool built for it by its 20% stockholder IBM Corp will debut in a couple of weeks as ObjectStore Performance Expert, OPE. ODI's anticipated SQL client, which provides access to ObjectStore C++ data from SQL-based tools and applications, is expected soon as ObjectStore Inspector. It's a forms-driven front-end query system. Other developments now underway include providing support for using ObjectStore as a back-end Web server, Web content and Java applet hosting. The project to integrate ObjectStore with Iona Technologies Ltd's Orbix object request broker as Orbix-ObjectStore, allowing objects to be stored and retrieved from the ODI database using Orbix is still underway. ODI says it's not seeking a relationship with IBM beyond that which it already has.

COMPUWARE ON ACQUISITION TRAIL

Farmington Hills, Michigan-based Compuware Corp is on a buying spree and says it plans to acquire other development and production applications in addition to those bagged recently (UX No 573). For the medium term it's looking to add other fault diagnosis and data management services. Its divided its client/server business into three areas. Design and development is based upon its Uniface 4GL acquisition. Testing and implementation includes the Mercury Interactive-derived Playback tools; production applications include the EcoTools and EcoNet. EcoNet, the renamed CoroNet Systems management application acquisition, includes a SingleView visualisation interface and reporting tools, plus Supermonitor, a discovery agent that analyses network traffic information in real-time. Prices start at \$6,800.

WRQ SHIPS NEW REFLECTION SUITES

PC-to-Unix connectivity house WRQ Inc, Seattle, Washington, will introduce Version 5.6 of its Reflection Suite for the Enterprise and Reflection Suite for TCP 5.6 next month. RSE enables heterogeneous sites to integrate IBM SNA with TCP/IP while Reflection Suite for TCP is for networked systems via TCP/IP. Based on WRQ's TCP/IP stack including built-in network diagnostics, NFS, dynamic host configuration protocol and DNS over NetBios the new versions come with WRQ's point-to-point protocol client, building on the earlier serial link interface protocol by adding features such as link-level error correction to improve reliability and efficiency. Further enhancements include a new interface monitor utility to check network connections, enhanced Internet applications including ProntoMail 2.0, enhanced Mosaic 2.1 and WinVN and full support for OLE 2.0. Reflection Suite for the Enterprise 5.6 goes for \$500, the TCP version for \$400. Both suites provide access to IBM mainframe, AS/400, Unix, Digital VAX and Alpha hosts.

LOW-END POLO DUE BY MID-YEAR

The low-end version of Stratus Computer Inc's PA-7100-based Continuum fault-tolerant SMP line is due by mid-year. The so-called Polo machine will use PCI bus but lack the expandability of its 600 and 1200 series cousins (which won't get a PCI bus makeover) and continue Stratus' emphasis on low-end solutions. Stratus awaits HP's 64-bit PA-8000 to carry its CPU plans forward. Stratus last week reported fourth quarter net profits up 5.2% at \$14.1m against a period that included a \$7.8m write-off of purchased research and development, on turnover that rose 11.5% at \$168.4m. Net profit for the year to December 31 plunged 71.6% to \$17.3m after a \$24.5m restructuring charge, on turnover that rose just 2.0% at \$587.9m. Net earnings per share, up 11% at \$0.60 in the quarter, slumped 70% at \$2.47 in the year.

FORTE ADDS VISUAL APP BUILDER

Forte Software Inc's added a GUI-based application generator for use with the recently introduced 2.0 release of its three-tier development environment. Forte Express generates both the user interface and SQL database access components plus a framework for implementing business policies as shared Forte services from drag and drop components. As well as user-defined items, it can accommodate imported object-based CASE models and database schemas into Express business models, application models and the generated applications. Express uses OMT Object Modeling Technique methodology and generates 4GL. Changes in the Forte partitioning, deployment and management models can be saved in separate leafed files and be re-incorporated back into Express. Database supported include Oracle, Sybase, Informix, Rdb, Microsoft SQL Server, DB2/6000 and ODBC. Forte Express supports Motif, Mac and Windows clients; OpenVMS, Digital Unix, AViiON, AIX, NT, Dynix, Solaris and HP-UX servers. A site licence is priced at \$20,000 until April, when a 10-developer licence will cost \$20,000. Forte's also added five new partners to its tools programme; Interactive Development environments, Open Horizon, Ptech, Select Software Tools and Tivoli Systems. As far as integration with object frameworks go, Forte says it's had most customer requests to tie into the Iona Technologies Ltd Orbix ORB. The company claims over 150 customers for its Forte second generation application development environment with an average install price of \$200,000+. It expects around 60% of its users to buy Forte Express. Of the crop of companies now re-positioning for the second generation, application partitioning market, Forte says if they didn't build their technologies in the 1990s then they are likely to have key components missing.

CALDERA LINUX DESKTOP ON RUNWAY

Caldera Inc, the Orem, Utah-based company backed by former Novell Inc boss Ray Noorda, says it's in the final stages of putting a channel and a marketing campaign together for the launch of its first product, the Caldera Network Desktop, on February 5, with shipments expected six to eight weeks thereafter. The Linux-based desktop, available in beta for some months, is described as an Internet/Intranet office suite for small offices. It includes the Linux kernel, GUI, built-in networking for Internet and other IP networks, NetWare client, back-up and the 32-bit Twin XPDK Windows API from Willow Software Inc (UX No 572). A package of applications including WordPerfect, Z-Mail, spreadsheet and Motif will be available for the desktop (UX No 556). Caldera, which has 14 full-time and a similar number of part-timers, dispelled the notion it may be about to be merged or acquired.

PROJECT TECHNOLOGY UPDATES C++ DEVELOPMENT TOOL

Berkeley, California-based consulting and training outfit Project Technology Inc, home of the Shlaer-Mellor method for object software design has released Version 3.2 of BridgePoint, its object software development tool which it inherited as part of its acquisition of Cary, North Carolina-based Objective Spectrum in the summer (UX No 542). BridgePoint is a C++ application development environment supporting re-generative automatic code generation and consists of a model builder for creating Shlaer-Mellor analysis models, a model verifier, an object analysis model simulator development process and generator and a translation framework for translating models into executable source code. The new version of BridgePoint includes up to 50% greater code generation capabilities, new interfaces for third party development tools and APIs OpenLook, Motif and Windows. Up on workstations from Sun, HP and Silicon Graphics, BridgePoint goes from \$8,000 per user for 10 users.

Incremental improvement

Meantime Project says its made an incremental improvement to its Shlaer-Mellor object-oriented analysis method, improving the formalism - a mathematical system comprised of axioms and theorems - and rigour of the method, the result it says of its experience with large-scale software developments. The Shlaer-Mellor Method; The OOA96 Report can be downloaded at <http://www.projtech.com>.

DEC STARTS TO MOTOR AGAIN AT LAST AS PRODUCT REVENUES, UP 26%, SET A RECORD

By Tim Palmer

With second quarter product revenues soaring 26% to a record \$2,347m, it looks as if Digital Equipment Corp might this year finally get its annual turnover up out of the \$14,000ms where it has been stuck for some five years. The company is "optimistic we will experience continued growth" in the second half of the fiscal year to June. DEC says 64-bit Alpha systems sales rose 50% over a year earlier, driven by strong market demand for AlphaServer systems, while the AlphaStation line saw particularly strong growth in workstations shipping with Windows NT. Total Alpha-generated revenue now exceeds \$7,000m, which still looks a lot less than it ought to be at this stage in the game. Service revenues were \$1,604m for the second quarter, "essentially unchanged" from the same period last year. While VAX maintenance revenues were down slightly, the decline was offset by the growth in the company's new multivendor services, network integration services and Alpha systems maintenance and support, DEC said. The implication is that the services business is not taking off quite like DEC intended. DEC is particularly pleased with its forthcoming FX!32 software translation and emulation technology, which, as reported, is designed to enable iAPX-86 applications to run at high speed on Alpha systems. The FX!32 software, expected in mid-1996, the company said. DEC also said it recorded strong revenue growth in its personal computer business during the quarter, although margins here are unlikely to be anything to write home about. Revenue from the company's components product businesses, including storage subsystems - it still integrates the disk drives now made by Quantum Corp into disk subsystems and arrays - and network products, grew more than 30% over last year, with the storage business unit seeing strong revenue growth in its StorageWorks products. The network products business unit also saw "significant" revenue growth in its switching and hub products, DEC said. Product gross margin was an improving 32.5%, compared with 30.5% in the second quarter of a year ago. Service gross margin slumped to 32.7% compared with 36.1% in the comparable period last year, reflecting an expected shift in mix towards new high growth but somewhat lower margin multivendor service and support offerings; the problem here is that margins in this segment will continue to deteriorate as the new business, with its poor quality of earnings, progressively becomes a higher and higher proportion of the whole. DEC ended the quarter with about \$1,50m in cash, essentially unchanged from the first quarter and an increase of \$362m compared with last year, but still a very low figure for a company that was once one of the most fiscally prudent in the industry, and once had about twice as much cash as well as no debt, far from the situation now. DEC ended the quarter with about 61,100 employees, down 4,500 from a year ago and down 400 from the first quarter of the current fiscal year. Overall, DEC said it saw "significant" revenue growth in all of product businesses and in new service offerings during the second quarter, and recorded good revenue growth in all geographies. Its priority over the next two years, it says, will be to concentrate on improving operations to bring profit levels in line with the computer industry's leading financial performers. DEC reported second quarter net profit up 688% at \$148.8m on turnover that rose 13.8% at \$3,951.4m. Mid-term net was \$196.9m against a loss last time of \$111.7m, on turnover that rose 9.5% at \$7,222.5m. Net per share, up 1,200% at \$0.91 in the quarter, was \$1.17 in the half.

BBN TO REORGANIZE IN WAKE OF Q2 LOSSES

It may be no co-incidence that on the same day that networking R&D group BBN reported a loss of almost \$8m in its second quarter, \$16.5m for the half to December 31, it announced a re-organization designed to lump most of its high profit yielding business into one unit. The company is now split in half with a newly inflated Internet-based business and the remaining BBN Systems and Technologies. The buzz around the Internet being what it is today, it is no surprise that BBN Planet, its erstwhile Internet managed network service focused on firewall technology and bringing security to the Internet, will form the hub of the new business unit and will retain that name. It will also absorb other BBN Internet related activities such as the network management contract for AmericaOnline and its fledgling internet dial-up services and its network construction consulting group. This new group will account for roughly 20% of revenues at \$27m (out of \$124m) for the half year. This leaves its key contract R&D business, both federal and commercial and roughly half of its business, mostly on cost plus contracts, lumped in with its loss-making BBN Domain pharmaceuticals and manufacturing software and its Butterfly parallel processing hardware business. No-one at the company would comment on the reconstruction and what it may lead to, but it certainly leaves questions about whether all staff will survive, and what will happen to strategic investors such as AT&T Ventures which bought into BBN Planet for \$8m in the second half of last year and whether it accepts a smaller portion of a bigger business. On the one hand this could be BBN moving smartly to divert attention from a loss-making year, but it would be foolhardy not to raise the spectre of the less glamorous businesses being dumped in the near future, with BBN cutting back to its lifeblood contract R&D and Internet related activities. The company reported second quarter net losses of \$7.9m up from \$1.9m, on turnover that rose 23.5% to \$63.2m; mid-term net losses rose to \$16.5m from \$3.7m, on turnover up 20.8% at \$124.3m.

AT&T FIGURES SPATTERED BY WRITE-OFFS

By Tim Palmer

The net damage to AT&T Corp as a result of its vast \$6,250m hit to cover the cost of breaking itself up into three was a quarterly loss of almost \$2,700m, but it just managed to stay in the black for the full year with \$139m. It looks as if the sooner NCR Corp is cut free to sink or swim by itself - and a merger with Unisys Corp might still make sense, although not nearly as much as acquisition of Sperry Corp in the mid-1980s would have done - the better. The AT&T computer unit reported a 28% slump in sales to \$1,300m in the quarter and an 8% decline for the year to a mere \$4,690m, making it smaller than when AT&T acquired it. The decline was due largely to the unit's sale of the micro-electronics business in early 1995 but also the decision to discontinue manufacturing personal computers in the third quarter. Provided AT&T lets NCR go with no debt, a merger would spread Unisys' debt burden over a bigger capital and asset base. Excluding charges associated with AT&T's restructuring, NCR reported an operating loss of \$79m for the quarter, and \$580m in the year. The firm achieved a tiny \$2m operating profit in the previous year. In telecommunications services, revenues were up 6.5% to \$12,040m for the fourth quarter, and 6% for the year to \$47,280m, so even spun off, it will be a big business. Excluding wireless services, revenues rose 5.4% for the quarter and 4.8% for the year. Long distance calling volumes grew 8% in the fourth quarter, and for the year, the company handled a record 61,600m calls, a 10.8% increase. AT&T Wireless had a net gain of 1.5m cellular service subscribers, a 37% increase over last year. Wireless revenues grew 26% to \$792m for the quarter and 28% for the year. Product sales gained 6% for the quarter to \$7,510, 6% for the year to \$22,410m. Sales of network telecommunications equipment increased 23% in the quarter to \$4,100m. International equipment revenues rose, led by strong sales in Saudi Arabia and in China, the company noted.

IBM RELEASED FROM MANY 1956 ANTI- TRUST CONSENT DECREE SHACKLES

IBM Corp has succeeded in its bid to have most of the provisions of the 1956 anti-trust consent decree voided, and it is now free to resell used RS/6000s - for whatever price it can get. That liberty highlights how much the world has changed in the intervening 40 years: used RS/6000s - or any other Unix box for that matter - aren't actually worth more than about 5% of list. The market is so much more competitive now, and IBM so much less dominant, that the relaxations look more like a license to find ingenious new ways to lose money. The Integrated Systems Solutions Co no longer needs to be run at arm's length and is now free to buy mainframes from IBM at whatever low price it needs to undercut all competitors - but if it does, it will simply mean that the whole deal will be less profitable - and the services business already barely covers overheads. Equally, IBM is free to absorb IBM Credit Corp and write leases that knock Comdisco Inc or General Electric Credit Corp out of the deal, but only at the expense of making a loss on the deal. The court order terminates the decree in its entirety for all IBM products except the System 390 mainframe and AS/400 mid-range lines, and the only important surviving restriction here is that IBM must continue to provide spares and manuals to third party maintainer and brokers at a fair price; IBM still wants the decree rescinded in its entirety "as a matter of principle."

SILICON GRAPHICS RISES TO THE CHALLENGE FROM NT

by William Fellows

Multimedia software on bargain-basement machines running Windows NT has started to put pressure on Silicon Graphics Inc, and last week it responded with a remake of its entire product line to embrace the new R10000 and R5000 RISCs from its Mips Technologies Inc unit. Given the number of Unix RISC and Intel vendors now also out to eat SGI's prized high-margin graphics and interactive multimedia lunch, the announcement was surprisingly low-key. Although at 8.11 SGI appears to have the fastest SPECint_base95 boxes now on the market, the 200MHz R10000's floating-point system performance - 10.5 SPECfp_base 95 - is only 10% or so up on the R8000, which it replaces in higher-end machines. SGI needs floating point performance to drive its traditional strength in graphics. If SGI's focus runs to a more general purpose system focus then it's going to find itself slap bang in the middle of a firefight HP, Sun, IBM and DEC are already waging.

Corn

Top of SGI's system pile now is an Onyx InfiniteReality graphics supercomputer claimed to process geometric, imaging and video data concurrently in real time and up to 100 times faster than the current Onyx Reality. SGI sees the 24-way, R10000- or R4400-based InfiniteReality being used in applications such as the creation of entire virtual sets in television studios, so that the weather presenter could be standing amid the alien corn while he talked about the midwest, and hoisted to the top of the Rockies for the mountain segment. R10000 and R4400 versions of Onyx can be configured with up to three InfiniteReality or RealityEngine2 graphics subsystems, 64Mb to 16Gb RAM and up to 6.2Tb disk. A two-way 200MHz R10000-based system starts at \$208,000; the R4400 model begins at \$199,000. Both will ship this quarter and come with 16Mb texture memory, 64Mb RAM, 2Gb disk and 21" screen. SGI's also created a monster uniprocessor workstation combining the Onyx architecture and InfiniteReality subsystem. The i-Station 10000 is priced from \$125,000 - initially with a single R4400 including 16Mb texture memory, 64Mb RAM, 2Gb disk, two display channels and 21" screen.

Challenge

New R10000-based high-end Power Challenge server models are rated up to 2.5 times faster than the current ones which use 90MHz versions of the floating-point intensive R8000 TFP part. The 200MHz R10000 units come with from two to 36 CPUs delivering up to 14 GFLOPS. They're rated at 8.9 SPECint95 and 12.3 SPECfp95, 8.11 SPECint_base95 and 10.5 SPECfp_base 95. A two-way starts at \$88,800, additional processors are \$50,000 per pair. R8000 systems are upgradable to R10000. The mid-range

Challenge Server line gets an R10000 makeover - the two-to-12 way Challenge L and XL start at \$88,800 and \$138,800 respectively. An R5000-based Challenge S is available with a 150MHz or 180MHz CPU is priced at from under \$10,000 as a fully-configured Web server, SGI says. A one-to-four way 200MHz R4400 Challenge DM is now priced at from \$30,000.

Modelling

The new Indigo2 Impact 10000 line of general purpose desktop workstations using the R10000 are claimed to be two to three times faster than predecessors using the MIPS R4400. The uniprocessors start at \$43,000 (High Impact 10000) and \$55,000 (Maximum Impact 10000), and ship next quarter. A new entry-level graphics workstation using a 200MHz R4400 called Indigo2 Solid Impact designed for solid modelling starts at \$22,000 with 32Mb RAM, 1Gb disk and 20" screen. A 250MHz version is priced at \$27,000 and an R10000 version will cost from \$34,000, both with 64Mb RAM, 2Gb disk and 20" monitor. A new entry-level desktop graphics Indy R5000 series with a new XGE graphics subsystem will offer 80% better performance than existing Indys, SGI says. A 150MHz R5000PC (primary cache) model starts at \$8,500; the 150MHz R5000SC (with 500Kb secondary cache) is priced from \$11,500; and the 180MHz R5000SC (500Kb L2 cache). All come with 8-bit XGE graphics, 1Gb disk, 32Mb RAM and 17" screen. All are due this quarter, along with a \$6,500, 133MHz R4600 (IDT Orion)-based Indy with 32Mb RAM, 500Mb disk and 17" screen. SGI's also created a new IndyStudio line around the Indy R5000 specifically for interactive 3D, digital video and animation developers, plus online publishers. The entry-level price point is \$13,500, including pre-bundled versions of SGI's Alias/Wavefront Composer Lite, Adobe Photoshop 3.0, Illustrator 5.5, MetaTools Kai's Power Tools 2.0.1, SGI's NFS implementation, Iris Impressario and Insignia Solutions' SoftWindows 2.0, said to be a \$4,500 value. With Alias/Wavefront Animator the price rises to \$16,000; \$18,500 with Composer and \$20,000 with PowerAnimator.

Irix 6.2

A new Iris FailSafe failover module is available for clustering Challenge servers; software for two Challenge S servers starts at \$8,000. On Challenge DM, L and XL or fully-stacked S is from \$12,000. The company has now also released the 64-bit implementation of its Irix Unix. Version 6.2 includes SGI's XFS journaled file system, X/Open Co Ltd XPG4 Base 95 branding. MipsPro 7.0 are new versions of the company's R-Series compiler set which will ship in the spring.

FSA PRESSES CLAIM FOR POWERBROKER NAME; ENHANCES UNIX SECURITY UTILITIES

Calgary, Alberta-based Unix utilities house FSA Corp lawyers have lodged a complaint in the US objecting to Expersoft Corp's use of the PowerBroker name for its object request broker and its application for a US trademark on the name. Neither FSA nor its lawyers have heard back from the San Diego, California company yet. FSA, which began selling its PowerBroker administration and security suite for Unix root accounts back in 1994, says that even though PowerBroker is not registered as an FSA trademark in the US, its prior use of the name gives it certain rights in the US, where the government can intervene in disputes and can turn applications down or strike trademarks off. In Canada, where FSA says it's not come across Expersoft's PowerBroker yet in any case, the government only maintains a trademark list and disputes are settled through the courts. A lawsuit, a settlement or continued use of the name by both companies are the three cards now on the table. FSA says it won't play the latter, believing it's got dibs on the name Meantime. FSA's introduced version 2.1 of its PowerBroker security software utility for controlling activity on Unix root or superuser accounts. As well as a single integrated GUI, 2.1 includes the ability to get people logged into root without them having to know the root password; limits what people can do as root (or grants others access to parcels of root power they wouldn't have been granted under normal usage); and

provides audits trails and keyboard stroke histories at a central site. Comparing the utilities to the US Department of Defense Orange Book security requirements, FSA says that where PowerBroker overlaps, it provides better than Level C but less than Level B security. But it includes much more, it claims. PowerBroker's up on most Unixes and can be supported from Windows, NT, OS/2 and Mac sites. Its costs from \$30,000 for a 30 user license. FSAs' also offering a PowerLogin password and login administration module that can also specify the working environment once the user is logged on. It's priced at from \$30,000 for 30 users on the same platforms as PowerBroker. A PowerTelnet encrypting remote login system claimed to provide secure, transparent Internet communications across Unix, Mac and Windows desktops costs from \$500 per server, \$100 per client. All three modules, plus a PowerSendMail service are available as a packaged PowerSuite bundle. FSA, with distributors in Asia and South America, is seeking European outlets. It's about to open an office in Palo Alto, California. FSA, which sold its Load Balancer software to Santa Clara, California-based Unison Inc many moons ago will seek OEM and VAR deals for PowerBroker. It's reportedly got deals with a Unix systems management company and a security software house in hand.

ICL'S SIX-OF-THE-BEST

Fujitsu Ltd's UK-based ICL Plc sibling, where Keith Todd is now chairman and CEO following Peter Bonfield's departure to BT Plc, is now operating as six separate divisions spread across geographical regions. Group Executive Director Ninian Edie's technology division includes David Teague's high performance systems unit - mainframes and Goldrush products; David Mills' volume products unit, which develops and markets Unix workstations and servers and PCs; the D2D manufacturing subsidiary run by Alastair Kelly which provides contract electronic manufacturing services; Marie-Anne Van Ingen's Technology Plc, ICL's UK distribution company; plus TeamWare and GroupWare software which was inherited from ICL's Nokia Data acquisition. Paul Whitwam's Customer Services division includes the Sorbus third party maintenance business, consulting and contract help-desk services. Third division is Nigel Hartnell's outsourcing operation (expected to grow significantly this year). Fourth is Rod Powell's retail systems; fifth is Nuno Caldeira's financial services; and sixth is Group Executive Director Richard Livesey-Haworth's ICL Enterprises (from which the retail and finance operations have been spun out). ICL Enterprises includes systems integration, project management, local government, multimedia services, Web and other interactive business. Its reports also include ICL Finland, ICL Ireland, Industry Systems, ICL International and ICL South Africa. The former ICL North America unit which was responsible for software sales, including AccessManager and DAIS, is now part of the high performance systems group and operates out of Irvine, California. Torsten Vieth is group sales director for the company and Hideo Watanabe is director of Fujitsu relations.

ASNA BEGINS SHIPPING VISUAL RPG 1.2 WITH PRINTER, WINDOWS AND UNIX SUPPORT

Amalgamated Software of North America Inc has begun shipping ASNA Visual RPG Release 1.2 to customers in Europe, Australia and North America. The integrated Windows-based data processing development environment for developing event-driven, graphical user interface and client-server applications incorporates a number of new features, including local printer support for ASNA Visual RPG applications and is available for Windows95, Windows NT and Windows 3.1. The Big Bear Lake, California-based company, with a research and development site in San Antonio, Texas and European headquarters in Guildford, Surrey, estimated a 45.0% rise in turnover to \$6m during its last fiscal year. Visual RPG supports other server environments, such as Windows and Unix and integrates the RPG language with the modern programming techniques of object-oriented programming, enabling programmers to create client-server graphical applications that can tap the AS/400's DB2/400 database using a language with which they are familiar. By enabling programmers to remain with the RPG language, companies save time and money where it would previously have been spent teaching new skills or employing a differently skilled workforce. Visual RPG is modelled on Microsoft Corp's Visual Basic and supports VBX level 1. Features of the latest release include the ability to execute any .EXE command from a Visual RPG program and Client Access/400 support for AS/400 communications. It also offers control grouping, auto-alignment and copy/cut/paste in both the IDE Form Editor and Print File Editor, which both simplifies and speeds up the process of making windows and designing reports. The local printer support and graphical Print File Editor are the major features of the upgrade. When designing a report the developer "draws" the fields onto each of the report formats, then sets character size, font and colour properties of each field to create the desired effect. Once defined, the print file becomes a permanent file definition in the ASNA DataGate database. The database is similar and compatible with IBM Corp's DB2/400 and handles all database access. A single user licence is included with ASNA Visual RPG. All existing customers will obtain their upgrades free of charge.

nCUBE WINS \$15m ORDER FROM TELEPHONE VIDEO OF AMERICA

There is rejoicing in Foster City after a \$15m order for media servers arrived at the offices of nCube Corp from New York video information provider Telephone Video of America Inc. With the assistance of Lockheed Martin Corp's Media Systems Integration Division, Telephone Video will use the server to provide video-on-demand services to over 200,000 homes in northern California and San Diego by mid-1996. The company says it wants to take advantage of national open access regulations to offer video services on the broadband networks of Pacific Bell Inc, Nynex Corp and BellSouth Corp.

HYPERCOM NETWORK SYSTEMS OFFERS LEGACY-TO-TCP/IP GATEWAY

Phoenix, Arizona-based Hypercom Network Systems has announced a new gateway designed to enable users to migrate to TCP/IP-host centric environments, while protecting their investment in legacy systems. Rather than encapsulating the legacy traffic in TCP/IP headers, the Legacy/TCP/IP Gateway, used in the company's Integrated Enterprise Network hybrid router product line, provides native support for both legacy protocols and TCP/IP interfaces. The advantage of this, HyperCom claims, is that the legacy interface operates without any changes in configuration or operation, and that encapsulation headers or trailers, or other modifications to the user data, are not required. On the TCP/IP side, the gateway also operates in a native fashion to provide the highest level of throughput, says the company. Each separate legacy directly corresponds to a TCP/IP session, allowing for a simple programming interface within the Internet Protocol environment. As the gateway establishes Transmission Control Protocol sessions for transmitting legacy protocols to a set of TCP/IP hosts, it distributes these sessions across the enterprise network. This, says Hypercom, prevents any one wide area network connection from being overloaded. Each legacy connection gets its own session, which also preserves data quality, and makes it easy to isolate and obtain diagnostics on multiple protocols as they traverse the network. Along with individual sessions, the associated management traffic is also distributed. No price or availability details were given by the company.

CISCO REVEALS 2-TIER SYSTEM FOR SWITCHED INTERNETWORK MANAGEMENT

Cisco Systems Inc has unveiled its system for the management of multi-layer switched internetworks. It comprises two main elements - a suite of switch management applications, dubbed CiscoWorks for Switched Internetworks, plus new embedded network agents that reside within Cisco's Internetwork Operating System. The agents are intended to provide topology and traffic management information, enabling CiscoWorks to display the network's physical and logical layers: Cisco claims the new application is the first to display the physical configuration of the links between switches, and enable network managers to perform graphical drag and drop configuration link functions. Applications offered as part of the suite include CiscoView for graphical device management; VlanDirector, for virtual local network management; TrafficDirector, designed to provide traffic management and options for Asynchronous Transfer Mode and design management tools in the shape of AtmDirector. The agents include the Cisco Discovery Protocol for topology and discovery mapping; traffic management agents, based on RMON or external switch probes; virtual local network communications agents and Simple Network Management Protocol MIB 11 agents. The suite - claimed to run under "all major Unix systems" - is due to ship in the first quarter of this year at \$8,000. CiscoView and VlanDirector are out but no prices were given; TrafficDirector and AtmDirector are due this quarter and next respectively.

SUN MICROSYSTEMS OFFICIALLY OPENS ITS KAZAKHSTAN OFFICE, PROVIDING LOCAL AND CENTRAL ASIAN SUPPORT

As part of Sun Microsystems Inc's round of Ultra Computing launch events last month, the company announced the official opening of a local representative office in Kazakhstan. The office in the capital, Almaty, is the third in the Commonwealth of Independent States after Moscow and Novosibirsk. The office has been operating unofficially since July. Simultaneously, Sun opened the Kazakhstan branch of Sun-Service in Almaty. The new facility will provide support and technical service for Sun customers in Kazakhstan and the rest of Central Asia. According to Tony Loeb, general manager of Sun Microsystems Moscow, the main target markets for Sun in Kazakhstan are banking, government, science, geophysics and telecommunications. Sun's local partner, Elsi Tech, has already sold some Sparcstations to the Republican International Telephone Exchange. Among customers of Sun in Kazakhstan are the National Bank, the Space Research Institute, Caspi-Shelf, the Kazakhstan Ministry of Geology, the Kazakhstan Ministry of Oil and Gas, and Kazakh (National) State University (KazGU) where Sun donated three Classic workstations. KazGU has also been chosen as the location for the Sun Microsystems training centre in the republic. (see 'Sun Wins National Bank' p2)

CA DELIVERS SDK FOR UNICENTER TNG - ON NT ONLY

Unless the Unix fraternity screams loud enough, it's understood there'll be no Unix version of the software development kit for CA-Unicenter/TNG (The Next Generation) which Computer Associates International Inc last week began shipping on Windows NT. It'd rather folks went and bought NT workstations if they want to use the SDK rather than port the thing over from the NT-based Intergraph Corp workstations it was developed on. When ~~TNG proper is eventually released, supposedly in the April timeframe, a Unix version will trail the NT cut by several weeks. Although TNG itself isn't~~ in beta yet, the free SDK includes a copy of TNG. TNG will include a common object model store to which vendors can write managed objects from most mainstream databases - though CA points out that CA-OpenIngres already supports object constructs - a schema definition for enterprise management, a manager/agent architecture, other management functions and the much touted WorldView 3D front-end navigation module. To support the TNG kit, which is actually the first formal SDK program CA's ever launched, the company's garnered the support of a slew of vendors including mainframe administration rival BMC Software Inc, to work on class libraries that will plug into TNG. Support from BMC suggests that it now makes sense to integrate the application management capabilities of BMC Patrol software with CA-Unicenter. CA also made a big issue out of the unifying of its Unicenter with Cheyenne Software Inc business process view.

Fly around the network

The SDK consists of a trio of API sets - WorldViews, Enterprise Management and Agent Factory - plus libraries, schema, templates, customisation tools and class libraries to help use the APIs. The first is Agent Factory, which opens up the correlation technology in TNG to outsiders. ISVs can use Agent Factory to build and deploy manager/agent application to manage networks, systems, databases and applications. Enterprise Management Framework is the application layer API to create plug-ins to use Unicenter services and supports cross-platform integration. The WorldView API and SDK is used to hook applications into the 3D virtual reality interface in TNG, which CA calls Real World. Systems administrators can use a joystick to fly around their network, dive into the guts of a PC, fly up to a malfunctioning disk drive and launch a program to diagnose the illness and maybe even fix it. CA COO Sanjay Kumar boasted the new front end will "eventually allow you to read the lights on the buttons of a virtual HP laserjet in real time," boasted Kumar, though aren't these new world users supposed to be viewing and controlling processes rather than equipment?

Hooking

The GUI layer also includes hooks that let applications from different ISVs share information. It's claimed to be the first network management tool that lets administrators launch programs without knowing their TCP/IP address. The GUI sits on top of a middle layer which is basically the current CA-Unicenter with a bunch of enhanced and new features. A help desk option has been added, security has been enhanced, domain level management is better defined and new storage options have been added. At the bottom is the agent layer, which is built on the foundation of the technology CA got when it bought Legent Corp with a host of modifications and upgrades plus various pieces of new code. Hooking the whole thing together is what CA is calling a common object model (last year it called it an enterprise object model), which is a logical schema definition for enterprise management. That piece caused no small bit of confusion last week when it appeared CA was hinting TNG would have an object database, possibly the fruits of its deal with Fujitsu Ltd to develop object technology for CA-OpenIngres. But no. The common object repository CA specifies for TNG is simply a common store to which vendors can write managed objects from just about any mainstream database.

Plug-ins

CA's optimised TNG to make use of the on-chip graphics technology Intel Corp has embedded on to Pentium Pro (although on its press call it wasn't able to say how). CA says Pentium - or other RISC systems - will require a graphics accelerator board. As well as BMC and Cheyenne Software Inc, CA offered-up a partial list of the companies that are to support or develop TNG plug-ins using the SDK. PentiumPro houses on the list include Compaq Computer Corp, Data General Corp, Hewlett-Packard Co and NCR Corp - plus Intel itself. Others supporting the SDK are Microsoft Corp, Netscape Communication Corp, Novell Inc, Leibert Corp, Sun Microsystems Inc (presumably having to buy-in a bunch of NT workstations for development purposes) Symbol Technologies Inc and UB Networks Inc. CA will begin moving CA-Unicenter customers, apparently logistically weary of upgrade charges, over to more manageable maintenance plans during this quarter.

INTERGRAPH EDA DIVISION GIVEN ITS CORPORATE FREEDOM

Intergraph Corp, Huntsville, Alabama, is spinning out its electronic design automation (EDA) division as an independent subsidiary called VeriBest Inc, coming almost full circle to the days when the Boulder, Colorado operation was the free-standing, almost-bankrupt Dazix, a company formed by Daisy Systems' hostile takeover of Cadnetix. VeriBest will retain development offices in Huntsville and Mountain View, California; it will retain all 350 employees. Intergraph will retain a majority stake in VeriBest; the unit expected 1995 turnover to come out at \$34m, up from \$28m in 1994. VeriBest Inc is the name of its flagship Unix, NT and Windows-based EDA product line, so far the only software of its genre in the NT market. Intergraph reckons VeriBest, which it bought for a song literally hours before it was to file Chapter 7 bankruptcy, will do better on its own than as part of a large organisation where it accounts for only 4.3% of the annual revenue. Intergraph wants to bring back the unit's free-wheeling entrepreneurial spirit and translate it into explosive growth in the NT-based EDA market. EDA programs are used to design widgets like application-specific ICs, field-programmable gate arrays and the printed circuit boards that are the heart of every electronic device. Although VeriBest currently has the only NT-based EDA software on the market, virtually all of its Unix- and Windows-based competitors have announced plans to migrate to NT.

Half the EDA market

VeriBest estimates that within three years NT will command more than half of the EDA market, currently dominated by HP/UX and SunOS/Solaris with a small Windows share. NT sales last year were 80% of VeriBest's \$34 million in software and service revenue. It also sold about \$13 million in hardware. For 1996 its business plan is to grow software and services sales to \$57 million, with NT's percentage inching up. It also sells Unix versions of VeriBest, ported from NT, to keep its foot in the door at design shops using the old Dazix Unix-only products. It charges about 20% more for the Unix products than for NT, blaming the higher prices on higher development costs and hardware. Intergraph's game plan is to operate VeriBest as an independent subsidiary, with no direct management links to the parent company other than sharing a chairman, Jim Meadlock. Chuck Robertson, whose pedigree harkens back to the days when the company was Dazix, has been named CEO. His management staff is also sprinkled with survivors of the Dazix operation mostly from Cadnetix which was doing just fine, thank you, until Daisy took it over. VeriBest product plans for 1996 include introducing an aggressive array of new NT-based software such as tools for analog and VHDL simulation, FPGA and PLD synthesis, graphical tools for high-level design and its first programs for ASIC and PCB floorplanning. VeriBest figures the new products should double the size of its potential market.

MORGAN STANLEY SURVEYS SOFTWARE SPENDING PLANS

Morgan Stanley's US Investment Research group canvassed 102 users online about their enterprise software spending plans for 1996 and 1997. On average, 53.9% of respondents' production applications access a relational database, although 70% of data still resides on mainframes. The users said just over a third of their current legacy applications would be converted to run on relational databases over the next two years. The average size of a production relational database is currently 16.8Gb, up from 9Gb as found in the same survey last year. The dominant operating system for developing client/server applications is Unix, and although NT will pick up some ground through 1997, respondents still expect Unix to be their primary development environment by a large margin. Oracle dominates respondents' development relational database choice, followed by Sybase, Informix, Sybase, Microsoft SQL Server and DB2. Microsoft is expected to pick up some share by the end of next year, putting it ahead of Informix and Ingres but still some way behind Oracle and Sybase.

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Sun Microsystems Inc wants to merge with **Apple Computer Inc**, but thinks Apple is worth far less than its current market price, says the *New York Times*, suggesting that Sun has offered only about or \$23 a share, far lower than the \$33 or \$4,000m indicated in other reports. Sun executives, speaking on the condition of anonymity, told the paper the Apple talks had involved only a few top executives at Sun. Scott McNealy, chief executive, and William Raduchel, chief strategist, were said to be interested in acquiring Apple only if the company could be picked up for a bargain price.

Sequent Computer Systems Inc saw fourth quarter net profits down 13.9% at \$10.7m, on turnover up 19.6% at \$151.8m; net profits for the year to December 31 were up 5.9% at \$35.1m, on turnover that rose 19.9% to \$540.3m.

Cray Research Inc reported fourth quarter net losses of \$25.6m, after a pre-tax restructuring charge of \$42.6m, against profits last time of \$9.5m, which included a \$8.3m restructuring charge, on turnover down 0.3% at \$236.3m; net losses for the year to December 31 were \$226.4m, after a \$187.7m restructuring charge, against profits of \$55.7m last time, on turnover down 26.6% to \$676.2m.

The famous **Frog Design Inc** was apparently responsible for creating the prototype Network Computer that **Oracle Corp's** Larry Ellison has been showing off in Japan. The company has come up with something it is calling Network Computer Operating System or NC-OS that will run on a family of Internet and World Wide Web devices ranging from television set-top boxes to video phones and pagers. Although the initial iteration uses the ARM7500 RISC, and NC-OS appears to be based on Acorn Computer Group Plc's RISC OS, it is being designed to be processor-independent and there will inter alia be a version for iAPX-86-based personal computers, with application portability.

Mentor Graphics Corp has swooped in to buy CoSoft Ltd, a West Malling, Kent company specialising in Windows-based printed circuit board schematic entry software, which includes schematic capture for application-specific and field programmable parts. The deal was a share swap but the details were not disclosed.

The JavaSoft unit of **Sun Microsystems Inc** says that the Java 1.0 programming environment is now available for downloading free of charge at <http://java.sun.com>: it is available for Windows95 and NT on iAPX-86 and Solaris on Sparc; Java 1.0 for Mac OS 7.5 is expected by the end of March, and IBM Corp is doing versions of the Java Virtual Machine for Windows 3.1 and OS/2, while the Open Software Foundation is doing versions for other Unixes.

Data General Corp has reported first quarter net profits down 80.6% at \$4.7m after a gain of \$44.4m on settlement of litigation, on turnover that rose 16.1% at \$327.6m.

Net wags suggest a special ES edition of Merced. MercedES, get it? (see page 1)

Amdahl Corp has reported fourth quarter net losses of \$38.4m, after a \$53.3m write-off of in-process technology, and a against \$40.9m profits last time, which included a \$15.8m gain from licensing technology to Fujitsu Ltd, on turnover that was down 16.5% at \$416.2m; net profits for the year to December 31 were down 61.9% at \$28.5m, on turnover that fell 7.5% to \$1,516.4m.

The **Standard Performance Evaluation Corp** (SPEC) has put its SPEC Newsletter up on the Web at <http://www.specbench.org>

HP's gunning for some of Sun's runaway Netra Internet business, offering one of its newest low-end D-Class servers fitted with 32Mb RAM, 1Gb disk, LAN interface, Netscape Communications Server and HP-UX, for \$10,380 as the HP 9000 Web Server, claiming it delivers twice the performance of Sun's Model i600 running Netscape communications server.

Novell Inc's spinning-off the largely failed AppWare cross-platform development toolset into an employee-owned Salt Lake City company called Networked Multimedia. A Mac/PowerPC release is expected in March along with a beta release of OpenDoc/Cyborg support. It'll change AppWare's name too.

Dublin-based object request broker company **Iona Technologies Ltd** is the latest ORB company to promise integration with Java; Orbix betas with Java support are expected next quarter.

SunSoft's merging its object products group responsible for Neo into the Solaris products group.

Sun's UltraSparc makeover for the 1000 and 2000 server lines is set for April 15 in New York.

Novell Inc will dispose of Wordperfect this week: front-runner to take it on is Ottawa, Ontario-based Corel Corp.

Data General Corp's Clariion RAID subsidiary has got **Hewlett-Packard Co** to ink a formal OEM agreement with it. HP's been buying Clariion disk products on an ad hoc basis for some time. DG's storage unit say it's got no plans to incorporate Sun Microsystems Inc's self-mating SCSI connector into its sub-systems.

SunSoft Inc's now offering version 4.0 of **Imperial Software Technology Ltd's** X Designer GUI builder which can generate GUIs for Motif and Windows using cross-platform widget sets as ProWorks/Visual XP. The extension costs from \$500 for Sparc-Works/Visual on Solaris 2.5 - \$400 on the Intel edition.

We hear they're trying to keep it secret but we understand **CMP Publications Inc** has bought a third of its old nemesis *Electronic News* which its owners have been shopping around (UX No 565). The way we hear it they did it to keep it out of the hands of **Cahners Publishing**.

A year after first announcing its cut-down Distributed Computing Environment client as DE-Lite at its Decorum '95 user bash (UX No 525), **Transarc Corp** will begin shipping the thing at the same time as its Decorum '96 event which takes in Tarpon Springs, Florida, the last three days of next month. Transarc's got a bunch of other Web stuff up its sleeve.

CA's got so many things in its pipe that we don't know whether its planned Jan 30 announcement includes any of the outstanding Unix development efforts; including the CA-Unicenter/SunNet Manager combine now in beta (UX No 551), the CA-Unicenter/Santa Cruz Operation Inc bundle (UX No 560), the integrated 'Rainbow' OpenIngres, CA-Unicenter and ManMan/X suite (UX No 562), or the object Fujitsu Ltd/CA-OpenIngres object database integration work.

Sun staffers are reportedly referring to the proposed Sun/Apple marriage as Snapple.

Sybase Inc has reported fourth quarter net profits down 81.7% at \$6.0m, on turnover up 4.9% at \$267.3m; net losses for the year to December 31 were \$19.5m, against \$87.1m profits last time, on turnover that was up 15.9% to \$956.6m.

Sybase has named **Oracle** refugee. Leith Anderson VP channels and alliance marketing, reporting to VP, corporate marketing Tom Herring.

Scott McNealy won't admit it's true but *Business Week* in a cover story on **Sun**, spurred by the Java phenomenon, claims it has a Java-based OS in prototype that "could replace Windows completely." It could be ready next year. Sun could also do an MPU to run Java applets at "lightening speed."

DEC's reportedly sold a thousand Turbo Lasers, aka AlphaServers 8400, in less than nine month. At an average \$600,000 a pop, that's revenues of \$600m.

Okay, so maybe Scott McNealy is trying to buy **Apple Computer Inc**. If he is - and the seeds of the idea we know for a fact go back at least 18 months - then why in a casual pre-Christmas chat did he suggest that we buy a Toshiba as our next machine?

SunSoft Inc's chief scientist Rob Gingell has a bee in his bonnet about the **UnixWare Technology Group** and would like to see them ousted from the Open Systems Pavilion at Uniform that they share with X/Open, the Open Software Foundation and Uniform itself on the grounds that UTG isn't open enough to qualify given its predilection for a specific Unix implementation. UTG CEO Larry Lytle says he doesn't much care for outsiders messin' with his mission statement and has send the terse message "@%\$* you and die" to Gingell.

Hewlett-Packard Co is supposedly setting up a separate division to house all its 64-bit work.

The **Open Software Foundation** will reportedly announce a new chief to replace HP's-loaner Jim Bell either at Uniform or in the days leading up to it. We hear it's down to two candidates having considered an ungodly number of prospects after failing - our sources continue to maintain - to secure the services of ex-HP Unix chief Wim Roelandts, now at programmable logic house Xilinx Inc.

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SNI PUTS SERVERS INTO OPEN ENTERPRISE COMPUTING GROUP

In a massive restructuring, Siemens Nixdorf Informationssysteme AG, is putting all of its server business, from Unix to mainframes to Intel, into one big \$3bn Open Enterprise Computing unit headquartered in Munich but run by an American spending half his time in the US. As part of the move, and even more radical given its 30 years of slavishly following IBM Corp's every step, the mainframe arm has finally taken a step to cut the apron strings and strike out on its own, porting the business to versions of RM600 servers called Sunrise that'll run the old MVS-like BS2000/OSD mainframe operating system from this time next year (*see page four*). The new Open Enterprise Computing (OEC) unit's charter is international, but its focus will be on the American market. Pyramid Technology Corp president and CEO John Chen will run it; the Intel business will be based in Augsburg, mainframes in Paderborn and Mips RISC development in San Jose. The group will pool 5,500 of SNI's 37,000 employees worldwide and Chen expects to grow the business 20% a year. The effort should get SNI more brand recognition in the US, especially after it discontinues the name of its Pyramid subsidiary. The \$9bn SNI has recently paid only lip service to Americanising itself. SNI will flatten the corporate structure to give managers direct control over geographies and lines of business. SNI wants to roughly double its US business to around \$1.5 billion by the year 2000, starting with \$700 million this fiscal year. It's looking for immediate acquisitions in retail and transportation and partners for Mexico, Brazil and Argentina. It aims to derive equal revenue from German, European and other markets in a few years. Richard Lussier, who ran Pyramid for nine years before selling it to SNI in February 1995, will step down in April as CEO of SNI Inc, for personal reasons but will stay on the boards of both SNI and Pyramid. A non-German-speaking replacement will be appointed in 60 to 90 days.

...PORTS RELIANT UNIX TO INTEL; RM2000 WITH MIPS OR INTEL

Not only are there radical changes to SNI's mainframe strategy, but Pyramid and OEC chief John Chen also has a heap of Unix plans in his pipe. Initially the company has melded the SNI Sinix and Pyramid DC/OSx SVR4-based Unixes into a single offering called Reliant Unix. An upgrade will bring existing Sinix and DC/OSx installations up to Reliant Unix, which supports Pyramid's enterprise and high-availability features plus the HP OpenView-based TransView system management featured on Sinix. It'll be available for the company's existing Mips RISC-based SMP systems including the Pyramid Nile and Reliant lines, SNI's RM series and the merged Reliant RM parallel server. However SNI's now also got Reliant Unix up and running on SMP Intel boxes, currently the preserve of NT, and plans to deliver it on servers in the RM lines that'll accommodate Intel or Mips CPUs. At the high-end an RM1000 follow-on, the RM2000, is being designed to house either Mips R10000 or PentiumPros. A higher-speed cut of SNI's 200Mbps Meshine interconnect is also promised for the RM2000; the box is expected in 18 months. Pyramid's Reliant clustering software is being fully-integrated with SNI's Observed clustering and - retaining the Reliant name - will be deployed on the high-end SMP RM600 servers and above. The Dolphin-based PCI/Scalable Coherent Interconnect distributed shared memory system will be deployed in RM600s by year-end, by then it and the RM400 quads will be available with R10000s. SNI's skipping Mips' R5000 entirely. It's part of what Chen calls a "coherent vision of clustered computing," clustering that will eventually feature up and down the Mips/Unix and Mips/BS2000 OSD lines, beginning with shared storage and working up to distributed shared memory. R1000s are now available with 200Mhz R10000s from \$172,000.

SAN FRANCISCO - IBM's GOLDEN GATE TO OBJECT APPLICATIONS

IBM Corp's readying a cross-platform, client/server object-based application development environment called San Francisco (for Shareable Frameworks) it hopes will catapult object technology and its own software development enterprise to centre stage. Large users and ISVs will use the environment's reusable frameworks together with tools such as VisualAge, plus third party offerings and PC-based tools to build business applications in the areas of logistics, finance, distribution and manufacturing. IBM and UK partner JBA Holdings PLC are creating framework building tools from JBA Guidelines and VisualAge for use with San Francisco. The project is being shepherded by Steve Carter of IBM's AS/400 unit, already blooded in object technology with its re-write of OS/400. Alpha cuts of San Francisco will debut in the second and third quarters, betas are due in the fourth, with production ships next year. It'll be available direct and OEM for PCs, Unix, NT, AS/400 and mainframes. Work on San Francisco started more than two years ago, but only in the last six months has IBM decided to productise the thing. Its foundation layer is the Distributed System Object Model, IBM Austin's object technology that's yet to find a real application role outside SystemView now that Taligent's been folded back into IBM's arms. It'll also include class libraries from IBM's Toronto Labs - responsible for the VisualAge family into which pieces of Taligent are integrated. Other logistics, financial and distribution frameworks being created for San Francisco by Stockholm company International Business Systems AB, a 1,000-person company that's done extensive work rebuilding OS/400 applications using object techniques. IBS and JBA are working at a San Francisco development centre in Boeblingen. It's apparently only a co-incidence IBM's two current partners are European. As well as creating additional utility, maintenance and reusability components hidden from the application level, IBM is developing other objects for customer information, accounts receivable and invoicing, plus new compilers for it. Given Taligent's failings, tool and multiplatform support is crucial.

FIRST JAVA, NOW JAVA CHIPS; SOMEDAY KONA, A JAVA OS

Java may be a byword and behind the surge in Sun's stock price but can the freebie be turned into a money-making proposition that saps Microsoft's strength? In a move that's bound to add a new dimension to the Great Apple Debate, Sun is about to announce that it's designing special Java chips. It's imagined they'll run everything from cheap Internet access devices to printers to cellular phones to games, essentially putting Java everywhere just as Microsoft would do with Windows. But it's gonna take a while. The chiplets won't appear in products before the second quarter of 1997. Sun's 500-person chip arm STB, the Sparc Technology Business unit, has been given the brief and since the things aren't Sparcs and won't run Solaris, its name has been changed to Sun Microelectronics to reflect the broader charter. Sun Microelectronics says the project is "far enough down the path" to disclose. It envisions three "chips": PicoJava, MicroJava and UltraJava. Pico's a core that Sun will license generally starting this summer when it becomes available. The exigencies of design cycles necessitate an announcement now, we're told. (The timing of course is a publicist's dream). It'll sell for \$5-\$25. MicroJava and UltraJava are proprietary though bound for the merchant market and folks who will embed them in whatever widgets they're making - cars, refrigerators, printers, modems. Sun Microelectronics will develop purpose-designed subspecies. Micro is the first of the widgets that can properly be called a chip since it has I/O, memory, communications and control functions. It'll cost \$25-\$100. The UltraJava, starting at \$100, is a bit more speculative and will be a 3D graphics implementation that leverages UltraSparc's VIS technology. MicroJava samples should be available next January; Ultras in late 1997. The Java chips should let Sun play in a market forecast to be worth \$15bn by 1999. Sun is leaving the architectural details pretty vague and usual MPU terminology doesn't seem to apply anyway. They're supposed to be a whole lot better and faster at running Java applets than traditional chips, even Sparcs, because they're optimized to run byte code and forego the overhead of an interpreter otherwise necessary for the Java Virtual Machine. One point Sun's even cagier about than the Java chips' specs is a prospective Java operating system. Sun is reportedly working on one - codenamed Kona - that "could replace Windows completely." Such a thing apparently falls within the domain of the recently formed JavaSoft unit and would have to be written in Java. Sun said any realisation was years away. Sun Microelectronics would only say that when the Java chips ship it expects "one of its partners will provide an operating system." Of course there will also be the kind of embedded operating systems that run toasters, say. The Java chips are being done by the UltraSparc team.

IMPLICIT SOFTWARE WANTS A PIECE OF CLIENT/SERVER CONVERSION MARKET

Created from a department at French systems engineering firm Concept SA in 1991, Implicit Software Inc is aiming to capture its share of the emerging and potentially enormous market for software tools to help companies revamp old applications for client-server architecture. "This is definitely an emerging area. There is a huge untapped user base out there. Any company with old applications, will need to change them, and only a small handful of firms have started to," says Judith Hurwitz, president of Hurwitz Consulting in Newton, Massachusetts. In a report published in 1994, Ms Hurwitz estimates that the market for these high-end second-generation client-server development tools will be worth \$2,500m by 2000. Over the last 12 months, she estimates that firms with product already on the market made a total turnover of \$600m. "There are also a lot of players, new companies emerging all the time, but nobody has yet achieved dominance. And they are all aiming at that part of the market, high end, second generation," she continues. Implicit, set up as an American company in January 1994, is among players in the market that include Sybase Inc's Powersoft Corp, still developing a high-end product to complement its desktop, Forte Software Inc, Nat Systems Inc, Dynasty Software Inc, the Antares joint venture of Amdahl Corp and Electronic Data Systems Corp, Sapiens International NV, Open Environments Corp, Compuware Inc, with its acquired Uniface BV products, and Visix Software Inc's Galaxy. Ms Hurwitz says Implicit has a good technology that is strong on rapid application development and for focusing on business rules in that development. In those situations, she said, it would compete with Forte. Implicit's product is still in early evaluation with some customers in the US. Says sales director Jean-Pierre

Ullmo: "The market today for this tool is not yet organised; it's an opportunity that should be in full swing by mid-1996." By that time, he says, companies will have discovered the limits of first-generation tools, and will have either finished evaluating Implicit's product or their own user needs for moving mainframe applications into a client-server environment. Hurwitz agrees: "It's a complex market, with a very long sales cycle because people have to live with the decision for a long time. They won't just say, 'Well, I'll try this and if it doesn't work, throw it out.'" As is usual, Implicit went to the US for access to capital and marketing, although its investment to date is largely from French and American industrial partners, with very little from venture capitalists. Its research and development remains in France, where it also recently announced the product. Although Implicit did some initial marketing in the US and got positive accolades about what it was doing, Hurwitz says they need to get more venture capital support "so they can get the product to market." "Implicit lacks distribution channels and sufficient market recognition. The expensive part of the software business is getting market visibility, not developing the product," she explained. Ullmo says the company is forging an indirect sales network in the US with its industrial partners, including Sun Microsystems Inc. "We are interesting lots of industrial partners, so we're just trying to set up the best scenario," adding that it should be completed within six months. It has hired Don Roadner as marketing vice-president from VMark Software Inc, who took part in the firm's market analysis and product positioning. The company objective is to be on NASDAQ in three years, Ullmo said. Currently capitalised at \$4m, the firm forecasts 1996 turnover of \$12m and \$30m in 1997.

DOCUMENTUM SEEKS \$20m FROM IPO

Document management outfit Documentum Inc, whose book value was \$7.6m at the end of 1995, has filed to go public with an initial offering of 1.8m shares, at \$12 to \$14 a share, expecting to raise about \$20.7m. Existing stockholders (including Xerox Corp, which currently holds 37.9%) will retain 86.6% of the company's stock after the offering. Incorporated in Delaware in January 1990, the company operated as a wholly-owned subsidiary of Xerox Corp until October 1993 and garnered \$13.5m venture funding in three rounds to the end of 1994 (UX No 516). 1995 was Documentum's first profitable year; it reported net profits of \$514,000 against 1994 losses of \$1.9m, on turnover that rose 145.4% to \$25.5m for the year. At the end of 1995 the company had an accumulated debt of \$6.7m. 1995 licence revenues generated \$5.1m, 30% of that from Xerox and its affiliates. International licence revenues 26% of total sales. The company's Enterprise Document Management System (EDMS) is a family of object-oriented, client/server document software product. Documentum, which says it has 100 EDMS users and has unveiled an Internet product strategy called Accelera, counts its competition as market-leader Saros Corp, Interleaf Inc and Metaphase Technology Inc. It has 174 employees 75 in sales and marketing, 23 in customer support, 52 in product development and 24 in finance and administration. - at eleven US and three European locations. Jeffrey Miller is president and CEO.

SYBASE DITCHES BRAHMS OO PROJECT

Once upon a time - for a long time actually - Sybase had a project code named Brahms until back in December it disbanded it. As a result, there are lots of rumours flying about willy-nilly about what happened and why. Contrary to widespread reports, says Dennis McEvoy, senior VP, Sybase Enterprise Products Division, Brahms was never intended to produce a product, specifically an object database supposedly along the lines of Illustra, now an Informix satellite. It was a research project and it was discontinued not because the proverbial *merde* hit the fan over there financially and they were cannibalizing resources and because they were losing ground with their flagship line and because the thing never met a schedule and was *tres* late but because customers on their advisory board said they didn't want a pure object database. They want object extensions to Sybase's relational database like Oracle and Informix customers will be getting. And so that is why, McEvoy says, some of the Brahms group was dispatched to the SQL Server group and others to the Sybase connectivity folks, the latter so they could do object-supporting three-tier middleware which will start appearing this quarter. See, now, all that fuss for nothing.

NT IS KEY TO SNI'S LOW-END AND LEGACY MIGRATION PLANS

SNI's also mounting a low-end systems push and a scheme to migrate legacy applications to NT. The German is going to cooperate with Microsoft Corp in developing BackOffice applications. The initiative centers around what it calls the ComUnity Applications Implementation Framework, an object environment it's co-developing with Redmond that integrates legacy business applications with NT. NT will be the "common user interface" for its low-end systems, including departmental servers, PCs and a new Pentium Pro workstation line. Although it can support NetWare and Unix on some of its low-end boxes, SNI made it clear that NT is the OS of choice. ComUnity, which will target ISVs and IT shops at the 1,000+ mainframe customers SNI claims, will use Visual Basic and OLE Automation to implement BackOffice-type applications. SNI's Component Link Enabling, a set of communication interfaces backed by implementation tools, will make the migration possible.

PLATINUM BUYS TRANSACTION MONITORING TOOLS

Adding to its burgeoning systems management offerings Platinum Technology Inc, Oakbrook Terrace, Illinois has acquired privately held Advanced Systems Inc/Distributed Computing Group for an undisclosed sum. Englewood, Colorado-based AST/DCG's transaction management tools will be introduced by Platinum as the WireTap products Xtn Characterizer and Xtn Monitor. Xtn Characterizer profiles client/server applications, analyses transactions and records how much network, server and database resources each transaction uses. In turn Xtn Monitor measures ongoing volume and response time performance of transactions calibrated by Xtn Characterizer. WireTap joins Platinum's performance management products including DBVision, for managing performance of Unix-based relational database systems, and ServerVision for Unix server performance. WireTap is up on most Unix in the second quarter.

DEC AND HP FIRST TO UNIX 95

X/Open Co Ltd's been handing out its first Unix 95-compliance (Spec 1170) branding awards. DEC, and Hewlett-Packard Co have each won the right to use the Unix 95 brand. Looks like HP will be first out of the gate, promising its Unix 95 cut of HP-UX in the anticipated multi-threading release from Feb 20. DEC will attach its Unix 95 spurs to the promised Digital Unix 4.0 release in March.

SCO GROWS WEB FEET

Unix-owner Santa Cruz Operation Inc appears to have woken up to the fact that the Internet equals big bucks for Unix vendors. And, two years on from its first and largely ignored offering in the area - SCO Global Access, "right technology, wrong configuration" (No 477) - SCO's having a second turn at it, planning a series of packaged Internet products and services for use with SCO OpenServer and UnixWare in Intel Corp-based systems it's calling Atlas. It doesn't think it's coming into the game too late, arguing the market is still evolving rapidly enough to accommodate newcomers. As well as a new home-grown HTML-based tool designed for easy configuration of Internet and Intranet networks, SCO will offer a slew of third party products such as Netscape Communications Corp servers; Columbus, Ohio-based Morning Star Technologies Inc's security and PPP technologies; Irving, Texas-based Micro Computer Systems Inc's IPX/SPX-to-IP gateway; and Netcom Corp, America OnLine, MCII and PSInet access services. Indeed it claims to have signed as many as two dozen deals for point products in the area and is currently dotting the i's and crossing the t's on a deal for Java with Sun Microsystems Inc. Although it'll have some early cuts of the software at Uniform, the first packaged CD for use with OpenServer will debut in April or May, with a UnixWare release following a quarter or so behind. Thereafter it'll roll the stuff into the quarterly upgrades to its base OpenServer and UnixWare releases. Packaged products from SCO OEMs, including IBM, Compaq, Unisys and others, plus VARs and resellers are expected in four to six months.

Ubiquitous

As well as adding Internet technologies to its core operating system technologies, SCO says Atlas is also a plan to make the Internet an integral part of all SCO products, services, training and partnerships. It's expecting each of its product divisions to develop Internet services and products. New configuration tools it'll offer at the platform level include Web, mail and ftp servers, multiple domains, security, enhanced PPP, event notification, remote and Internet-based management. Layered products will include commerce and communications servers, the MCS Novell Internet gateway and virtual private network software. Client technology will include Web browsers - Netscape, Oracle and Mosaic - authoring tools and its Client/Server integration unit's Vision connectivity packages. The technology doesn't reside in any one development group, but is being shepherded throughout the organisation by former channel sales VP Jeff Ait, now VP Internet.

JASMINE FLOWERS FOR CA AND FUJITSU

Six months after buying into Fujitsu's Ltd's vision of database object technology (UX No 543), Computer Associates International Inc has unveiled the first SDK of Jasmine; a version of Fujitsu's nine year old ODB-II object database enhanced with CA's availability and data integrity technology. Jade is the CA-built development environment and user interface that can be used to create multimedia query and reporting programs for use with Jasmine. Third parties will use the free SDK to get tools and C++ libraries up on Jasmine and Jade, production versions of which are expected in October that Fujitsu will sell in Japan and CA will market elsewhere. Jade will be available for NT and Windows 95, Jasmine on Unix and NT. Pricing will start around \$2,000. Jasmine supports bindings to Sun's Java programming language and Microsoft Corp OLE as well as C++. Applications created using Jade will also run under Web browsers. Jasmine's not quite the object/relational beast the two originally envisaged however. CA had promised to give its relational database, CA-OpenIngres a new lease of life with an extension into the object relational model but that plan was scaled back to a souped-up object database. CA cites sales automation, travel kiosks and telecommunications as naturals for Jasmine-based applications. Now out at beta is CA's promised CA-OpenIngres/CA-Unicenter/ManMan-X combination, codenamed Rainbow, which will debut under another name (UX 562). A CA-OpenIngres 2.0 beta programme is expected mid-year.

IBM, PERSUADED TIVOLI IS WORTH \$743m

IBM Corp clearly prefers to pay top dollar rather than brook any competition or dissent when it makes an acquisition, so it has agreed to offer \$47.50 a share cash for Tivoli Systems Inc and its Tivoli Management Environment (TME), putting a pricey valuation of \$743m on the company - after stripping out Tivoli's cash. That for a company that did \$5.5m net on sales of \$50m in 1995 - albeit up 84% on 1994 - which means IBM's paying 15 times Tivoli's turnover. The directors and officers of Austin, Texas-based Tivoli - most of the stock is in the hands of its VC backers and its founders came from IBM - have agreed to sell their shares to IBM. The market had clearly already got wind of the deal, because Tivoli shares had closed up last Tuesday before the announcement. IBM's installing Tivoli CEO Frank Moss as head of a systems management software division based in Austin, where the IBM's \$1bn SystemView network and systems management operation is also based. The combined unit will start life with 1,300-odd staff (320 from Tivoli). Although there's some overlap between Tivoli Systems Inc's Tivoli Management Environment (TME) systems management suite and IBM Corp's SystemView network (NetView) and systems management environment, the two companies weren't able to identify all areas of crossover - both have performance analysis and software distribution mechanisms - or how they'll be brought together. Details of an integration and development plan are expected in a few week's time. SystemView and TME will continue as separate products, but Tivoli CEO Frank Moss' new command - the combined IBM/Tivoli systems management software division - will create a single view for the two. IBM says it'll trade on the Tivoli brand name in systems management. It's also unclear what'll happen to the SOM/DSOM object request broker foundation underpinning of IBM's recently-detailed SystemView family. IBM's technology is still tied primarily to its proprietary platforms and badly needs the kind of broad-based multiplatform strategy Tivoli has created. However, one of Tivoli's key attractions has been its vendor-independent strategies, and a key measure of the acquisition's success will be whether Tivoli can retain and expand its current partner list. Moss promises a Tivoli Internet strategy this quarter. The two say they are aiming at a client/server server management market currently worth some \$2.5bn.

MAGNA SAYS THREE-TIER SUPPORT IS KEY; READIES CICS/6000 PORT

New York's Magna Software Corp, which started life as a Tuxedo OLTP developer now does the majority of its business on top of Open Environment Corp's Entera TCP/IP- and DCE-based three-tier application development environment. Although Entera is less focused on transactionality and OLTP performance - but also offers MVS application migration - Magna says the traditional Unix OLTP vendors - Transarc, Novell and NCR - have failed to recognise that the key to winning the market appears to have shifted towards application partitioning and three-tier development functionality. It's a view that's been widely advocated and evangelised by the likes of influential Cambridge Technology Group Inc founder and MIT professor John Donovan. Magna hopes the BEA Systems Inc start-up - with which it wants to work - will develop Tuxedo and Top End into solutions that address this requirement (UX No 574). Its belief is that BEA will have a McDonalds-like effect on the industry. Rather than driving other local food outlets away or out of business, the opening of a new McDonalds usually attracts a whole bunch of food vendors to set up in the area. The Magna X Cobol-based OLTP mainframe-to-Unix application development environment works with CICS and Encina in addition to Tuxedo TP monitors - a CICS/6000 implementation is being readied for introduction later this month. Magna has the Blue Cross medical insurance group building CICS/ESA applications on the mainframe and migrating them to CICS/6000 using Magna X. Magna says a significant percentage of its users are looking to migrate their applications to NT - when NT becomes more robust and scalable. Not because NT is intrinsically any better than Unix but because the same users view Microsoft as highly committed to NT and long-term support of it. Magna will support all of its products on NT over time.

SIEMENS TO PHASE OUT MAINFRAMES; BS2000 ON R4400

As part of its restructuring - see front page - Siemens-Nixdorf Informationssysteme AG is changing the entire face of German data processing, shifting allegiance between processor suppliers from ~~Fujitsu Ltd to Mips Technologies Inc.~~ After 30 years of slavishly following IBM Corp's every step, the mainframe arm of SNI has finally taken a step to cut the apron strings and strike out on its own. The Siemens 7.500 series mainframes are derived from old RCA Spectra 70 licenses and the Spectra 70 was copied from the IBM 360. Siemens has kept the architecture in step with IBM's System 370 and System 390 so that in the past several years, it has been able to top off its line with IBMulators from Fujitsu Ltd, simply microcoded to run the BS2000 operating system, which experts characterise as more like the old OS/VS1 than MVS, although Siemens has progressively added MVS features. Despite its machines being incompatible, Siemens has echoed every innovation IBM has introduced in its line a few months later. Finally emancipated, it has decided the Tandem Computers Inc model, converting the proprietary operating system to run on machines built around high-end Mips Technologies Inc R-series RISC microprocessors, is a better bet than IBM's less-than-convincing Parallel Sysplex concept. Plans, first hinted at last year (UX No 556), to implement BS2000 for the R10000, have now been firmed up, and when SNI's current OEM agreement with Fujitsu for microcoded mainframe processors runs out, it will not be renewed. The first machine, due in about 12 months, will be a 10 MIPS affair using a 250MHz R4400 in BiCMOS. Models in the 100 Mips range are promised by 2000. SNI will also support Unix on the new machines and they will have firmware assists to enable BS2000 users to carry over their mainframe peripherals. These will be needed because to start with, data will need to be converted to new formats on the fly. Siemens has been buddies with Fujitsu since the latter's incorporation, but the new strategy marks a parting of the ways in mainstream computing because Fujitsu has hung its hat on the Sparc RISC.

UNISYS TAKES ANOTHER VAST HIT

It has been restructuring almost from the word go at Unisys Corp, but in the latest shake-up, the company says it expects to see annualised savings of over \$500m by the end of 1996, and annualised savings of \$600m by the end of 1997. The company, formed by the inappropriate crashing together of Burroughs Corp and Sperry Corp, says that while it was "disappointed" with 1995 financial results, it is encouraged by continued revenue growth in information services, and reckons it can return to profitability in 1996 despite possible disruptions from restructuring actions. The company is taking a whopping restructuring charge of \$581.9m or \$3.39 a share to cover one-time costs to eliminate 7,900 jobs, and to consolidate and discontinue some products and programmes. Its bank syndicate has waived the covenants in its revolving credit facility. Unisys reported fourth quarter net losses of \$676.8m, up from \$52.3m losses last time, on turnover up 5.1% at \$1,838.7m; net losses for the year to December 31 were \$624.6m, against profits of \$100.5m last time, which included a \$7.7m extraordinary charge, on turnover up 3.7% to \$6,202.3m.

ICL'S HEALTH SYSTEMS ARM SOLD TO SIEMENS NIXDORF

In a move that makes it one of the leading UK supplier of health systems, Siemens Nixdorf Informationssysteme AG has bought ICL Plc's Medical Portfolio, in spite of ICL vehemently denying it was for sale to our sister publication *Computergram* in June. Siemens would not disclose what it paid for the £20m turnover business, but an ICL source suggested the price was in the tens of millions. The business will become part of Siemens Nixdorf Health Systems Division, which it claims will become a £40m-a year business in the UK. Siemens says the acquisition puts it in a very strong position to win new contracts under the UK government's Private Finance Initiative, which involves private sector investment and joint risk in public sector projects. Siemens inherits ICL's mainframe customer base, using the IRC PAS patient administration system, many of whom are already committed to migrating to OPENpas, a Unix system. Siemens says it will continue to support both these systems, as well as actively promoting its own Unix-based CaMIS clinical and management information system.

NOVELL WILL HOLD 20% OF COREL IN WORDPERFECT DEAL

Given that it was rejecting an offer of \$200m from Bain Capital Inc of Boston, Novell Inc had to dream up some pretty ingenious ways of making the price to be paid by Corel Corp of Ottawa for its ~~WordPerfect business at least come close.~~ In the end it managed to get it to about \$197m - most of it in shares - when a licensing deal is thrown in. For that, Corel gets the WordPerfect word processor, PerfectOffice application suite and QuattroPro spreadsheet and related software. The deal is claimed to make Corel, best known for its CorelDraw graphics package, the second-largest independent vendor of personal productivity software for personal computers. Novell gets a mere \$10.75m cash, the rest comes as 9.95m new Corel shares worth some \$116m, for a substantial part of a business for which it paid \$855m in June 1994. Corel is expected to pay an estimated \$70m in future royalty payments - without which the deal is worth just \$127m. Novell is keeping the GroupWise client software, Envoy electronic publishing software and other technologies it acquired from WordPerfect, and is licensing them to Corel for the minimum royalty of \$70m over the next five years. Novell will have about 20% of Corel and gets a seat on the board. Corel will lease facilities from Novell and hire certain Novell employees engaged in the continued development and support of the application products, but expects the deal to create a startling 1,500 jobs in Canada this year. Chief executive Michael Cowpland said he sees sales for Corel of \$500m this fiscal with per share earnings of at least \$1.00. He believes WordPerfect will be profitable "right out of the gate."

SUNRIVER TO ENTER MARKET FOR INTERNET COMPUTERS

SunRiver Corp, Austin, Texas snapper-up of unconsidered trifles such as the Applied Digital Data Systems display, X terminal and Pick systems business, and Digital Equipment Corp's VT dumb terminal business, plans to enter the low-cost Internet access business via its two subsidiaries, SunRiver Data Systems Inc and TradeWave Corp. The two have licensed Java and HotJava from Sun Microsystems Inc and will use them to develop a range of products for use in corporate Intranets and custom electronic commerce - again using the Intel Corp 80960 RISC, which the company already uses in the X-terminals it inherited with ADDS. First products are expected by mid-year, exploiting the TradeWave - formerly EINet - Virtual Private Internet secure point-to-point communications software for corporate Intranets and business-to-business electronic commerce over the Internet, and SunRiver Data Systems' capabilities in low-cost terminals. SunRiver plans to develop a family of affordable devices for accessing and processing Internet-based data and Java-supported applets in corporate Intranets, introducing a family of dedicated low-cost Internet Computers and Terminals. The Internet Computer will connect directly to the Internet via built-in Ethernet or over ISDN and dial-up connections. It will include an integrated interpreter to execute Java applets and the HotJava Web browser.

SGS THOMSON KEEPS ITS ARMY OF NEW INVESTORS HAPPY WITH ITS FIRST RESULTS

Franco-Italian semiconductor manufacturer SGS Thomson Microelectronics NV was held back by capacity shortages in its first full year as a quoted company. Nevertheless it was still a very good year for the company. Net profits for the year were up 45% at \$526.5m on turnover that rose 34% to \$3,554m. In addition to the earnings increase the company has a net cash position of \$64.9m, having been in the red to the tune of \$905m back in 1991. Long standing president and chief executive Pasquale Pistorio would not be drawn on the precise location of the company's proposed 8" wafer plant outside Europe, but Singapore is thought to be the favourite. In terms of areas, shipments in Europe accounted for 46% of sales, Asia Pacific 26%, the Americas 24% and Japan 4%. Pistorio said the company is aiming for an equal split between Europe, Asia and the Americas by 2000. Around 30% of the company is now traded on the New York Stock Exchange and the Paris Bourse since the initial public offering in December 1994 but Pistorio would not say whether the company would tap the market again this year.

DEC STRONGARMS ITS WAY INTO INTERNET DEVICE FRAY

Parts from DEC may power machines fielded for the express purpose of taking market share away from its pal Microsoft. Those of course would be those cheap new Internet access boxes that Oracle and Sun are hatching. This week, DEC is supposed to unveil the first of the StrongARM line, a gussied-up take on the widget currently used in Apple's Newton. DEC's widget is also apparently the engine for the next batch of Newtons and promises new applications and human interface capabilities. DEC hooked up with ARM chip owner Britain's Advanced RISC Machines Ltd a year ago to fill Hudson, its state-of-the-art factory. Under its architecture license, it is allowed to develop its own derivations as well as make and market the things. So, DEC says, it has raised ARM's performance levels tenfold to 185 Dhrystone MIPS, in one case while not exceeding half a Watt dissipation. It would have preferred to change ARM's pin-out to up its I/O performance another 25% but kept to compatibility instead. DEC describes the results as "supercomputer-class performance on AA batteries." Prototypes of Oracle's proposed Network Computer are currently based on the ARM 7500 a 20 Dhrystone MIPS chip. Although Oracle has said it anticipates the Network Computer eventually using other chips - like an Intel perhaps - depending on who's producing it - DEC says Oracle's operating system is currently restricted to the ARM. This is not true, according to Oracle. It's built - from stuff licensed from ARM and other unidentified companies mixed with stuff of its own probably derived from its own interactive TV venture - portable operating system called NCOS described as a microkernel overlaid with portable graphics.

Not restricted

Meanwhile, DEC product manager Kevin Fielding says he's been told by Sun that it is not restricted in its choice of processors for its machines which Fielding's been told will include a \$400 model but then they've also got their own Java chips in progress and a prototype using a MicroSparc. Sun said however that folks who might license and build its prospective Java device (*see front page*) could use a non-Sun chip. DEC's not pinning its hopes for StrongARM on the fate of such machines whose potentials remain questionable. It also intends to pursue PDAs, electronic organizers, set-top boxes and video games. Its main competitors are the Hitachi SH architecture, the PowerPC and the Mips Magic Carpet or 4300i. Prices for the SA-110 will range from \$29 in 10,000 quantity for a 100MHz part operating at 1.65 volts and delivering 115 Dhrystone 2.1 MIPS and dissipating 300mW to \$50 for a 200MHz part operating at 2 volts and offering 230 Dhrystone MIPS and running on a watts of power. It's most promising piece is the \$49 160MHz-185 MIPS part dissipating 45mW. It claims it is the most power-efficient processor today. Samples are available now; production starts in the spring. Meanwhile, DEC is bowing out of the home PC market, where it made little impression, to concentrate on selling to business. It will cancel its Starion line. The move could increase profitability. DEC PC chief Bruce Clafin, recently arrived from IBM, credited his troublesome unit break-even status, achieved in calendar Q4, to its sales of higher-margin NT-based units.

SAP AMERICA CEO FLIES TO INTERNET COMPANY

High-flying SAP AG has installed its executive VP worldwide marketing Paul Wahl as CEO of SAP America Inc, Wayne, Pennsylvania. Former president and CEO Klaus Besier departed to run Business@Web a high-profile, two-year-old Internet application development start-up spun-out by John Donovan's influential Cambridge Technology Group Inc. As well as providing SAP America with products to do business on the Internet, Besier told the New York Times that SAP America is exploring an equity investment in Business@Web. Donovan hopes to take the Internet company public soon. *Unigram* readers may remember Wahl as former director of the Open Software Foundation European operations. Former SAP America CFO Kevin McKay becomes COO and executive VP Jeremy Coote becomes president. SAP AG reported net profits for the year to December 31 up 44.0% to the equivalent of \$271.7m, on turnover that was up 47.3% to \$1,809.9m. Net earnings per share rose 43.9% to \$2.68. The figures were converted at \$0.6708 to the German mark. SAP America's 1995 revenue totalled \$710m.

NEXT SOFTWARE DELIVERS WEBOBJECTS

Steve Jobs' company made the name change official last week and at its Webmania event in San Francisco last week NeXT Software Inc introduced the anticipated WebObjects programming tools for automating Web page creation, designing Web services and tying them into corporate databases (UX No 552). WebObjects comes in different flavours depending on how sophisticated the user wants its Web site to be. The \$3,000 WebObjects Pro allows developers to incorporate C, C++ and Objective C code into Web-based applications and access OLE datatypes stored in Windows applications. WebObjects Enterprise is a \$25,000 development system for organisations that want to encapsulate data from existing applications into their Web sites and develop both internal and external Web sites. A free, scripting language-based version of WebObjects is available from Next's web site. Next has created a WebConstructor consulting group which will offer various packages to support Web development using WebObjects including database adaption (from \$50,000), mainframe application adaption (\$50,000), prototyping a system in two months (\$75,000). Next says it'll also support Java programming and the Sun/Netscape JavaScript scripting language in WebObjects but still hasn't decided whether it'll adopt Java for its NextStep and OpenStep products. The first cut of WebObjects ships next month with support for building web applications that incorporate Java applets and JavaScript code to run on the client. Future versions will support Java and JavaScript for building server-based applications. Next's readying a major update to its Windows- and Mach-based NextStep/OpenStep lines with Portable Distributed Objects release 4.0, now expected next quarter (UX No 572).

NETOBJECTS TO EASE FREQUENT UPDATING OF WEB SITES

Very few of the organisations that have established World Wide Web sites seem to realise that it is much better to be absent from cyberspace than to promise that your hot new site will have all the latest and greatest news about your products, only for eager surfers to find when they log on that it was last updated on January 10. A new company, NetObjects Inc, has been formed in Redwood City, California to create Website authoring, publishing and management products for people and organisations that design and develop for the Web. Its first offering, NetObjects Site Publisher, due to be launched in the second half of the year, is designed to build and update an entire site automatically every 30 minutes. An early prototype will be demonstrated on Thursday next week at 24 Hours in Cyberspace, an on-line event at www.cyber24.com, intended to showcase the future of real-time content publishing for media organisations and others that publish information that changes rapidly. NetObjects promises that thousands of images and hundreds of stories will be continuously collected, edited and published in a single day. NetObjects was formed in November by Rae Technology Inc and Clement Mok designs Inc, an identity and information design firm.

REPORT FINDS SECONDARY CONCERNS

Second generation application development tools aren't meeting user's enterprise requirements, according to a new study from Newton, Massachusetts-based Business Research Group (BRG). The report, "Second Generation Client/Server; Navigating the Application-Migration Pitfalls," follows BRG's recent evaluation of client/server databases (UX No 572). It's based on a survey of 100 mainly US users which have implemented enterprise-wide OLTP applications in client/server environments. Companies surveyed averaged 5,118 employees with data-processing budget of \$14m drawn from finance, retail, healthcare, government and manufacturing industries. The report examines problems companies face migrating to second generation client/server tools. The critical issues apparently fall into two categories; organisational change, training and performance; and functionality. 37% of respondents said staff learning curves were their chief concern. 25% said compatibility was their number one concern, 24% said cost, 18% ease of use, 17% said tools features and 15% performance and response times. 71% of respondents said new organisational models were required to implement and use client/server tools efficiently. However, the changing nature of applications and complexity requirement has promoted tool functionality to centre stage, the report says, with ease of use now a less important concern. 75% of respondents said the cost and difficulty of migrating legacy applications is a deterrent to moving to client/server environments.

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Acer America, now a \$1.4 billion business, has divided itself into three divisions: Consumer Business, Commercial Business and a System Integration Business. VP Max Wu is running Commercial; VP Michael Culver Consumer; and Acer president and CEO Ronald Chwang is stepping in to kick off System Integration.

Mainsoft Corp, which once looked like it would be first to implement OLE on Unix, has fallen behind a number of months while **Bristol Technology** managed to sneak past with its own release before Christmas. The product, which will support OCXs and MFC classes as well as cross-process functionality on the same machine, is now set to go into beta on Suns in a few weeks, with production a month later.

Insignia Solutions Inc has restructured its sales force bringing together its separate Mac and Unix sales groups into one organisation that will also handle NTTrigue.

So why did **IBM** need to pay so much to buy **Tivoli** - and in hard cash too, not soggy paper? Even if we're generous and say profits will double and more to \$12m this year, IBM is still valuing it at about 62 years' earnings, and the whole world was saying the that Japanese market was nuts when price-earnings ratios reached between 60 and 100 (it was - the Tokyo index was at around 38,900 then, and it didn't stop falling until it got down to about 14,000)

Programmer Arthur van Hoff and marketer Kim Polese, and several other important members of the 80-strong Java development unit have left **Sun Microsystems Inc** to form their own business developing Java-based software. James Gosling, the author of Java, will not be leaving. Sun is not investing in the venture, which does not yet have a name.

Cisco Systems Inc is growing so fast that it expects to hire at least 3,000 more employees in the US over the next four years, and could take on an additional 7,000 by 2006 - but with plenty of room at its base in Research Triangle Park, North Carolina, those jobs won't go to San Jose unless the city can find a way around an impasse over who pays for a road extension: Cisco is negotiating with the city to buy 155 acres of state land in North San Jose, but negotiations are stalled on the question of who should pay to extend a major road through the site, the *San Jose Mercury News* reports.

On seeing that **IBM** has been released from many of the 1956 Consent Decree constraints, a subscriber at **Sun** (and former **IBMer**) enquires "does this mean that IBM can now go after 100% of the punched-card business?"

Looks like turmoil at Marlborough, Massachusetts-based **Sequoia Systems Inc**: Neil McMullan has resigned, and Michael Stewart has been moved up from the company's **Texas Microsystems** acquisition to succeed him as president and chief executive.

Don Berey, one-time ringmaster of the circus known as Unix Expo, has parted company with its owners **Blenheim** to seek his fortune elsewhere. Fax him on 201 461 6809.

In an event hyped as being akin to Gutenberg's invention of moveable type, this Thursday photo journalists around the world from rural Nepal to the boardrooms of New York City will produce "24 Hours in Cyberspace" under the direction of the same team that created "A Day in the Life of America." It's supposed to distill how the Web is changing the way we interact, learn and conduct business. It's all being done on **Sun** boxes with **Illustra's** publishing system.

Oh this is nice. We read on the front page of the *Wall Street Journal* that **Sun Microsystems Inc's** filtering technology is being used to keep the Chinese people from learning anything on the Internet that their masters don't want them to know.

A newly fashioned Embedded Products Group, under VP and general manager Rajesh Parekh, formerly chief technical officer and VP, engineering at Sun's hardware arm, **Sun Microsystems Computer Corp**, is responsible for proliferating the Java chips - see front page - and Sparcs into the embedded market. Sun will produce reference platforms.

OMG and **The World Wide Web Consortium** have exchanged memberships. **OMG's** created an Internet SIG to find ways that Corba and Internet architectures can interoperate and create standards for Corba object/Internet interoperability.

The UltraSparc II, forecast to do 350-420 SPECint92 and 550-660 SPECfp92, taped out around mid-January. The design team's been flown to Hawaii as a reward for hitting the date.

BEA Systems Inc's takeover of Tuxedo - what **Novell Inc** is calling a joint development and master distributor agreement - takes effect February 23. Novell wants to notify resellers and customers. They're guarding the financial terms on which agreement was reached. **BEA** says we underestimated the current strength of its 24x7 support infrastructure (UX No 574).

Where are they now? Carl Ledbetter, once head of **SunSelect** and **Wabi** who went on to bigger and better things as president of **AT&T's** Consumer Products unit which sells telephones et al, has now gone to cable modem house and **AT&T** investment **Hybrid Networks Inc** in Cupertino, California as president and CEO.

Integrated Computer Solutions, the folks who brought you Xhibition back in the old days, are putting together IntraNET NY, the first technical conference for Java applet developers. It's to be held at the Manhattan Conference Center of the Millennium Hotel in New York April 8-10 and includes a small exhibit space. **ICS** is putting it in New York because Wall Street, it says, will be first to capitalize on Java's ability to develop intranets. Call +1 617 621-0060 or <http://www.ics.com/IntraNet/> or IntraN@ics.com

SunSoft's brought a **National Semiconductor** marcom VP Anne Wagner in as VP marketing.

Apple CEO Michael Spindler has been ousted and replaced by **National Semiconductor Inc's** president and CEO Gilbert Amelio, the *Wall Street Journal* reported Friday. Meanwhile the *New York Times* maintained that a merger deal with Sun, higher than the initial \$23 a share bid, "could be announced within days."

Dublin company **Iona Technologies Ltd** is about to become best friends with **Silicon Graphics Inc**. Meantime, Iona was forced to reveal its Java hand a little sooner than it wished after **PostModern Computing Inc** pipped it to the first Java'd ORB announcement with Black Widow back in December (UX No 568). Like Black Widow, Iona's module will be a downloadable Java applet.

DEC's looking for a deal with OLTP start-up **BEA Systems Inc** that's all but taken Tuxedo off Novell Inc's hands (UX No 574). **DEC** previously wasn't able to work with New Jersey-based Tuxedo specialist **IMC**, one of **BEA's** acquisition, because **IMC** held a Tuxedo source licence and was offering an enhanced version of the TP monitor (it was also on a different release) making it a competitor to **Novell Inc**, from where **DEC** got its Tuxedo. **DEC** expects its Novell OLTP engineering and marketing relationships to roll over to **BEA**.

Data warehouse **Red Brick Systems Inc** and **OLAPer Information Advantage Inc** are reportedly to bundle their technologies for decision support as Web OLAP Content Server from next quarter at from \$40,000 on Unix.

Corvallis, Oregon-based **Rogue Wave Software Inc** will introduce its DBFactory C++ code generator next month. Using the factory, developers can select database elements and generate DBTools h++ classes from them. **Rogue Wave's** also readying a visual application builder for the Java programming language.

SNI buried news of its new Open Enterprise Computing (OEC) division inside presentations given at a pre-CeBit event last week. Rather than fanfare the creation of the new \$3bn computer systems organisation, executives of the German company adhered to presentations created months ago - before OEC was concretised. US executives we spoke to were unhappy that the OEC rollout was a half-baked affair.

Computer Associates, whose CA-Unicenter is chief rival to both SystemView and TME, responded immediately to **IBM's** \$750m acquisition of **Tivoli**: "I've Been Moss'd" was how it thought the deal ought to be characterised.

The day after the acquisition (Thursday) **CA** already had its salespeople internally ironing out details of trade-in and re-pricing programmes to lure TME and SystemView users to CA-Unicenter. **CA** promises its CA-Unicenter-SunNet Manager bundle next month but is still working on its tie-in with **SCO** Unix which has proved a more difficult package to put together than originally expected (UX No 560).

Last week's **Tivoli** teleconference organiser could only take questions from six companies on a list **IBM** gave it.

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IBM TO KICKSTART SOLARIS- AND NT-ON-RS/6000, EAGLE SERVER SOFTWARE CAMPAIGNS ON FEB 20th

You'd be forgiven for thinking IBM Corp's non-AIX PowerPC ventures - namely Windows NT and Solaris - had all but withered and died since the Power Personal Systems Division was dismembered into RS/6000. The company's already stopped shipping PowerSeries machines with NT installed. However on February 20th IBM will announce full marketing and service support for Solaris and NT on its PowerPC 604-based PCI/ISA bus 43P series workstations, E20 workgroup servers and future boxes. IBM's US sales force will be compensated equally for selling AIX-, NT- or Solaris-based boxes - itself a big deal internally. There won't be a full 64-bit RS/6000 in any shape or form out of IBM this year, though it claims it does now have a plan that's still being closely-held. On the same Tuesday the company's software group will land its Eagle project, a collection of seven servers, including OLTP, database, communications and Internet bundled on a CD for its server platforms, from which users will be able to select required pieces. Meantime, IBM says it's SP2 parallel systems are getting heaps of interest from commercial types consolidating their decision support, OLTP and server. In April it'll lift the veil on a new, higher-speed version of its 40Mbps Vulcan SP2 switch and improved TCP/IP performance.

SOLARIS; THREE BITES TO 64-BITS

SunSoft Inc's Unix plans call for a phased introduction of 64-bit technologies in at least three Solaris releases beginning this summer culminating with a full 64-bit operating system offering due early 1998. Although SunSoft is targeting the 64-bit UltraSparc and eventually Intel Corp Merced (P7) architectures, it's also committed to supporting all 32-bit Sparc and Intel hardware and existing Solaris applications and technologies in the new releases, plus Aspen's 64-bit Unix APIs. PowerPC does not figure in its current 64-bit plans; it says it's "not sure what PowerPC's 64-bit roadmap is." A mid-1996 release will incorporate 64-bit asynchronous I/O and full support for all 64-bit hardware. The 32-bit kernel is being moved off into a separate addressable area, which SunSoft says will eliminate the hard boundary currently limiting 32-bit user and kernel processes to a maximum 2Gb space each. A full 4Gb addressable space will allow the kernel to support many more processes at any one time - or allow a user to run one very large process. An early 1997 release will include full implementation and support for 64-bit and 32-bit APIs and increase available read and write file space from 2Gb to over 1 terabyte. Full 64-bit addressing doesn't arrive until a 1998 cut of the operating system. SunSoft sees data warehouse, 3D and animation customers as prime beneficiaries. It says it's already working with database vendors on database-in-RAM techniques.

IBM PUTS THE BUSINESS INTO OBJECTS

IBM Corp will release a new version of its VisualAge toolset by year-end that includes key object-oriented software licenced from UK company JBA Holdings Plc to allow ISVs and application developers to create applications from re-usable business object component building blocks. The software includes JBA's C++-like JBA Object Toolkit (JOT) and System Object Model (SOM)-compliant browser and workshop. The tools are being developed for use with IBM's San Francisco (Shareable Frameworks) environment, a business application model that when it becomes available early next year, is designed to increase software reuse, improve programmer productivity and reduce time to market. IBM will make the framework available across multiple architectures (UX No 575). After examining popular business applications running on its platforms, IBM concluded that when boiled down, many components, functions and toolkits are identical and need not be re-invented for every new program. From this understanding grew the notion of an application development model with a common language and shareable component objects and tools residing upon its System Object Model (SOM). From the 30-odd partners it had working on the original San Francisco specs, IBM picked reference models from a handful, plus some of its own work. The first hurdle was crossed last fall when, after a run-off, JBA's object-oriented GuideLine toolset was picked over VisualAge as the preferred development toolset for San Francisco. IBM struck a cross-licencing agreement with JBA, which, in conjunction with other IBM partners including Sweden's IBS AB, is developing San Francisco at IBM's Boeblingen centre in Germany. The 40-person development team includes eight from JBA and a dozen from IBS. IBM has licenced JBA's SOM-compliant Object Workshop, an object development tool and browser which allows developers to point to and retrieve any other SOM component over LANs or the net. It includes a GUI painter and 35 controls, plus graphing, database container and other widgets. JBA will offer a version of Object Workshop for OS/2 in July. IBM has also licenced JBA's JOT language, claimed to be almost identical to C++ but tailored for business application development, which does away with the programming language's more esoteric structures. IBM's Toronto labs and JBA will create a full business programming C++ language from JOT and include it and the Object Workshop in a new VisualAge release by year-end. Re-usable manufacturing, financial, distribution and business objects plus a variety of toolkits being created by JBA, IBS and others partners will be available for San Francisco. How ISVs will make money from San Francisco or whether they'll buy into it in the first place is unclear. With up to 40% of components identical across applications, and - we're told - another 40% of tools and code that's shareable, that leaves only 20% of the development sandwich for value-add.

INTEL JOINS DOLPHIN FAN CLUB

Intel Corp has officially "blessed" the use of Dolphin Interconnect Solutions AS' interconnect solution and may even be looking at ways to adopt it for its own systems. Dolphin's technology is based on the ANSI standard Scalable Coherent Interface (SCI) and a system architecture called Cache Coherent Non-Uniform Memory Access (NUMA). SCI is a 1Gbps protocol which makes individual memories on each four-way Intel SHV board look like a single large memory, and enforces cache coherency across all the baseboards. NUMA is claimed to scale to hundreds of processors using the traditional shared memory programming model, meaning SMP applications do not have to be re-written to run on the systems. Although Dolphin has based its solution around Intel chips, it said that until recently it bore the animus of the microprocessor giant, which steered customers away from the architecture. Two weeks ago, however, Intel officially approved of the design, a fact that it's not broadcasting but is letting Dolphin and NUMA users like Data General spread around. Intel is weighing the possibilities of high-volume SCI-based servers, according to sources at Compaq, which is also working with the SCI company on implementations that would complement its already-licensed Tandem's ServerNet technology. Dolphin confirmed the reports. Intel is being secretive about its plans for the technology, but Dolphin employees working with the chip company think it's interested in NUMA in part because it already runs on Intel chips and memory. If Intel licenses it, it could bring major revenues to Dolphin, but it fears that Intel could try to make its own version: Intel reportedly tried to build its own SMP technology, but the solution apparently didn't stand. It still wants a way to link together Pentium Pro quads in a high-availability clustered system, and could use SCI's "glue" for that. Novell is still working on the MPP NetWare version that will use NUMA and that it hopes will leave NT in the dust.

THIRST FOR JAVA DELAYS BROWSER

Sun Microsystems Inc says it's been so deluged by developer demand for Java that it's fallen a quarter behind on the HotJava Web Browser it hoped to have ready by the summer. Sun's new JavaSoft division said it only had 12 people, including managers, marketers and secretaries, when the Java rush first began, and although those numbers have risen to 80, it hasn't been able to keep up with the demand. Sun said that being that small it could "only do one or two things at a time," but HotJava is still a high priority. Although the division won't put a date on the release, it says the browser could go to beta in the spring with release 1.0 due over the summer or more likely in the fall.

NEC, BULL, PACKARD BELL POOL MICRO RESOURCES

Seeking to make a virtue of necessity, NEC Corp and Compagnie des Machines Bull SA are riding to the rescue of cash-strapped Packard Bell Electronics Inc, the Sacramento, California personal computer maker universally believed to have received a large inventory-backed loan from Intel Corp. Under a comprehensive restructuring, Packard Bell will be merged with Bull's struggling Zenith Data Systems, and the married company will get a dowry of more than \$650m from NEC and Bull. NEC will invest \$283m in cash for non-voting convertible preferred stock and will retain 19.99% of the voting equity. The balance is in kind, being the book value of Zenith. As part of the deal, Bull will receive medium term notes and convertible bonds from Packard Bell to an unspecified value. With the addition of Zenith's activities, Packard Bell will have annual turnover of more than \$5,500m, based on the 1995 sales of both companies, and with 13% of the US market, will vie with Compaq Computer Corp for top spot. When NEC's personal computer sales are added in, the grouping becomes number one worldwide. The enlarged Packard Bell plans to list its shares in the US this year, NEC said, adding that it and Packard Bell would consider the sharing of personal computer plants and co-operation in distribution of products and on support services.

Seeking strengths

At first blush, the expanded three-way alliance between Bull, NEC and Packard Bell represents a "with one bound it was free" transformation of Packard Bell's prospects, and enables Bull to disguise what a disastrous buy Zenith Data Systems has been. Effectively Bull is decently burying Zenith in Packard Bell, and its personal computer ownership falls from 100% of Zenith to the existing 19.9% it already held in Packard Bell. The problem is that it looks like the kind of alliance where each is looking for strengths in the other three that they don't have - NEC knows a fair bit about efficient manufacturing, but Bull has shown that it knows little about marketing personal computers in Europe beyond its own base, and zilch about marketing them in the US. NEC knows next to nothing about marketing them in the US, and while Packard Bell may be a whiz at marketing personal computers, it is a novice at marketing them profitably - most years it either ekes out the most meagre of profits, or makes a loss.

IBM HAS BIG PLANS FOR INTERNET TELEPHONY, WANTS TO SET INDUSTRY STANDARD

IBM Corp has caught the Internet telephony bug, becoming the first major to do so - and says it wants to rally a standards group so that users at each end do not need to be using the same software. The company says it plans to enter the Internet multimedia communications business by offering telephony software that will make possible telephone calls over the Internet and over private networks. The new IBM Internet Division says the software is an evolution of technologies already developed in IBM research labs to provide Simultaneous Voice & Data capabilities, and offer speech quality of "a good cellular phone." The technology enables a computer user to combine conversation and data transmission at the same time using the Groupe Speciale Mobile digital cellular standard, and should be ready by mid-year. It will compete with the existing products from VocalTec Ltd, Camelot Corp and Quarterdeck Corp. IBM does not plan to offer the product to consumers in retail packaging, but will preload the software on its multimedia personal computers, include it in the OS/2 Warp operating system and other IBM hardware and software products, and make it available over the Internet. It will also be compatible with Windows95, NT and Mac OS. The software was developed at the company's research facilities in Haifa, Israel, with the contribution of other IBM research locations. It will have a graphical user interface to make it easy for novices and in future, the company will integrate other IBM technologies such as security, encryption, conference calling, videoconferencing and connection from the Internet to any telephone worldwide. Disingenuously, the company insisted that the product did not pose a threat to phone companies, and told *Reuter* that it was working on it with several phone companies - but widespread use of Internet telephones would necessitate a revolution in tariff structures and an eventual flat usage fee.

OPENVISION RENAMES PRODUCTS AXXION

OpenV* always seemed like a rather ludicrous name for systems management software, but does Axxion sound any better? With a \$7.5m quarter under its belt and now apparently in profit (UX No 572), privately-held OpenVision Inc has bitten the bullet and renamed its dozen system management products Axxion (pronounced action, we're told). There's Axxion-NetBackup, -HSM, -Dfrag, -HA, -Event Manager, -Performance Manager, -Scheduler, -Xfer, -SecureMax, -Authenticate, -Authorize and -Detective. The company's now also integrated and packaged some of these point products together in various pairings to address specific management requirements such as event driven storage, high availability storage and security, secure auditing and secure event management. The company recently ditched the notion it had of using its Computer Time acquisition to offer direct backup of relational database tables rather than hardware block copying, opting instead to OEM Data Tools Inc's SQL-BackTrack for use with Informix and Oracle, with Sybase and CA-OpenIngres support to follow (UX No 539). It's got no plans to offer an object database as a repository or add support for managing object databases. OpenVision's new CFO Ken Lonchar was responsible for taking his previous company, Microtech Research Inc public. OpenVision reckons to have done around \$23m in calendar 1995. IBM Corp's acquisition of Tivoli Systems Inc should mean less confusion in the market, OpenVision reckons.

AS YOU WERE: HARRIS WILL SHRINK TO ITS TRUSTED ARM

Faced with a steep rise in the value of the latter's shares compared with those of the former, Oceanport, New Jersey-based Concurrent Computer Corp and Harris Computer Systems Corp, Fort Lauderdale, have radically restructured their proposed combination, and Harris Computer will now sell its real-time computing business and about 230,000 shares to Concurrent in exchange for about 10m shares of Concurrent common and \$10m Concurrent preferred stock. Harris says it will concentrate all its efforts on its secure computing systems business. The preferred stock carries a 9% coupon and is convertible into Concurrent common at \$2.50 a share. Following the transaction, Concurrent shareholders would hold about 75% of the enlarged Concurrent, with the balance owned by Harris. Harris shareholders will have about 90% of Harris with Concurrent holding the remainder, and Harris could boost its position in Concurrent to about 32% on full conversion of the preferred stock. The revised deal also follows public statements by a large holder of Harris stock that he would not support the merger as originally constituted and recent successful initial public offerings by other companies in the trusted systems business. The earlier deal also required fairness opinions from advisors for both companies and these were not thought likely to be forthcoming. Harris will now also change its name.

APPLE WARNS OF BIGGER OPERATING LOSS FOR CURRENT QUARTER, SAYS NOT NOW IN TALKS

The position of Apple Computer Inc seems to get daily more precarious, and last week, as his first public act, new chairman and chief executive Gilbert Amelio reversed the company's traditional policy of not commenting on press speculation and came out with a statement saying that it was not currently in merger talks with anyone, and that its loss for the current - fiscal second - quarter would be worse than the \$69m loss last quarter. Neither piece of news was calculated to underpin the punch-drunk share price and the stock duly opened about a dollar easier at \$27.375. Earlier, *Reuter* had reported that Sun Microsystems Inc had renewed its \$23 a share offer but this time including a cash element. Apple said it was reversing the "no comment" policy "because of the destabilising effect recent rumours and speculation have had on our business and our organisation." The higher operating loss will come atop of the \$125m pre-tax charge this quarter for restructuring, and Apple stressed that the warnings were based on partial information and should be taken as a guide, not gospel - it doesn't want to run afoul of securities laws on top of everything else. Apple planned "to remain competitive at all levels while retaining our ability to develop and bring to market leading-edge technologies, particularly in the areas of multimedia, Internet, graphics and ease-of-use," Amelio said.

HP PEPS X TERMS

Although it's a rapidly maturing market, Hewlett-Packard Co's overhauling its X terminal lines this week with new models in its Entria entry-level and Envizex technical series. HP's X terminal sales declined to \$139.5m last year from \$164.7m in 1994 - the market was worth \$520.5m compared to \$645m in 1994. It's just a drop in HP's \$31.5bn ocean, but not a sum to be sniffed at, the company says. The new Entrias, designed for corporate desktops, are now fitted with 25MHz Intel Corp i960 CPUs, 4Mb RAM, two SIMM slots expandable to 68Mb, one parallel, one serial and two PS/2 ports. They're claimed to deliver 80486 performance when accessing PC applications on the HP Model 500 Windows application server. Rated at 2.64 Xmarks, the Entria Plus 17CH is a 17" colour model with a resolution of 1280x1024, which is priced at from \$3,000. The 19" variant costs from \$3,500. The 2.5 Xmarks-rated Model 15C is a 1024x768 device and costs from \$2,000. The 17" Model 17C is priced at from \$2,700. The Entrias now also support MPEG graphics and software until now only available for the higher-performance Envizex line. Version 7.0 of the Enware multimedia bundle includes a suite of local clients, Common Desktop environments, MPEG video player, PPP, extended support for Sun environments, SharedX and local whiteboard. Prices go from \$600 to \$750 for the multi-host software depending which server environment is being supported. CDE is \$100 per client. Audio kits are \$100, MPEG-1 video adapters are \$600, PCMCIA adapter card is \$120, cable management is \$60 and a stand is \$60. Configured as a console for use with HP 9000 servers the 15" 1024x768 monitor is from \$3,000 - the 17" 1280x1024 version costs \$4,500. The existing Envizex models designed for advanced multimedia applications are now available with bundled MPEG video, audio, floppy drive and 14Mb RAM (plus optional 100VGAnyLAN) at from \$3,500 for the Model 19Gp with a 19" mono screen and \$4,400 for the 17CpS with a 17" 1280x1024 colour screen. 19" and 20" models cost from \$5,100 and \$5,400 respectively. The Envizex models are rated at 3.26 Xmarks.

Tektronix shines in 1995 X terminal market

According to Zona Research Inc's X Business Group, the 1995 X terminal market was worth \$520.5m - 237,426 units - down from \$645m in 1994 (UX No 526). HP's share of the market increased to 26.8% (from 25.4% in 1994), though revenue actually declined from \$164.7m to \$139.5m. NCD's 21.4% share of the 1995 X terminal hardware market - \$111.4m - was down on 1994's \$143.4m, 22.1% share. Tektronix's 19.3%, \$100.5m share was well up on its \$76.1m, 11.7% 1994 business. DEC's 9.6%, \$49.9m 1995 business was down on the \$72.3m, 11.2% share it held the year before. IBM did \$25.5m for a 4.9% share in 1995, down on 1994's \$65.7m, 10.1% share. Other vendors - Sun, ADDS, Hitachi and other accounted for the other 18%, \$93.7m.

Thin clients

Given their declining market, X terminal vendors are trying hard to differentiate their offerings and diversify into value-added software products. They'd rather characterise their souped-up monitors which run X Windows-based Unix applications over the net as "corporate thin clients," with support for what ever degree of multimedia is required. HP's trying to position its X terms as universal access devices for running Internet/Intranet (HTML support), Windows applications (via mechanisms such as PX X servers, NCD NTrigue, Tektronix WinDD, SunSoft Wabi, Insignia SoftWindows or SCO Merge), legacy applications (terminal emulation support) and Unix servers (X Windows). However, having apparently solved two of the market's biggest bug-bears - lack of PC application access and phobia about increased network traffic that X terminals generate (supposedly the rise of the Internet has killed-off this worry) - the market is still in decline.

START-UP TRY'S NEW TACK FOR NET COMMERCE

A Cambridge, Massachusetts start-up with its eyes on Internet commerce is hoping to avoid technical uncertainty about credit card standards and customer fears about security on the Web by avoiding the credit card issue altogether. Malls Ltd brings a geographically-based approach to the Web through its Communities Online program, where users can click on a map of the US to find stores near them. Shoppers purchasing an item call the company via an 800 number to register, giving the attendant their credit card number in exchange for a proprietary password that can be used for all future purchases. CEO Frohman Anderson said that the arrangement will keep credit cards off the Internet until security issues are ironed out, necessary for Web transactions because "the public will remain suspicious for a long time." The company also supports COD, checks and unsecured credit card transactions. Anderson said he's waiting for the new Visa and Mastercard security standard to solidify before committing to it. Malls, a DEC partner, has developed a scanning and compression technology over the last two years that will place companies' artwork on Web pages at a fraction of the cost of normal Web page development. The company said it's had interest from business, especially non-retail places like restaurants. It plans to make money from a 5% transaction fee on all purchases and from pages sold to businesses: from one text page with e-mail for \$120 a year up to a deluxe account that sells for \$1,000 a year for 50 pages. The site runs on a Unix-based AlphaServer 1000, with plans for an 8200.

IBM STIRS METADATA STANDARDS SOUP

IBM Corp was building its "lobbying" momentum at the Meta Group conference in Florida last week (see page 4) to ensure that the coming metadata standards from the Metadata Coalition will look a lot like its existing product line. "Metadata is the data about data users need to base quantitative decisions on." It added Cognos Software Inc's Impromptu to the previously announced list of vendors supporting its Visual Warehouse tools and the associated Data Guide Tags technology for storing and sharing metadata, and claimed its support had risen to 25 tools that can be integrated with its warehouse offerings (the list is on its way as this is written). Included are those tools from Arbor Software, Business Objects, Information Advantage, Pilot Software and Vality Technology announced in October. But IBM also revealed that the Metadata Coalition had "accepted a submission of IBM technology," towards speeding the standard. Initially the six founding members had produced a draft specification, but this is understood to have been moved forward considerably with the submission of the IBM Data Guide technology and is now out for review with the various members. Patty Nghiem of Business Objects, co-chairing the Council of the Metadata Coalition, gave a rosy view of the shape of the standard saying: "Membership is now up to 20 companies and we expect them to have this draft by February 15th, and offer amendments in time to vote at our March 27th meeting [at Database Client Server World in Boston] to adopt the proposals as a standard. But compliance is going to be up to each vendor, although we expect it should be achieved within a year." Nghiem played down the idea of any controversy or politics coming into the standard, positioning it as a good idea for everybody, so that all systems in the data warehousing arena can share or swap metadata. But an IBM spokesman added: "This is just like any other standards making exercise. The technology steering group is bound to have a few heated exchanges, and the final adoption always has something to do with politics. It may not be as straightforward as we hope; that's why we are keeping up our initiative to sign up more data warehouse vendors directly." A copy of the draft standard is available to non-members and press after February 15th, and a Web site is being set up on the IBM site to market the proposals. The Coalition claims 20 members and has lowered its membership fees to \$500 to try and tempt a new crowd.

HP NOW OFFICIALLY PART OF IBM'S DCE PRINT MANAGEMENT CAMPAIGN - RIVAL ONC PRINTXCHANGE VERY DISTANT

As expected (UX No 556), IBM Corp has won fellow Distributed Computing Environment (DCE) adherent Hewlett-Packard Co for its Print Systems Manager software designed to manage networks of distributed printers from a Unix console. IBM currently has PSM up on AIX 3.2 and DCE 1.0x. It's had to delay a planned AIX 4.1, DCE 1.1 implementation until the spring to give DCE time to "settle down." HP will show an early cut of PSM on HP-UX at Uniforum next week, but isn't saying when it'll begin selling the software. PSM is based upon the ISO DPA Palladium print model standard and requires a DCE licence. Remember this is Unix, and remember the RPC wars are still being fought and you'll understand why PSM is of course facing-off against a rival distributed print management mechanism called Printxchange backed by DEC, SunSoft, Xerox and others, including Kodak and Novell. Printxchange is based upon the same print standards as PSM and doesn't require DCE. It however will run on the Sun-derived Open Network Computing distributed computing environment, and it's nowhere near being a product yet. Beta code isn't expected until September at the earliest, though the development is still on track, SunSoft says, claiming the resulting software will be bundled free of charge or available unbundled at no cost. The other player, Dazel Corp already offers its Output Management System for print management on Unix. Although SunSoft et al claimed to have drawn Novell Inc's NetWare attention to Printxchange at their announcement last year - and say their mechanism will include NetWare directory print services - HP is confident its new relationship with Novell on Unix will lure the same services to PSM. So far no Printxchange adherents have taken up IBM's offer to licence PSM, and although IBM and HP "understand the need for interoperability," they say the "Printxchange people are not at a point where they can discuss interoperability yet." The respective business managers are talking at regular intervals, we're led to believe.

DATA WAREHOUSING INDUSTRY SET TO GROW TO \$13bn IN TWO YEARS, SAYS META GROUP STUDY

By Peter White, US Editor APT America Inc

The data warehousing (DW) bandwagon is building massive momentum, with 1,200 attendees at the DCI-organised, and Meta Group-sponsored, Data Warehousing show in Orlando, Florida last week planning to make it a \$13bn industry within two years. This figure comes from an ad hoc survey of the show attendees carried out by the Meta Group, and represents incredible growth from last year's \$2bn levels of expenditure to 1998 figures of \$8bn on hardware and software and a further \$5bn spent on services and systems integration (all figures are Meta Group estimates). And these numbers aren't just drawn from the air; they are extrapolated from buying plans listed by the attendees, themselves representing a huge proportion of the Fortune 500 buyers. Most surveys of this type usually come from wide-eyed optimistic, vendor-supplied data. The survey also revealed that so far the average expenditure for a data warehouse project is \$3m, with over two thirds of this spent on hardware, typically supporting less than 50 decision makers. But this is set to accelerate, with bigger projects gradually being undertaken. 59% of respondents expect to support DWs in excess of 50 Gigabytes by the middle of the year, and 85% claiming they will be supporting over 50 users in the same time frame. Oracle Corp's database lies at the heart of 50% of all DW installations with Microsoft Corp SQL Server, Red Brick Systems Inc and Informix Software Inc duking it out for the second spot. The survey states that sales of multidimensional databases (MDBMS) have not borne out optimism from the equivalent survey last year, but that users still insist they want to deal with the classic hypercube structure of data offered by such systems. They just haven't bought them in volume yet. The Meta Group keynote speaker Aaron Zornes warned users though that MDBMS' don't scale beyond 10 Gigabytes, with performance degrading dramatically above that line. Most data warehouses initially had used existing PC tools to bring the data to executive's desks, such as Excel and Microsoft Access. But this is set to change. Users are becoming more familiar, with specialist tools designed to interrogate MDBMS such as Business Objects, Cognos' Impromptu and Powerplay, Brio Enterprise, IQ Software and Microstrategy's DSS Agent, and will turn to them increasingly over the coming year.

"Back to the future" means "Back to the server"

The world's biggest ever collection of data warehousing professionals heard a shocking message; it is now time to trust their corporation's most precious data to the Internet. It's safer than leaving it on a Windows PC. And from an audience of seasoned data handling specialists, a big chunk of them out of the Fortune 500, there was not one single McEnroe-esque cry of "You cannot be serious." One established futurist/analyst at the show went as far as suggesting that if the advice was followed, the PC industry as we know it would be all over, declaring "this is just going to end." And some of the world's biggest companies were cited as examples of companies that have already taken the step, with names like MasterCard and Fed Ex banded around as pioneers. As if to echo the stage-managed sentiments, at least three data warehouse specialist software houses showed Internet offerings for the first time, with more promised.

Home

Richard Finkelstein of Performance Computing, keynote speaker who so heartily endorsed the move to the Net went on to confess that Oracle Corp founder Larry Ellison's "vision" of a cheap network computer had hit him like a religious conversion three or four months ago, and he predicted a massive take-up with major corporations moving away from "client centric" computing, declaring that it was as if the applications were saying, "I want to go home to the mainframe." For mainframe read back to the network, preferably to a Unix server. Mr Finkelstein, affectionately nicknamed "The Fink," by the previous speaker because of his habit and ability to turn conventional computing paradigm's on their head, cited Fed Ex's placement of customer shipping data on the Internet so that customers can track their shipments from all over the world. Finkelstein told his audience: "Netscape is a thin client, where the application sits on the server and only the GUI sits on the client. Windows is a fat client where the application tends to sit on the client." And he asked: "Could you imagine a worldwide order tracking system like that being built with a fat client?" His point wowed an audience as everyone considered how every client would need to upgrade their processor and memory, move to the right version and configuration of the operating environment and deploy a common application. Faces winced in sympathy at the idea. "If you put your applications on the server you just need Netscape, or any other browser. And Netscape doesn't need to run on Windows. Any other applications you need in the future, you just download some applets or send some Java scripts to the client."

Safe

While the Fink was painting a future in which corporate PC growth would stall, Unix read-only servers would be the standard not just for data warehousing but whole areas of cooperate computing, other shreds of evidence that he may not be so crazy, were mounting. Finkelstein went on to rise to

his theme of "the demise of the fat client, long live the thin client," when he brought up the subject of his ten year old TV at home, that's still good for a few years yet." Can you imagine if the TV manufacturers came to you every two years and said, you need to spend \$500 and buy a new set now. Well, that's what we do right now with a \$2,000 PC, and when you can buy a machine that's no more difficult to set up than a Nintendo box, for \$500 or \$1,000, and not change it for ten years." Finkelstein implied that data warehousing was the best chance for major corporates to try this approach out since their read-only nature meant there was no risk of losing data over the Net. "The problem isn't bandwidth. The Telcos have 80% of their bandwidth unused, and a private Intranet is easy to secure. Fat clients have no security," he added.

Chance

Supplier of OLAP (Online Analytical Processing) software, Information Advantage of Eden, Minneapolis, declared its vote for the Net in a joint marketing deal with one of the founding fathers of data warehousing, Red Brick Systems Inc. It's teamed up to declare the Internet safe, even for the banking world, strongly hinting that their top client, MasterCard, was looking at the Net as a way of offering views on its 1.2 Terabyte data warehouse of credit card transaction information back to its 22,000 worldwide banking partners. You can be sure if MasterCard does choose to take what would have to be such a carefully thought out, encrypted, hyper-secured step, then competing organizations would be forced onto the Net to chase the concomitant network savings. Information Advantage used the show to launch WebOLAP, a front end to its DecisionSuite Server technology, convinced that its other major blue chip clients (as well as MasterCard) would follow shortly onto the Net, as they come off beta. Other (as yet non-Web) clients include Unilever, the US Customs, Fingerhut, and major US retailers Target Stores and Sears. Microstrategy Inc of Vienna, Virginia, a direct competitor to Information Advantage, was one of the others touting a Web approach to data warehousing but declared its first, if lesser known customer, Hannaford Bros Co, for its DSSWeb. This \$2.5bn US retailer is already linking its 140 stores to sales, cost and inventory information over the Web.

SYBASE ADDS TO WEB.WORKS STORY

Trailing Oracle and Informix announcements by several weeks (UX Nos 563, 568) Sybase Inc says it will offer an application development for web.works, its planned Internet architecture, promising database and middleware details in the coming weeks. The company recommends using the forthcoming PowerBuilder 5.0 release with web.works, plus a web.sql module being readied for use against System 10 and 11, enabling developers to embed SQL statements in HTML pages. with support for Common Gateway Interface and Netscape APIs. A Solaris release is due this quarter, with other platforms supported from next quarter. Prices start at \$1,200. The company has also announced PowerSoft Optima++, a C++ OLE automation tool which using the Watcom C/C++ compilers, plus Microsoft controls and Netscape browser plug-ins. Later versions will support Java and Corba 2.0. PowerBuilder and Optima++ will share data windows, reports and a PowerBuilder repository. Optima++ supports ODBC, Sybase SQL Anywhere, Data Pipeline for data migration and InfoMaker query and reporting tools. Its expected in the next ninety days.

PC X SERVER BUSINESS BOOMING, SAYS IDC

Worldwide PC X server shipments grew to 654,900 units in 1995, up 42.3% on last year, according to International Data Corp. Hummingbird Communications Ltd captured top spot with 46% of market share for both units shipped and revenue. Worldwide vendor revenue grew by 40% to \$108m in 1995. IDC expects 1996 worldwide shipments to increase by 40% in volume and 38% in revenue respectively. IDC attributes the growth to the capability for PC X servers to distribute information between Unix and other X Windows based host computers. It expects further industry consolidation. The fastest growing vendor was WRQ Inc which increased unit shipments 153% and revenue by 121%. IDC expects WRQ to bring pressure to bear on Hummingbird and NCD with its NT product later this year.

X/OPEN SECURITY SPECS DUE NEXT QUARTER

X/Open Co Ltd's security working group will begin delivering the first of its X/Open Security Brands in the second quarter (UX No 548). XBSS (X/Open Baseline Security Specification) will be available for distributed computing environments, followed at the end of the year with branding for the Internet Engineering Taskforce's GSS (Generic Security Service) API and RSA-based GCS API for cryptographic services. X/Open says it's made something of a quantum leap from its original starting position which was concerned with standards on single systems. XBSS standard includes basic security features such as auditing and communications for Unix, NT, OS/2 and mainframes. Conformance testing should begin soon after. The GSS API provides mutual authentication for applications in distributed environments, supporting audit trails on different platforms across the network. The Security Group is already working on single sign-on, Internet firewall and a public key cryptographic specifications. X/Open says it's developing an infrastructure to provide a 'directory inquiries' of all public keys, a digital signature service and non-repudiation services to be used for contracts and purchase orders. It expects the public key encryption and digital signature to be branded in 1998. Meantime Version 2.0 of its ISO-rated Call Level Interface for defining calls for applications interfacing with SQL includes support for complex data types and will be available in the second quarter.

INFORMIX TO SHIP OBJECT-RELATIONAL UNIVERSAL SERVER DATABASE BY YEAR-END

Claiming a two-year lead over rivals, Informix Software Inc, Menlo Park, California, last week consummated its plan to acquire Illustra Technologies Inc (UX No 570), detailing an object-relational Universal Server database it'll ship by year-end. Informix says Universal Server will store and manage relational tables, text, numbers, sound, images and Web pages. It's effectively a new cut of Informix's existing Dynamic Scalable Architecture relational database technology tailored to support DataBlade modules, the Illustra technology which allows all kinds of structured and unstructured multimedia data types to be stored as true objects in existing databases, and not just as parcels of data with object wrappers a la Oracle Corp. Next quarter the company will offer a gateway allowing customers to build applications on the Illustra Server object-oriented database that can access information stored in Informix databases. At the same time it'll introduce a development toolkit for building DataBlade programs that will run against both the Illustra server and Universal Server. A subsequent release of the toolkit will provide support for building C++ DataBlade class library modules using Informix tools. The plan is to migrate all Illustra customers, applications and DataBlades to Universal Server over time. Illustra plans one further release of the Illustra Server, version 3.3, in July, but says it'll continue to support 3.x releases as long as customers require. Universal Server won't support all Illustra 3.3 features until a subsequent release later in 1997. The company says Informix customers will be able to run their existing applications on Universal Server - which its engineers call Universal Data Server 1.0 internally - unchanged. The acquisition of Illustra is set to complete by the end of the month.

PLATINUM TECHNOLOGY RAMPS DATA WAREHOUSE CAMPAIGN

The data warehouse technology Oakbrook Terrace, Illinois-based Platinum Technology Inc has assembled by merger, acquisition and development is beginning to take shape. Its Data Warehouse business unit catalog ~~encompasses data movement, transformation, metadata management and data access.~~ Data Shopper 1.2 is a graphical front-end for the Platinum Repository, enabling drill-down queries, or what Platinum describes as a "shopping cart" for query building by handing queries to supporting query and reporting tools including Platinum InfoQuery and Forest and Trees, Microsoft Query and Intersolv's Q+E. Shipping now version 1.2 costs from \$25,000 for 100 users. Repository MVS 3.3 enables IBM System 390 mainframe data to be managed and accessed from OS/2, Windows 95 and NT and most Unix platforms. Support for new import sources include Informix, LBMS and Platinum InfoRefiner. Available now, prices start at \$50,000. Platinum's extraction tool InfoHub 2.0 provides transparent SQL access to MVS relational and non-relational databases, including Adabas, CA-IDMS, IMS, VSAM and MVS from PC-based applications or from front-end query and report writing tools. InfoHub enables interactive read, write, and update access to mainframe legacy data without DBMS-specific code. It supports the ODBC and DB-Library, enabling access from most popular client platforms. It can also be used in conjunction with Platinum's InfoPump to move data between client/server platforms and MVS databases. New features include a DRDA communication infrastructure to handle movement between client and host. In beta, it's due in the second quarter at \$55,000. Platinum InfoRefiner 3.0, originally known as Platinum Pipeline, and licensed from Dataware Inc, is a software tool enabling organisations to take legacy data (i.e. data in DB2, IMS hierarchical files, VSAM, and other sequential file formats) and seamlessly integrate it into DB2. It includes a new graphical front end. Prices start at \$90,000 depending on number of CPU's. InfoPump is Platinum's bi-directional data replication tool. It supports OS/2 V2.1, AIX V3.2, and Windows NT V3.5; a Windows V3.1 compatible workstation is required with network access to Sybase or Microsoft SQL Server. The latest version has been updated to support HP-UX, Solaris and AIX and NT. It's priced from \$25,000 for NT, \$35,000 for HP and Sun. InfoTransport 2.0 - previously Data Transport - moves large volumes of MVS data (DB2, IMS, VSAM, and sequential files) to PC-, UNIX-, and LAN-based databases (DB2 for OS/2, DB2 for AIX, Sybase SQL Server, Microsoft SQL Server, Informix, and Oracle). Version 2.0 supports change propagation from InfoRefiner, enabling the distribution of changes to a data file. It also includes enhancements to the user front-end and support for DB2 for MVS Version 4.0 as a source and Informix and ASCII as a target. It's added Pyramid's and NCR operating systems to its roll call. Prices from \$40,000. Meantime Platinum Technology will combine its Forest and Trees, InfoQuery and InfoReports data mining tools with UK-based Integral Solutions Ltd's Clementine neural network and rule induction technology for decision support. The two say they'll deliver a 'business intelligence workbench' for accessing data to enable solutions such as market basket analysis in retail or call transaction pattern analysis for fraud detection in telecomms.

BMC RAMPS CLIENT/SERVER CAMPAIGN

Mainframe database and application management-turned open systems adherent BMC Software Inc, Houston, Texas, has appointed former Informix Software marketing director Andy Smith as European marketing director. The company's restructured its European business, appointing country managers to run UK, French, German, Italian, Spanish, Belgian, Dutch and Scandinavian operations, each with their own sales and marketing teams, who report to three pan-European company officers, including Smith. BMC's hiring in sales and marketing across all units, and is gearing for high-volume distribution strategies (international license revenue grew 56% last quarter). Other changes mean that managers on large accounts handle both mainframe and Unix products. Although BMC spent its first 10 years as an IBM Corp mainframe database management company - its founders are IBM refugees - the company kicked off an open system strategy a couple of years ago with the acquisition of Australian Unix database and application event management company Patrol Software (UX No 473). BMC's already got HP and Sun reselling the Patrol suite, which can now also pass information to Computer Associates' CA-Unicenter (UX No 574). Although Tivoli Systems, CA, OpenVision and others can manage disks, batch jobs, security and software distribution, BMC appears to be farther down the application management track than any of the above. It hopes to have Patrol modules available for as many as 40 applications by the end of the year. The company claims Patrol is unique in offering application, database and server hardware management - in any combination thereof - via the use of intelligent agents which reside at each occurrence of a database or application, monitoring activity. Rather than passing all information back to a central console for action by an administrator or an admin package, Patrol knowledge modules which sit alongside the intelligent agents provide a set of routine response guidelines which the agents can act upon without having to alert the console. The database knowledge modules in turn can be updated by Meta Desk, Manage and Change packages, which are effectively an extension of the company's reorganisation and backup mainframe products to Unix and NT. Or the knowledge modules can call the console directly. Customers aren't even required to buy a standalone Unix- or Windows 95-based BMC console, which can run under SNMP managers such as OpenView, CA-Unicenter, SunNet Manager or a Tivoli framework. BMC will reportedly add key reorganisation and log management features to the Meta suite next quarter. Like every company worth its salt these days, the company's also working-up an Internet angle for its Patrol products which it says will be able to manage and monitor Web sites from later this year. BMC does 80% of its business on the mainframe - within two years it wants revenue to be split evenly between mainframe and client/server sales. Following BMC's \$119m third quarter revenues, up 31% on last time, Morgan Stanley has upgraded its investment recommendation to outperform from neutral. It has counted 23 new products from BMC this fiscal year with a further 22 due by year-end. BMC counts Platinum Technology and Compuware as its closest competitors.

NEW REVELATIONS ABOUT APPLE'S PLANS TO BUY IBM STUN THE ENTIRE INDUSTRY

By Hesh Wiener

In the wake of massive losses and widespread debate about its very survival, Apple Computer Inc has developed a brazen plan that would not only ensure its continued existence, but would propel it to the very pinnacle of the computer industry, famed computer journalist Louie's Keyhole revealed. "Very soon," confided Apple's doomed chief executive Michael Spindoktor, "we will be prepared to launch a takeover bid for IBM." Spindoktor is of course history, but his works live on in the expert hands of corporate escapist Astrid Gilberto Amelia Earhardt. Sources have told the *New York Times* that sources will soon be telling the *Wall Street Journal* that sources have just told *Reuters* that sources refused to confirm to the *San Jose Mercury News* that the *New York Times* will tomorrow print that while sources say the talks with Some Microsystems have not been confirmed as at an end, Earhardt may even now not after all be seeking to raise the capital needed to buy IBM on Wall Street. IBM will still not comment on the possibility of an Apple takeover, but Sam Albatross, formerly a spokesman for IBM and soon to be a former spokesman for New York's Comical Bank, specialises in getting quoted in the press, and has a word for every occasion, and often for none.

Vacuous verbiage

"Unofficially," Albatross confided, "because my current relationship to IBM is as an independent commentator trying to ingratiate myself, I can only provide innocuous and vacuous verbiage suitable for bridging otherwise disconnected segments of an article. I'm a journalist's best friend. Now, regarding your questions, I believe it is fair and inoffensive to predict that whatever happens, it will be good for Apple, for IBM, for customers and most importantly for independent commentators." Another source close to IBM is Bosneen Serbovich, self-styled visionary, financial analyst, political crusader and sycophant to the stars. Said Serbovich, "I've said it before and I'll say it again: 'I've said it before and I'll say it again.'" Perhaps the most sceptical view of an Apple-IBM combine was expressed by the outspoken chief executive of Some Microsystems, Snoop McDogeatdog. For years a hardware vendor specialising in engineering workstations, Some achieved widespread prominence last year as its programming language, Coca, and its slogan, "The Network Is A Line," became the most widely misunderstood phenomena in the entire computer industry. "IBM," said McDogeatdog, "is trying to sell its outmoded products in a market that includes more than two hundred thousand hostile ex-employees who are now working for its customers, its competitors and all the top consulting companies. Its weakest offerings, like OS/2, are already dogmeat. The PowerPC is, so to speak, next.

Four sisters

"Apple wanted us to buy them out, and we made a generous offer. We said we would take over the company and fire every single employee if they paid us \$25 a share and assumed the mortgage on my exercise machine. "But Apple's board didn't appreciate the wisdom of my suggestion. So, I took the weekend off to play golf and visit my orthodontist, who, incidentally, is the same one used by Hollywood stars like Bugs Bunny." Another company widely believed to be one of Apple's spurned suitors is the database software maker, Orca. Its fiercely energetic founder and chairman, Larry Testosterone, spoke while juggling three Bosendorfers and a cellular phone, on which he was simultaneously arranging a very unusual date, but maybe not for him, with the four Lee sisters, Ora, Ana, Virginia and Manuella. "I just don't see any point to the deal," Testosterone ejaculated. "The entire computer business is about to boil down to two things: Orca software, which of course we have, and Internet terminals that cost no more than this railroad spike I am pounding into my concrete floor with my bare foot as we speak. Now get out of my face. I'm a busy man. I'm overdue at the recycling centre, where I tear phone books into little pieces." Journalist Stewart Sopotup is widely but surreptitiously read by his colleagues and rivals, who bitterly resent him for blatantly displaying four obnoxious traits that make his differences with the rest of the press absolutely irreconcilable: he is basically intelligent, he has a good sense of humour, he has an excellent command of the English language and he is honest. "I've been rescued from perfection," Sopotup admits, "by my sentimentality for Apple, which grew from an eccentricity into a perversion and finally into an obsession.

Threesticks

I loved the Macintosh for bringing an aesthetic to computing, and I still do. I loved the Newton because it is such a cute idea, and I still believe it will work one of these days even though that faith is obviously a victory of hope over experience. And now I really love my portable phone because it lets me take those frustrating calls from PR guys when I'm on the toilet. I guess it's all over for Motorola. Anyway, as for IBM, I don't particularly like or dislike it, which bodes well for its future." Whether or not Apple completes its planned takeover of IBM, one company will somehow figure out how to turn the result to its advantage: Midas Soft. Its chief executive, William H Threesticks, outwitted both Apple and IBM at a time when both companies were presumed to have some wits. Both Apple's loss of power and IBM's perpetual restructuring are held to be byproducts of Midas Soft's rise to dominance of the systems software market, even though Bill Threesticks says he

just got lucky. "I'm always fascinated," said Threesticks, "by what the rest of the industry does with the crumbs that fall through my fingers."

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BLACK & WHITE OFFERS ADAPTER FOR DATABASE APPLICATION DEVELOPMENT OVER CORBA

Black and White Software Inc, the Campbell, California-based company which develops solutions using Visual Edge Ltd's UIM/X GUI-builder has created a set of graphical tools and a database adapter called DB/Enable which it says can be used to create distributed graphical and character-based applications using data from multiple SQL databases over Corba networks. DB/Enable incorporates Rogue Wave Software Inc's DBtools.h++ C++ class libraries and the UIM/Orbix server and application builder - UIM integrated with Dublin company Iona Technologies Ltd's object request broker (UX No 530). Black & White says client/server application distribution is achieved through Orbix and as a result relational database clients can work with other Corba applications using a single distribution mechanism. DB/Enable can also attach OSF/Motif GUI components to database procedures automatically. A single Orbix client interface supports multiple connections to Sybase and Oracle now, with Informix and Ingres to follow. A beta release is up on Solaris and Sybase, with production versions for Solaris, SunOS, HP-UX, Sybase and Oracle due next quarter. Development licenses start at \$1,500 for a single user, \$3,000 for multiple connections. Additional database libraries can be added for \$1,000 each.

IONA REPORT CARD NOW INCLUDES SGI, SMALLTALK, ADA, OBJECTSTORE, VERSANT, ROGUE WAVE

Silicon Graphics Inc is using Iona Technologies Ltd's Orbix object request broker to tie its systems together and has now decided to resell the ORB and create bundled applications for it. The bundled Irix release of Orbix is due this quarter. Meantime Iona's Orbix+ObjectStore integration with the Object Design Inc object database is now shipping. It's now doing the same for the Versant Object Technology Corp Versant ODBMS. Iona says it'll distribute DNS Technologies Inc's Corba 2-compliant SmalltalkBroker to provide interoperability between Smalltalk objects and C++ and Java objects. Virginia-based company Objective interface Systems Inc is developing an Ada implementation of Orbix. ORBstreams.h++ is a C++ class library based upon Rogue Wave's C++ development system that allows Orbix developers to pass C++ objects across a Corba interface. Previously developers had to describe C++ objects in Corba IDL before communicating with Corba objects. ORBstreams.h++ works with Rogue Wave and user-defined C++ objects.

NEAL NELSON OFFERS WEB APPLICATION PERFORMANCE BENCHMARK

Software for testing Web application and Internet server performance looks like a hot ticket. Following the introduction of Mercury Interactive's WebTest software (UX No 572), Chicago, Illinois company Neal Nelson & Associates this week unfurls a Web server benchmark it says can be used to assess the performance of existing or planned Web application and server configurations. The benchmark uses pre-scripted 300Mb files and remote workstation emulation technology to measure how Web server performance is affected by server-to-Internet connections, Web server power, operating system performance, device drivers, system configuration, disk controller and LAN adapters, disk drive speed, and hypertext transmission protocol daemon (httpd). The workstation sends requests - similar to those made by Netscape and Mosaic - to the web server, and measures response time. The test provides reporting and summary information. Pricing and configuration details were not available.

HP RAISES EMERALD BAR TO 14-WAY - PA-8000 FOR SERVERS DUE IN Q2

Hewlett-Packard Co's extended its high-end T520 "Emerald" mainframe replacement servers to accommodate 14 processors, up from the dozen it uses currently. It estimates performance at 7,000 transactions per minute ~~(thereby avoiking the wrath of TPC), some 35% up on the 12-way. Prices~~ start at \$145,000 - \$35,000 per additional CPU - which buys a two-way with 256Mb RAM, 14 slots, console and HP-UX, but no disk. HP has a handful of 12-way users, but wasn't able to say whether it has any takers for 14-way beasts. Meantime the four-way, 120MHz PA-7200-based K-Class Models 420 and 220 now support up to 2Mb cache per CPU. The four-way K420 - supporting up to 2Gb RAM and 8.3Tb disk - has achieved 4,939 tpmC (\$232 per tpmC) running Oracle7.3. It's rated at 8.24 SPECfp95 and 4.61 SPECint95 as a uniprocessor - 163 SPECrate_int95 and 248 SPECrate_fp95 as a quad - and is priced at from \$73,020 with 128Mb RAM, 2Gb disk and a two-user HP-UX licence. It says a uniprocessor achieves some 1,500 tpmC versus a uniprocessor Sun Ultra Server 1 which it says does 1,300 tpmC. The K220 supports up to 2Gb RAM and 3.8Tb disk. It's priced at \$51,120 with 128Mb RAM and 2Gb disk. Additional processors for both models are from \$19,000 each. 64-bit PA-8000 servers and upgrades are due in the second quarter; PA-8000 workstations will ship this quarter.

Cuts workstation tags

HP's also cut prices on its 712, 715, C and J series workstations. The 712/60 is now \$8,355, down from \$9,105. The 712/80 is down to \$10,160 from \$12,080. The 712/100 costs \$13,160, down from \$14,800. The 715/64 is \$10,300, down from \$10,900. The 715/80 is now \$12,000, down from \$13,400. The 715/100 is \$16,300, down from \$16,900. And the 715/100XC is now \$16,160, down from \$20,800. All ship with 20" screen, 32Mb RAM and 1Gb disk. The C100 is down to \$20,480 from \$23,495. The C110 is now \$23,480, down from \$29,500. The J200 is down to \$25,480 from \$31,500, and the J210 is now \$31,480, down from \$37,500. These ship with 20" screen, 64Mb RAM and 2Gb disk.

Eight-way clustering

On the software side, Hewlett-Packard Co revved its MC/ServiceGuard high-availability clustering software to support up to eight nodes on the new HP-UX 10.10 release (*see back page*), now also over serial links where required. HP says its main competition in the market is IBM Corp's HACMP (already eight-way) and NCR LifeKeeper. MC/ServiceGuard 10.04, which costs from \$4,000 to \$24,000 per licence, will move applications around clustered nodes within 60 seconds of a fault being detected using the Journaled File System in HP-UX 10.x. HA MC/LockManager for Oracle Parallel Server now supports up to four node clusters of K-Class, D-Class or T520 servers. It costs from \$8,500 to \$38,000. HP says Informix XPS 8.0 parallel database will be available on HP servers "within weeks." A ClusterView module which includes a Management Information Base (MIB), data collector and events windows for managing clusters from within with HP OpenView network node manager initially - OperationsCenter thereafter - will cost from \$1,300 in April. A new HP-developed high-availability storage unit comes in configurations of up to eight 2Gb disks (from \$1,600 each) or four 4Gb disks (\$2,400 each). They come with redundant power supplies and fans, and dual internal SCSI busses. It costs from \$2,600. A new RAID disk array can accommodate up to 84Gb.

NCR WIDENS SYSTEMS MANAGEMENT OFFERING

Meantime, NCR Corp's going to resell HP's MeasureWare, PerfView and GlancePlus modules in its HP OpenView OperationsCenter-based OperationsAdvantage systems management package. Version 2.0 of the NCR suite includes agents for managing NCR Unix MP-RAS, HP-UX and AIX nodes. It supports AT&T NetVault backup software, Axent Technologies' security management, Platinum Technology's job scheduling, the Remedy help desk and StorageTek Reel Librarian tape backup.

PLATINUM PLUMPS FOR DAZEL PRINTING

Platinum Technology Inc is going to use Dazel Corp's output server technology for its output management solutions and resell Dazel Express, the client component of the Dazel output management solution. Platinum will make the stuff part of its job management solution. Dazel is reputedly to be 18 months ahead of its competition and could become the de facto standard in its niche. Dazel president and CEO Bob Fabbio, meanwhile, is waiting on a check from IBM Corp. He's the one who started Tivoli Systems Inc which Blue just paid a small fortune to acquire.

APPLE AND OSF PORT LINUX & MACH TO POWER MACS

Apple Computer Inc has teamed up with the Open Software Foundation to port the Linux operating system to the Power Macintosh. The freely distributable Unix variant is being based upon the Mach 3.0 microkernel ~~and the duo expect to have a finished version ready next quarter. Initially~~ it will run on the older Nubus-based Power Macintoshes; the 6100, 7100, 8100 with the 7200, 7500, 8500 and 9500 models following. The work was announced last week at the Conference on Freely Redistributable Software in Cambridge Massachusetts. Apple says it showed an early prototype, but no information was available on the port's progress. The announcement has been welcomed by the Linux community, but with some bemusement - Apple has hitherto appeared indifferent to voluntary efforts to get Linux running on its machines. Apple and the OSF say their work will be made available under the standard GNU general public licence; in other words the source code will be available for people to use and tinker with. Unlike Tenon Intersystem's commercial MachTen Unix, the Linux port will not enable concurrent use of Mac and Unix applications - once Linux is running the user will have to reboot to get back into the Mac OS. As with most Linux releases, the first version will only have a sparse set of drivers. There will be no AppleTalk Stack; just TCP/IP over Ethernet. It will include X11R6 X-Windows, however. The GNU development suite will be included - GCC, Emacs etc. The effort marks the first time that Linux will be hosted on the Mach micro kernel and the OSF is undertaking a parallel effort to port the Mach/Linux combination to the Intel platform. Mach is important not only in terms of Linux, but also for the way that it could ease the development of other operating system 'personalities' to the PowerPC processor. A FreeBSD Unix variant should be achievable, for example, and those with a perverse streak will remember that OS/2 for the PowerPC is based on the same OSF work. OS/2 for the Mac anyone? Currently, the work is specific to the Power Macintosh, but Apple says it will be extended later to the PowerPC Platform (nee CHRP). Certainly the results of the work could be useful to other teams currently striving to port Linux to PReP machine's and Be Inc's Bebox. In the short term, however Apple is targeting the academic community, which will no-doubt greet the news with a sigh of relief. The company says it expects the source-code port "will help foster new research and education uses for Power Macintosh". Indeed it should, but it could also help Apple's position in the burgeoning Web market. The company says explicitly that the new OS will let Power Macs act as domain name and PPP servers.

SQL GROUP TAKES ITS ORACLE REPLICATION TOOL OFF TO THE US

London, UK-based SQL Group has been casting its Information Junction data replication tool for Oracle around the US and is setting set up a marketing and support centre in San Jose, California in an attempt to land some fish. It wouldn't mind if the US concern overshadowed its UK parent over time. The eight year-old, privately-owned company is probably better known as a consultancy begun by Oracle refugees. It now employs 45 and aims to clear £3m revenues next year. The company's up against specialist replicators such as Praxis OmniReplicator, Claris ClearEnterprise and Isis for Database, plus data warehouse operators and database operators themselves. SQL Group CEO Ryan Donnelly describes IJ as a database application tool, likening other replication solutions to a series of interface programs strung together in Cobol. IJ, on the other hand, is claimed to handle business rules, data scrubbing and transport, eliminating the need for heavy duty programming. "OmniReplicator looks at a limited set of data, copies it and replicates it to the target system. Oracle and Sybase are good at this as well, while companies such as Apertus provide data scrubbing capabilities. We do both," Donnelley says. IJ employs a modular approach for end-to-end migration from multiple legacy systems to Oracle7-based target systems. IJ includes a source interface processing module which sucks legacy data out into ASCII. Unwanted records or fields are discarded and the resulting 'scrubbed' data is loaded into IJ's internal tables and passed to a transformation pipeline processor (TPP). Information about data content, characteristics, structure, location and access paths are defined in an Oracle-based meta dictionary. TPP converts data into the target format and writes it to set-based or flat files. IJ works with gateways and middleware to gain access to legacy databases such as DB2, IMS, IDMS, RMS and Rdb. IJ Version 3 will include support for objects and the complex data sets that'll be supported by Oracle 8 plus multi-level security. Prices start at £25,000. Customers include Legal and General, British Telecom, Lombard Insurance, British Petroleum and Guinness Plc.

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Auspex Systems Inc has been granted a patent on its Multiple Facility Operating System, which runs on all Auspex NetServers: the patent covers an architecture that uses an efficient data-moving software framework to provide a connection between processors and storage.

Motorola Inc's left hand does not seem to know what the right hand is doing. Its Paris office is busy denying a report in *Les Echos* that the company wants to up its stake in **Compagnie des Machines Bull SA** to 38.9% from 17% by buying out France Telecom, IBM Corp and Dai Nippon Printing Co - but no-one has complained about the story to *Les Echos*, whose reporter assures us that that's exactly what vice-president Wayne Sennett said, and he said it in the presence of his flack and minder.

Santa Cruz Operation Inc chairman Lars Turndal says he will retire at the annual meeting on February 20.

IBM Corp's new RS/6000 honcho Mark Bregman is reportedly endearing himself to employees and customers alike. We understand he's spending the majority of his time with customers and workers rather than executive management.

IBM Corp's Deep Blue SP2 is taking on world chess champion Gary Kasparov in a six-game series that kicked-off on Saturday 10th after we went to press. IBM says Deep Blue can now analyse 13 and a half moves ahead for every piece on the board. It only draws on its strategy database for openings and endings.

Now data warehouse **Prism Solutions Inc** is going to the market, hoping to get away 2,150,000 shares at between \$8 and \$10 each in an initial public offering.

Aspen's API spec is basically an extension of Spec 1170 to support 64-bits and C data types.

Claiming to have done its thing, the Aspen process will be folded into **Open Group** this week. Meantime, **Open Software Foundation** may or may not have a new boss by the time of UniForum. As we went to press there were still three candidates in the running and the decision's expected to go to the wire.

HP says it's sold 7,000 of its SCO Merge and Vectra PC-based HP 500 Windows application server packages in seven months (UX No 543).

He's obviously a CEO-in-diapers. Only three months old and Maverick McNealy's appearing on CNN with father Scott, who was talking about the Internet.

O2 Technology Inc, Palo Alto, California, is now offering production versions of its O2Web module for creating Web servers based upon the latest 4.6 cut of the O2 object database (UX No 566). The module translates O2 objects into HTML but requires a full-featured Web server package which O2 isn't supplying. The module is \$1,500 on Sun, HP, SGI, DEC, IBM and Intel Unixes. O2 has 65 employees and claims 4,000 seats across 400 installs. There are 10 Unidata Inc developers working on the O2/Unidata object/nested relational meld which Unidata will market (UX No 537).

HP's Unix 95 (Spec 1170)-compliant HP-UX 10.10 release supports all HP workstations and servers, including the Visualize graphics subsystem. Kernel-level threads aren't due until a future HP-UX cut. HP says it releases new versions every six months. 10.10 costs from \$2,250 for an eight user licence.

Texas Instruments says it's software component assembly tools are far from being on the blocks, though it admits Arranger's only got 32 customers.

UK freeware specialist **Lasermoon Ltd**, Wickham, Hants, apparently believes it'll get its Linux offering branded Unix 95-compliant.

Object Design Inc's now offering its promised performance analysis and visual code browser tools as ObjectStore Performance Expert (OPE) and Inspector: OPE is priced at from \$6,000 on Unix and NT, Inspector is \$800 on Windows and NT now, with Unix versions to come.

As we went to press CNN was reporting a US SEC investigation into suspicious trading of **Netscape Communications Corp** stock following its two-for-one split earlier in the week. SEC would not comment. A Netscape spokesperson told us it had contacted SEC but couldn't find any evidence of an investigation.

Excuse us if we titter for a moment over all those headlines in the *Wall Street Journal* and the *New York Times* promising an "imminent" Sun takeover of Apple.

Sun Microsystems Inc's CTO Eric Schmidt, one of the force behind Java, is going to turn up on Wednesday February 15 at Uniforum for a plenary session on his pet subject.

Erstwhile **AGE Logic** president Peter Shaw, acquired by **NetManage Inc** along with AGE, is now senior vice president in charge of worldwide marketing.

In its drive to amass more bulk, the **Object Management Group** has swallowed up the **Object Definition Alliance** which now becomes a SIG called Interactive Multimedia and Commerce. It's expected to eventually become a task force and posts still more RFPs.

Andrew Allison is of the opinion that **Sun Microsystems Inc** shifted about 9,000 UltraSparc systems in its second fiscal quarter.

Maybe **IBM Corp's** not as profligate with its cash as the \$750m it's spending on \$50m-a-year Tivoli Systems Inc would suggest. All the top items on the Share user group's 1996 wish list concern managing distributed systems, something nobody knows how to do yet. Now the Share folks, those dear Fortune 2000s, have got to worry about everything from the mainframe on down, not just the Unix on down that Tivoli has concerned itself with but IBM must reckon the Tivoli framework is flexible enough to embrace the enterprise. Now if IBM is right then the move will more than repay its \$750m investment.

Despite analyst suggestions to the contrary, **Novell** has no investment in **BEA Systems Inc**, the start-up that now has the Tuxedo franchise.

DEC watcher Terry Shannon thinks DEC is likely to add Digital Unix to its Multia multiclient terminals. The things originally started out as a pure NT play and got Linux along the way.

Siemens Nixdorf Informationssysteme AG president and CEO Gerhard Schulmeyer sent us a signed statement that "Siemens Nixdorf has no plans at this time to eliminate use of the Pyramid identity." Based on what erstwhile Pyramid boss Dick Lussier told us a couple of weeks ago in Boston, we reported that it intends to do away with the Pyramid name which is really the only one of the two known in the US and UK.

There are now 175 daily papers on the Web, three times the number this time last year. **Newspaper Association of America** figures the number will double this year. Worldwide it's 775.

IBM Corp's VP, network-centric computing and business development BJ Johnson has gone to **CrossComm Corp** as president and CEO.

Ya know how they use a heat sink and a fan to cool off overheated microprocessors? Well, Santa Barbara, California-based **Superconductor Technologies** is going to turn up at Uniforum this week with a notion about how to basically put a "refrigerator" on a CMOS chip to improve its performance. It calls its scheme cold-computing technology or cryocomputing and says it's ready for widespread use. Cooling to -55 degrees centigrade reportedly increases performance by 50%; cooling to 100 Kelvins can increase performance by 2x. It's got Pentium Pros, PowerPC 620s, UltraSparcs, PA-RISCs and R10000s in mind. They all dissipate 20W-30W.

No matter what **SunSoft Inc** may imply, say or infer, **Compaq Computer Corp** says it's NOT gonna sell Solaris.

The *Microprocessor Report* thinks that with the Alpha 21066 effectively deadened at **DEC** and no other customers for it in sight, **Mitsubishi**, DEC's nominal second source, will wash its hand of Alpha this year. The 21066 was to be its first part. The newsletter also thinks IBM has scrapped the so-called PowerPC 615, that little flight of fancy that was to combine a PowerPC core with an x86 decoder. It reckons the boys at Somerset, now under a single new leader Mark McDermott from Cyrix, are still fussing with some PowerPC+x86 notions but they'd involve software emulation.

The **Meta Group** thinks by 1997 Unix Web application servers will command half the market. 30% will be NT-based, whilst **Novell's** new NetWare Web Server, released in December, will have 10% at best.

Sun had its analysts meeting last Tuesday, Wednesday, Thursday and was officially keeping mum on things Apple. CEO Scott McNealy was there and his only comment when he got to the dias was to take a big bite out of an apple he had with him.

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HP AND SCO MAP A ROUTE TO 3DA UNIX SUMMIT...

Hewlett-Packard Co and Santa Cruz Operation Inc have begun to define their next generation Unix system technology stream called Summit 3D Architecture (3DA) which will provide the basis for the 32-bit and future 64-bit operating systems they'll supply to OEMs and ISVs. HP will target PA-RISC customers, and SCO the Pentium and Pentium Pro shops and the OEM community initially, but Intel Corp's 64-bit Merced is the Holy Grail they are journeying towards. Intel, which claims its present role in 3DA is purely consultative, is expected to contribute engineering and other technical resources similar to those it's provided to Pentium Pro SHV developers once it lifts the veil on Merced. HP says it'll begin disclosing ISVs on techniques for targeting Merced in the Autumn. Other partners will port SCO's OEM implementation of 3DA to Mips, Sparc and possibly PowerPC architectures (*see below*). 3DA details *page three*.

...THAT MIPS, SPARC, MAYBE POWERPC WILL CLIMB

Development partners already secured for 3DA include NEC Corp, which through a MIPS ABI Group initiative called Golden Gate (*see page three*) will create a Mips RISC port from SCO's OEM offering. Hitachi Ltd, which offers PA-RISC and Intel systems, also promises support for "other leading CPUs" (it's still supposed to be a PowerPC shop). Novell Inc is integrating NetWare print, file and directory services. A Sparc port will be landed through the Fujitsu Ltd companies (though ICL Plc, which ported UnixWare 2.0 to Sparc, doesn't know whether it's got the development ticket yet). A wider partnering jamboree designed to attract the ISV community is being prepared for next month, when Intel-based server vendors such as NCR, Unisys and ICL, and others are expected to detail more specific plans to support 3DA technology. Unisys CEO James Unruh - to the chagrin of his client/server lieutenants - has already let slip his company's plan to abandon its own general purpose Unix operating system development and migrate its SVR4 customers over to UnixWare (which it already offers as an alternative) and eventually to the 3DA technologies. It can add its specialist technologies, such as high availability, to the SCO code. It's got a dot release of its SVR4 set for next month that'll start the ball rolling. The company will retain a niche development capacity for environments such as its MPP systems where it doesn't see SCO playing.

OPEN GROUP BONDS OSF AND X/OPEN

Open systems consolidation appeared to inch forward last week as X/Open Co Ltd and the Open Software Foundation formed the Open Group to streamline their respective specification and technology development processes. On the other hand, it could just turn out to be another layer of bureaucracy. Until a president and CEO is hired and brings his will to bear on the proceedings - *see back page* - little change is expected in either X/Open's or OSF's activities, although their user and marketing operations will be consolidated immediately. While X/Open attributed Open Group's formation to an inevitable process of consolidation among the industry's assorted vendor, user and technology consortia, it admits "egos and marketing in that order" will determine whether any other groups can be coaxed under the new umbrella. Discussions are said to be underway with a number of key organisations including the Object Management Group (OMG), bringing to mind that 'SUPERconsortium' idea mooted about last year (UX No 547, 555). Perhaps its day has finally dawned, provided egos and marketing oblige. However, it's actually more likely that the Open Group could be home to still-unborn initiatives that would otherwise spawn new vendor or user bodies than existing ones. Officially, the Open Group will only say that it's collaborating (lovely word that) with OMG, UnixWare Technology Group (UTG), the World Wide Web Consortium and the Petrochemical Open Software Corporation (POSC), and will establish vertical industry initiatives where there's a desire, modelled on POSC. Although Open Group claims it'll be more than the sum of its parts, some execs at member companies we spoke to were left to wonder how that could be given that OSF and X/Open effectively remain intact, complete with their names and management.

NCR PITCHES NUMA INTERCONNECT FOR INTEL SHV, MERCED

NCR Corp is readying a Non Uniform Memory Access (NUMA) technology called Advanced Memory Controller (AMC) optimised to turn two of Intel Corp's four-way Pentium Pro SHV boards into a superfast eight-way configuration. NCR says its implementation of the IEEE Scalable Coherent Interface interconnect protocol will knock spots off rival Dolphin Interconnect's implementation, which it claims will leave eight-way Intel solutions disadvantaged in performance terms against RISC vendors. It says it's close to tying up an agreement with Intel to have its AMC chipset integrated on to SHV boards and claims AMC logic has already been coded into Intel's next-generation 64-bit Merced chip. It will use Sequent's NUMA-Q backplane interconnect to expand to 32- and 64-ways. Currently demerging from AT&T Co, NCR's now trying to rediscover its former identity. NCR's computer systems chief Bill Eisenman says the biggest applause he got at a recent sales conference was when he said it was okay to call NCR 'the Teradata company' again. NCR, which will soon tie the knot with SCO on Summit 3DA, says it's most important concern is that the operating system support its key middleware such as Top End and LifeKeeper. NCR, now somewhat smaller than the company AT&T picked up in a hostile takeover, is looking for a profitable second half to carry it to break even for the year.

ASPEN HANDS OVER SPECS, OVERSPILL, TO X/OPEN,

The Aspen group of companies that last August boldly set out to define a broad set of 64-bit Unix APIs, has handed over an agreed, if limited, set of proposals to X/Open Co Ltd. Included is a four-page document said to describe around 20 changes that would be required for the 32-bit Spec 1170 single Unix specification to support 64-bit applications. The changes remove data size dependencies and expose 32-bit code for 64-bit processing. X/Open will feed the changes into Spec 1170 as error changes. After a quite heated debate, it is said, the Aspen working group also agreed to implement a common 64-bit programming model, LP64, for consistent representation of C language datatypes and for describing, among other things, how pointers are to be used in code. Several companies, including DEC and Silicon Graphics Inc, already support particular 64-bit datatype models, but in the end LP64 supporters such as SGI triumphed over proponents of the alternate ILP64 and LLP64 models that were also under consideration. SGI said that although LP64 requires a greater programming effort than other models, it results in more robust applications. LP64 will be submitted to X/Open's fast track specification process at its meeting next month.

Next generation Spec 1170

The Aspen companies also agreed on a common set of extensions to the Posix Threads interface and dynamic linking interfaces to support the emerging class of extensible self-configuring applications based upon ELF. These, along with Posix APIs for software installation, support for files larger than 2Gb from 32-bit environments, and user group management to improve multi-vendor systems management, are being turning over to X/Open to put through its working groups. X/Open says it would be wrong to characterise what's still missing as simply 32-bit work that doesn't lend itself to 64-bitness, or things Aspen merely left on the cutting room floor. X/Open hopes to complete work on the second version of its single Unix specification (which may or may not retain the same name) including the 64-bit work it's taking over from Aspen by the end of this year. If it does, it expects to see branded products two years from now. Although Aspen got industry-wide endorsement when the initiative was announced last August, more than a few vendors were sidelined from real participation. As a result, many of them are expected to handle other calls for endorsement - including any for the HP/Santa Cruz Summit 3DA 64-bit Unix effort - with less blind enthusiasm. In the end, the scale of the problem Aspen set out to solve exceeded what could be achieved through its COSE-styled ad hoc process. The need to actually deliver on some of its promises meant going now with what it has achieved and turning the rest over to X/Open.

COMPANIES FIND IT COSTS A FORTUNE - FOUR TIMES BUDGET - TO CREATE WEB PAGES: INTERNATIONAL DATA

A study of the corporate Internet has found that development costs are four times greater than budget - an average price of \$1m. ~~International Data Corp polled companies whose job was to maintain interactive commerce channels on the World Wide Web.~~ These companies sell products on the Web either as their core business, such as virtual mall developers, or as an extension of their core business. The cost of developing a site was around "four times greater than expected" and the time spent to customise a site for clients was two times longer than the original budget allowed. There is a great deal of activity behind the scenes: small companies see complementary sales channels that enable them to stay competitive; larger companies are attracted by worldwide markets and motivated by a fear of being left behind. But the cost of setting up a Web site, either for the company or its clients, is far from the plug-and-play model advertised by the leading vendors according to the report, *The Marketer's Internet: Motivation, Cost & Customization*. Companies find themselves in trouble as "unplanned and haphazard" purchasing overtakes traditional channels. Companies find a considerable proportion of their work includes personalising sites after the initial purchase - of the whole development cost, 20% goes on hardware and off-the-shelf software, while 80% is spent on adapting the package to be of use. The Internet is an ideal medium for companies to reflect the preferences of individual Internet users, but the cost of making Web sites responsive to individuals can be extremely high. Respondents to the IDC survey said they spent from \$840,000 per site with minimal security, to more than \$1.5m for highly-secured sites. "The people coming to our site want totally different things from one another," said one Fortune 500 company executive. "Now that we're up and running smoothly, the vast majority of our development effort is going into finding ways to give every single one of our customers a unique experience geared just to him or her. Users are going to feel as if we are really paying attention to them."

Easy entry route for companies

The most sought-after features of Internet packages are flexibility, speed and ability to tap the individual. "Off-the-shelf software is not at the level we need. We want software at a high sophistication level where the customer is able to customise their entry, such as the flexibility of a SQL database," said one respondent. The rapid growth of plug-in Internet servers in recent months - such as hardware from Sun Microsystems Inc, Hewlett-Packard Co and Intel Corp and server software from Netscape Communications Corp and O'Reilly & Associates Inc - has meant an easy entry route for companies to join the Web. More capable users are demanding advanced features such as order tracking, entry processing, search tools and improved presentation, and it is the job of server firms to meet these demands across all users, said Mark Winther, vice-president of Worldwide Telecommunications for IDC. "The priority of companies right now is to identify Internet server offerings that reduce both the cost of entry and time-to-market while simultaneously maintaining maximum functionality and flexibility," he said. "To alleviate the expense of custom development, coding and systems integration, solutions can be found in new turnkey, industrial-strength Web servers that, with a minimum of tuning, can yield effective sites that facilitate real sales." Preliminary results of the survey can be found at www.connectinc.com.

THOMSON SUN WINS OPEN TV ADAPTERS IN FRANCE, HOLLAND

Nethold Dutch, a South African television based in the Netherlands, and France Telecom have both chosen the Thomson Sun Interactive Open TV system to offer interactive television, the joint venture of Thomson Multimedia SA and Sun Microsystems Inc told *Reuter* in Cannes. Thomson Sun has been demonstrating interactive television at the Milia show, revealing how a viewer watching a pop concert on television could get information about other concert venues, and could make bookings for them by using the remote control. And in a game show, viewers could compete with the on-screen players.

SUPERSCAPE VR WINS BROAD IBM MARKETING PACT

It takes forever to wrap up a marketing agreement with IBM Corp, so although Superscape VR Plc, Hook, Hampshire has now won a non-exclusive deal under which IBM will market its virtual reality software for personal computers in Europe, ~~the Middle East, Africa and the former Soviet Union, deals for~~ the Asia Pacific region and the Americas are still in negotiation. IBM sales staff will also sell related services including consultancy, world-building and training, and Superscape will provide the majority of these services. Superscape is seeking similar deals with other majors, and expects to announce a similar one in a few weeks. And Superscape is now distributing VisNet, a product for viewing and exploring the Internet in three dimensions, free over the Internet starting next month. The software requires no special hardware such as head-mounted displays and is claimed to be the world's fastest three-dimensional interactive viewer on standard iAPX-86 personal computers. It runs under Windows.

SILICON GRAPHICS WINS MOVING WORLDS BACKING

Meantime Silicon Graphics Inc, Netscape Communications Corp and 54 other companies have agreed to support specifications for creating next-generation three-dimensional environments on the Internet. Called Moving Worlds, the specifications are proposed as the next generation implementation of Virtual Reality Modelling Language 2.0. The Moving Worlds specifications can also integrate applications in Sun Microsystems Inc's Java programming language; the 56 firms include Adobe Systems Inc, IBM Corp and Sega Enterprises Ltd.

JAVA TOOLS FOR POWER MAC BURGEON, BUT BROWSER, RUN-TIME ENVIRONMENT FOR APPLETS STILL MISSING

The Power Macintosh finds itself in the odd position of being well supplied with tools for writing Java applets, while end-users still have no way of running them. Metrowerks Inc, having just launched version 8 of its Codewarrior development tool, says it will add a suite of Java development tools code-named Wired in the May 1996 release. Meanwhile arch-rival Symantec Corp is promising a free Java upgrade this quarter, for existing users of its C++ compiler. Symantec Cafe, formerly codenamed Espresso, includes an integrated Class Browser that enables developers to browse and edit Java methods, data, and classes; source-code level debugging for Java code; a programmer's editor and full support for AppleScript. There is no word of any run-time module that will enable Macintosh-based developers actually to test the results, however. Symantec is using Sun Microsystems Inc's own Java compiler at the heart of Cafe.

Roaster

But the first company off the blocks with a real product is Cambridge, Massachusetts-based Natural Intelligence Inc which has begun shipping Roaster (is there no end to the coffee-related puns?) - a \$390 Java development environment. Natural Intelligence has its own Java compiler, but also enables the use of Sun's own code for people worried about complete compliance. The company is claiming the package as the most complete Java development environment available. In addition to the compiler, there is a Java class disassembler a code editor and a project window for easy manipulation of class files. Notably, Roaster also includes an applet-runner for testing and debugging the finished Java applets. What is still missing is a general Mac-based Web browser capable of executing the finished Java applets. Netscape Communication Corp is still struggling to get the Java interpreter working in the Macintosh implementation of its Navigator, and the latest beta release, version 2.06ba, still lacks Java support. Netscape said it was on schedule to have a finished Java-enabled browser within the next six weeks, adding that there is unlikely to be any extended public beta testing programme as has been seen with the Windows version.

SCO AND HP SEE UNIX FUTURE IN THREE DIMENSIONS

Hewlett-Packard Co and Santa Cruz Operation Inc claim to have identified over 3,500 APIs to their Summit 3DA Unix - *see front page*. Specifications for universal developers' environment due later this year will identify the single 32- and 64-bit development and porting target 3DA is intended to provide. Initial guideline specs will be published in 30 to 60 days' time. Preliminary ISV developers' guides are due by year-end, preliminary OEM developers' guides by mid-1997. Support for the 64-bit extensions to Spec 1170 will be delivered in an HP-UX 10.5 release for PA-RISC by year-end and by SCO in Gemini (the merged UnixWare and OpenServer) through a series of 1997 releases, by which time HP-UX will be up to version 11.0. Support for Merced, plus technology for backward compatibility with 32-bit systems will be delivered whenever that processor becomes available. The plan calls for the 3DA code base to be revved at least once every six months. Given this ambitious schedule, the composition of the single source base might appear a relatively innocuous detail. But oh no. Given the SVR4 HP-UX, SVR4.2 UnixWare and SVR3.2.x OpenServer code bases which flow into their development stream, HP and SCO have chosen to sidestep the emotional kernel issue, disclosing 3DA's source derivation only to OEMs. Estimated to account for 10% of 3DA's 200m-odd lines, the best description on offer is a combination of all three kernel technologies - and more - any of which will be invisible to ISVs approaching from either of the code bases.

Breed

Although HP is responsible for setting up the infrastructure for developing the technology, and SCO for bringing the technology to the OEM market, HP's said to have assumed a less dominant role than it had originally envisaged for itself. SCO says HP's initial plan to have HP-UX form the core of 3DA with SCO and UnixWare technologies strapped around it was soon overtaken when the combined design team came back with their best of breed suggestion for 3DA's composition. Then, after apparently finding little interest in the terms that it was still offering until just a few weeks ago for seats at the development table - \$10m to \$15m up front plus \$45m over three years - HP was encouraged to create a more level playing field for partners. "They get it now," says SCO. Although every partner will pay for the code no matter what they do with it, terms and conditions will apply depending on whatever contribution is made to the HP/SCO development effort. Partners can provide technology or development resources to 3DA; optimise technologies for other CPUs; licence and productise or repackage them for specific markets, or resell the products that HP and SCO produce.

Modular

Three design dimensions are described as key to 3DA. First is the separation of operating system functions such as memory management, file system and scheduler into modules connected by interfaces. OEMs and ISVs will be able to modify these interfaces to extend functionality. Second is the ability to customise these modules to support processor optimisations such as Merced's parallelisation, frame buffer caching or on-chip audio/video hardware. Third is optimisation allowing system developers to extend the modules for topologies such as NUMA, loosely-coupled clustering or MPP. SCO says it'll support NUMA in 1997. Key technology components of 3DA are the Distributed Computing Environment and Novell Inc NetWare directory, file and print services. Others currently being developed for it include network installation, system and software management, a universal software development environment, continuous availability, Internet services and security and support for Windows.

UNIX GANG CAN TAKE ON NT

IBM Corp's Lou Gerstner called for Unix vendors to unite around common interfaces in the face of Microsoft Corp's NT threat. Gerstner, speaking in a Uniforum CEO address last week, said that Unix fragmentation was once permissible because customers had no alternatives, but NT now offers one. He never named Microsoft, speaking of it only as a competitor in the Unix space who appeals to the customers through ease of use despite poor performance, scalability and availability. Microsoft's story "is a closed policy, a policy of exclusion," but people will listen to it anyway and they will buy." Gerstner said companies must stop releasing separate interfaces and support open standards. He also touted the newly formed Open Group, but noted astutely that the Unix industry "is a lot better at weddings than [it is] at marriages."

OPEN GROUP TO BEEF UP SPEC & TECH WORK

Open Group - *see front page* - says its aim is to offer more standards and technologies in the areas of security, interoperability, distributed systems management, architecture and the Internet. It begins life immediately with a single advisory board comprised of 15 representatives of the existing OSF sponsors and X/Open shareholders - DEC, Fujitsu, HP, Hitachi, IBM, NEC, NCR, Novell, SNI and Sun - the ISV and end-user members of the two current boards plus its first new sponsor, the Santa Cruz Operation Inc. It'll work with a management team that includes executives from X/Open and OSF to coordinate day-to-day activities. A 300-strong Open Group Customer Council chaired by Elf Acquittaine's Alain-Francois Robert and 3M Corp's William Estrem, will bring together and replace OSF's End-User Forum and the X/Open User Council. Its first meeting is in San Francisco next month. A single marketing council will serve both organisations. Existing OSF and X/Open membership fee commitments will provide the Open Group's 1996 funding though a new single-payment model is proposed from 1997. OSF sponsors currently pay \$1m; X/Open shareholder fees are \$600,000. OSF's 1995 revenues were \$41.9m from sales and sponsorship. Open Group's CEO is expected to operate out of OSF headquarters in Cambridge, Massachusetts. Geoff Morris continues to head X/Open, based in Reading, UK - also Open Group's European headquarters - while acting OSF boss Jim Bell will return to Hewlett-Packard Co when a CEO is found. Other offices are in Menlo Park, California and Falls Church, Virginia (X/Open); Brussels; Grenoble, France; and Tokyo (OSF). Open Group expects to add 50 staff through 1996. It starts life with 275, 60 of them X/Open, the rest from OSF.

GOLDEN GATE BRIDGES 3DA TO MIPS RISC

Mips Technologies Inc foundry NEC Corp, which also sells HP PA-RISC servers in Japan, will lead the project to create a single reference port of Santa Cruz Operation Inc's 64-bit OEM implementation of Summit 3DA Unix for the Mips RISC. All Mips ABI Group companies, including Mips parent Silicon Graphics Inc (which already has 64-bit Irix Unix and was wavering until the last minute) but excluding Concurrent Computer Corp which is getting out of the system building game, will participate in the Golden Gate project out of NEC's San Jose, California, premises. NEC will contribute between 25 and 40 engineers, the others - Tandem, Sony, Dansk Data and SNI/Pyramid - between 15 and 20 each. When it's complete, the reference port will be turned over to group members for value added implementations. The Golden Gate project will fold technology back into the 3DA development process under the deal it's got with SCO and HP. The Mips ABI Group's current Unix reference port is SVR4.2-based. Golden Gate will feed its work into version 3.0 of the ABI specification. Version 2.0 now includes support for a single asynchronous I/O which means database companies such as Sybase can create a single Mips/Unix port rather than separate versions for each of the companies' asynchronous I/O implementations. The 3.0 development will also bring the internationalisation work of the Japanese Open Computing Mips Platform group back into its midst.

CA TRIES - AND FAILS - TO LURE TIVOLI DEVELOPERS

Following IBM's acquisition of Tivoli Systems Inc, Computer Associates International Inc mounted an advertising campaign designed to lure the Austin, Texas-based company's developers into its den, but found no takers at Tivoli. CA ran a full-page ad in the Austin daily that told developers it would preserve the independence they were accustomed to and touted a job seminar at a hotel across the street from Tivoli's headquarters. In response, however, Tivoli hung a 40-foot sign from its building in full view of the hotel that read, "CA? No way - Tivoli will stay." It also ran a full page ad in CA's home-town newspaper *Newsday* that said "CA's worst nightmare: Tivoli everywhere. Happy Valentine's Day." Only six people attended the job fair, none of them from Tivoli, although CEO Frank Moss did stop by to thank CA for rallying the troops. A Tivoli staffer said the company regards CA as "the dark side."

IS THERE SOMETHING TO LOU'S SHOE THING?

Critics scoffed at Comdex Fall's keynote address flight of fancy that carried IBM Corp CEO Lou Gerstner into a world of shoe computers, but an MIT labs' work shows that the leap is grounded in possibility.

~~MIT's Media Labs is doing research in "things that think": smart shoes~~ that pass data to glasses and coffee makers that know when a cup is empty, among other things. It's got a list of 40-odd heavyweight sponsors that are betting good money the Labs' work isn't just a fancy, including AT&T, Disney, FedEx, HP, Microsoft, Nike, Olivetti, Philips, Siemens, Visa and Yamaha. Assistant professor Neil Gershenfeld and a grad student demo'd a system fitted to specially adapted Nike shoes with computer chips in them, which allowed them to touch hands and exchange data that appeared simultaneously on a screen or could be stored for later retrieval. Exchanging business card information by shaking hands was identified as one simple example of use. The system the labs have created passes the signal through the body using sensor and electrical field and flow techniques developed from its research into how hand and body movements create music notes when playing instruments. Taking away the instrument and leaving the motions, fields and sensors, the Labs created a 'spirit chair' used by comedians Penn and Teller which interprets body motions, allowing drum rhythms and tunes to be played apparently in thin air.

Fishboard

Rather than creating new versions of existing devices such as PDAs, laptops, pagers and cellular phones which Gershenfeld believes are only "just good enough to be worth their intrusion," - and in any case will soon reach the physical limits of size and density (or the point at which it becomes too expensive to make them smaller) - the Labs' work is aimed at embedding IT into everyday, low-cost objects, weaving those objects into a web to make them useful at "solving hard problems." Its principles are to match the performance of people, make new technology look physically as good as old, make it cheap, battery-less, wireless, without need for user IDs, deliver information where and when it's wanted and use lots of simple components in the process. The Labs has also developed "3D mouse" sensors that can be mounted in a table and respond to the user's hand movements rather than to an actual mouse device. Development of what's called the Fishboard - in part because certain species of fish living in muddy river bottoms use similar sensors to navigate - is being lead by David Allport at Hewlett-Packard Co's Bristol, UK labs. He's turned the technology into a way to navigate 3D applications, since a traditional 2D mouse falls short. The labs' sponsor companies get the rights to whatever ideas they generate in the consortium.

WEB EXPERT DOUBTS COMMERCIAL VIABILITY OF NET

An MIT Computer Science Lab research scientist who helped develop the Internet before it was a phenomenon says that it will be difficult for companies to make money on the Web and that it fosters monopolies, not competition. MIT's David Clark, an Internet pioneer, said that few companies will make money selling content over the Web in part because it pales compared to what can be found elsewhere. Video-on-demand, for example, won't take off because people would rather rent; "it's dead," in his estimation. Most money on the Internet will be made by integrating content and infrastructure. Clark said the margins on Internet access alone will be small because of the cost of bringing wider-bandwidth lines to homes. \$1,000 per home on a neighborhood basis is the number widely touted as the cost for getting advanced broadband networking into homes by telephone, wireless or utility providers. Salvaging existing wires into homes with new protocol techniques is likely to be no more efficient. Cable companies are better off in the short term because hybrid fiber-coax cable may cost only \$150 per house. Because the Internet access infrastructure is limited by cost, Clark calls the Internet a "natural place for monopolies." Clark and his colleagues once feared that an "elephant" like Microsoft Corp would release a product that would kill the Internet, but now it appears "they're going to hug us to death instead of trample us." Asked if the much-debated \$500 Internet box was substance or hype Clark said, "it's bullshit, but I'm prepared to be surprised." If browsers could run on a conventional TV instead of a higher-cost monitor, he said, the idea would be possible, but the low-resolution of TV monitors would degrade the quality of material available.

VERISIGN DIGITAL ID ADOPTED BY TESIRA

Los Altos, California-based Tesira Systems Inc is integrating Mountain View, California-based VeriSign Inc's digital identification technology into its Unix, Windows and Mac SecureWeb Client Toolkits for creating secure commerce applications on the web. ~~VeriSign will issue its Digital IDs and perform background~~ checks on the individual or entity according to the ID's level of assurance. End users can use Digital ID to encrypt their communications, confirm the identity of the message sender and determine that the message contents haven't been altered, the company claims. The ID can be used with any other application that is Digital ID-enabled, such as a secure Web-browser. Hoping to cash-in on the demand for secure Internet services, VeriSign's currently building an OnLine Digital ID Issuing System which will create Class 1 or 2 Digital IDs for users through an interactive session or email response system. Class 3 and 4 IDs are registered online but verified over the telephone. Class 1 IDs will be free for non-commercial use or \$6 per year for commercial use. Class 2 and 3 IDs will cost \$12 and \$24 per year respectively. Class 3 IDs are available now for most secure Internet servers. The online Digital ID issuing system goes to beta later this month. Version 2.0 of Tesira's SecureWeb toolkit is available at from \$3,000

THE REWARDS OF IT INVESTMENT - WITH NEW BUSINESS PROCESSES

A recent study by the Massachusetts Institute of Technology's Sloan School of Management claims that capital investment in computers is as much as six times as productive as other forms of capital investment. That's a gross estimate, which doesn't include the cost of replacing those computers every few years. Spending on new software it finds, will generally result in a productivity gain of two times. The School tempers its findings by advising that large returns from IT investment will only be realised when accompanied by parallel investment in new business processes. Organisations will require new tools to coordinate change in multiple dimensions; or prevent chaos when moving from the old to the new.

WHAT THE DOCTOR SAW GOES ONTO THE INTERNET AS MASSACHUSETTS STUDENT RELAYS STILLS FROM A LIFE

"Put yourself in my shoes and see the world from my perspective." On its own, Steve Mann's world is not much to look at. A desk. A chair. Some pieces of paper. Perhaps a visitor or two. However, Mann's world is available to the world via the Internet and standing tall in his visor, head-mounted camera, head-mounted antenna and wrap-around computer on his waist, he looks like the Terminator as it would have been depicted in an early 1970's B-movie. A doctoral student at the Massachusetts Institute of Technology, he transmits what he experiences directly onto the Internet where anyone can dial in and see what he has seen - it's not full motion video, rather a series of minute-old stills. These can be found at www.white.media.mit.edu/~steve/netcam.html. Mann is experimenting with NetCam, a camera-transmitter set-up that enables him to work as usual with the rest of the world looking over his shoulder - or head.

Visualfilter

His newest set-up, the 'visualfilter', projects the image from the camera onto a visor so that he sees "by viewing rather than seeing. This also means that another person can view the world exactly as I do," he said. He can also read his electronic mail, surf the Internet and do his computer work as he waits in line at the bank. "I don't always have it on," he admitted, "but I've always got it with me. There are times when you want to be isolated. You still want to be aware of your surroundings but scale them out. I often turn the outside world grey while I do my work." Extending the experiment, viewing what the subject sees, rather than simply dumping a camera on his head, may mean a much closer relationship between co-tele-workers, or whatever they will come to be called, he said. Mann also envisages uses for NetCam for the visually impaired and, in the far future, as a replacement for the closed circuit television cameras that haunt street corners and public places.

SANTIX RESURRECTS GHOST OF DME

A bunch of ex-Open Software Foundation refugees involved in the stillborn-Distributed Management Environment (DME) are planning to use Tivoli Systems Inc's Tivoli Management Environment as the platform to manage off-the-shelf DCE and DCE-based applications. Based in Munich, Germany, ~~Santix Software GmbH, a six-year-old DCE and Encina reseller and Tivoli training centre~~, is developing a suite of management applications for DCE 1.1 called DCEmgmt. Much of DCE's development was concerned with integrating services, and little thought given to managing the services, says Santix president and CEO Michael Santifaller. The first of the five components, DCEmgmt/Security Manager, is due in July with extended host, user/group and NIS management capabilities for Tivoli's Admin application and organisation, principal and account management for DCE domains. Santifaller was a member of the DME RFT evaluation team and one of the architects in the DME technology integration project. Santifaller claims Tivoli's approval for the work and plans to sell the suite direct in Europe. He's in discussion with Tivoli as well as Boston, Massachusetts-based distributor Intellisoft Corp to market its technology in the US. It expects each component to go for between \$5,000 and \$10,000 per cell but won't firm-up pricing until it's got a deal with Tivoli.

Jigsaw

Meantime it expects its Security Manager to include a single point of management for DCE and non-DCE user/group resources, a graphical front end to manage the resources and integration with Tivoli/Admin. A second release, due in the first quarter of 1997, will extend these features to include an access control list manager to protect the distributed file system, a keytab file manager, multicell trust management, and extended registry attribute management. Next out of the blocks will be an event manager, designed to integrate DCE 1.1 into Tivoli's Enterprise Console enabling the collection of management events from several sources. Due in the fourth quarter it will include integrated events from standard DCE 1.1 services, integrated DCE auditing events and a mechanism for integrating DCE 1.1 based application events. The Cell Configuration manager, due in the first quarter of next year, will provide functions through which a DCE 1.1 cell can be created and existing cell configurations can be modified. Features include configurations of the DCE 1.1 security service, the cell directory service, time service, replicated DCE 1.1 servers, clients and cell change management. Distributed File System Manager will enable DFS configuration for the DFS application, creation of aggregates, filesets and mountpoints, back-ups and read-only filesets and integration of auditing and events with Event Manager. Its planned for the second quarter of 1997. Also planned for the second quarter is the final piece of the jigsaw, Application Manager, for integrating the management of DCE 1.1 into the TME framework including configure/unconfigure, start/stop, enable/disable and modify applications and services. Up initially on Solaris, other Unix and NT platforms are planned.

PLATINUM TECHNOLOGY HANDS IN FINAL EXAM

Platinum Technology Inc has delivered its Final Exam automatic software testing suite it got from RadView Software Ltd, Tel Aviv, Israel (UX No 548). Final Exam, originally due in August, includes three components; Client/Server Test, an automated testing tool for generating and executing scripts for testing of client/server, graphical based applications; Memory Advisor to reduce the debug cycle time for C and C++ programs by identifying run-time memory errors, and Test Advisor, an advanced code coverage tool for measuring completeness of tests. The Oakbrook Terrace, Illinois-based company will add load testing, test management and SQL testing products by the end of the year. Client/Server test is up on Sun and Windows 3.1. Prices start at \$700. Memory Advisor supports Sun, HP, AIX, DEC Unix, Irix and DG/UX and prices start from \$1,000 for an individual user license. Test Advisor runs on Sun platforms and is priced from \$1,300 for an individual user license.

INFERNO RIVALS JAVA

According to the *San Jose Mercury News*, Bell Labs has been feverishly working on a rival to Java for the past nine months, shelving work on Unix' successor Plan 9 to do it. It's called Inferno. One of Unix' fathers Dennis Ritchie, who is also a developer of C, Java's progenitor, let the cat out of the bag and said that Java may have become too large and complex. On the other hand, he also said it doesn't go far enough and that Inferno could go into a wider variety of machines including future TV sets. The paper noted that AT&T is expected to become a Java licensee soon and wondered whether Inferno would ever be commercialized. Sun took vindication from the disclosure and expressed interest in the lab's ideas.

AVOIDING MIP-O-SUCTION IN DATA WAREHOUSING

If the DCI/Meta Group Data Warehousing Conference in Orlando, Florida last week had been a Web site, the section on most Frequently Asked Questions (FAQs) would have had just two items. "Why do I need to build a data warehouse?" and "How do I build one?" The combined might of over 60 data warehousing vendors and consultants tried to answer both questions, with everyone agreeing on the answers to the first - improved competitiveness, better marketing, greater customer service levels - and no-one agreeing on the answer to the second. Keynote speaker Aaron Zornes of Meta provided what guidance he could with a balanced overview describing the outgrowth of data warehousing from its beginnings in the information center of the 1970s, through decision support systems, EIS (executive information systems) to the online analytical processing (OLAP) and data mining applications exciting corporations today. Zornes coined the term "MIP-o-suction" to describe some of the experiences that users had gone through when asking "What if?" style questions of poorly tuned environments, and advised conference attendees to start small and try their hand first at data marts, (small isolated well defined subsets of a full data warehouse, dealing with less than 50 gigabytes of data).

Cost

Zornes then dealt with justifying the cost of building a data warehouse. It's no use going to your boss and saying: "I'd like a copy of all our existing hardware and software environment plus duplicate licence fees and I want to copy all the company's data. It's pretty difficult to justify a \$3 million purchase when that's your approach." And then he pointed the audience in the right direction. "Establish a data model, an informational architecture. A bit like Business Process Re-engineering before it got a bad name. Then choose your tools." It was a theme reiterated by many speakers over the week. As one noted, "Think about what you want to do with the data, assign a value that might be directly achieved from that use, develop a solution by designing your new data formats, pick the software you want to help, then buy your hardware. Don't do it the other way around." Zornes constantly warned about the size of data warehousing projects which increasingly are refreshed overnight. He warned the audience not to rely on multi-dimensional databases (MDBMS) above 5 or 10 Gigabytes, commenting "What is a very large data base? Well two or three years ago I would have said 20/30 gigabytes. Now it is anything over 500 gigabytes, and if you ask me where we are going to be in 18 months, I'm going to say an order of magnitude bigger than where we are today." Had the show indeed been a Web site, then hours after our sister publication, *Computergram* had left the show, there were still confused users pressing the FAQ button, and asking the same questions, while in the background the religious wars raged over the benefits of relational, OLAP, and ROLAP (relational OLAP) technologies.

DYNASTY REVS DEVELOPMENT ENVIRONMENT

Three-tier application development company Dynasty Technologies Inc, Lisle, Illinois-based has opened an office in London and appointed ex-Seer Technologies Inc sales director Paul Noakes as its managing director. It still hasn't got any UK customers but says it's gearing up its international effort, opening offices in Germany, Italy, South Africa and Brazil to add to its international headquarters in Paris. Meantime Dynasty has released Version 2.3 of its Dynasty Development Environment including support for local language based on X/Open's NLS with, as expected, support for Tandem Computer Inc's Himalaya MPP systems running the NonStop operating system (UX No 569). A further point upgrade, to beta in June will include integration for C++ and support for Windows '95. In Europe last week, Dynasty co-founder and CEO Michael Lyons was busy talking down first generation tools companies that are moving to three-tier; "To build technology like Dynasty takes more than \$20m and several years. If you weren't building in 1991, you can't play today; if you were implementing last year, you can't play tomorrow," he said. He doesn't believe products such as Powerbuilder and Compuware's Uni-face 4GL can make the leap from the mid-range market supporting fifty users to the enterprise corporate environment. If they are serious, he argues they need to rewrite their technology so that it's pure objects. Code generation and repositories can't be grafted on.

EXPONENTIAL FINALLY GETS LICENCE TO DO SUPERFAST POWERPC

Exponential Technology Inc, the San Jose company determined to design an ultra-high-performance version of the PowerPC RISC processor, has finally won the licensing rights to develop and market the part it needs from IBM Corp. The company has convinced itself that its first microprocessor will be the world's fastest when it arrives in early 1997, providing up to three times the speed of today's fastest Pentium processors. Exponential also says it completed product tape-out in January, putting it on schedule with its original first quarter 1996 target date, with first ships of a PowerPC-compatible microprocessor in early 1997. IBM has granted Exponential an architectural licence to design and fabricate the parts, and Exponential also signed a semiconductor process patent cross-licensing agreement with Motorola Inc. Apple Computer Inc has been cheerleading Exponential all the way, and is a likely early adopter of the new chip. Exponential's secret is to use bipolar technology for the core logic circuitry and CMOS for on-chip memory. Exponential is being bankrolled by Apple, Itochu Corp and venture capital companies.

NETSCAPE WINS USER INTERFACE FIRM PAPER SOFTWARE

Netscape Communications Corp continues to capitalise on its sky-high share price, and its latest target is Woodstock, New York based Paper Software Inc, the company behind a new Live3D system that enables Virtual Reality Mark-up Language graphics to be integrated into Netscape Navigator. Paper Software develops distributed multi-dimensional user interface products, including a WebFX Virtual Reality Modelling Language plug-in for Navigator, which supports the Sun Microsystems Inc Java Web language. Paper Software is also a partner of IBM Corp, which licensed its Sidebar technology to give PC-DOS an OS/2 look and feel as part of an effort to develop an operating system for Personal Digital Assistant that does not seem to have come to fruition. Mountain View, California-based Netscape will pay an undisclosed amount in shares for Paper Software, which still has only 12 staff.

NOVELL EXCEEDS SALES TARGET IN RUSSIA

Novell Inc said it exceeded its sales target in Russia by 5% last year. The company had estimated it would turn over \$13.8m in the year to October. The revenues in 1995 turned out to be \$14.5m. Novell has more than 300 business partners in the region. NetWare 3.12 accounted for 53% of total Novell revenues, NetWare 4.1 contributed 21%, and UnixWare 3.12, 1.7%. Annual sales growth in the Commonwealth of Independent States region as a whole was 62% in 1995. The number of Novell system houses increased during the year from four to 13. Novell's largest distributor in Russia is Moscow-based Lanit and its largest system integrator is IT, which is also based in the capital.

INGRES SUPPORT POOR, MAINTENANCE COSTS HIGH, SO BMW TURNS TO ORACLE

Automobile manufacturer Bayerische Motoren Werke AG (BMW) has given up on Ingres, citing high maintenance costs and poor support. The actual product, BMW says, was not the problem. Trouble started as a direct result of the takeover of ASK Computer Systems Inc by Computer Associates International Inc in 1994, says Bernhard Dichtl, head of information processing at BMW. BMW chose the CA-Ingres product for its price, only to find the savings had a price of its own. Although Oracle Corp has no low-cost offering, BMW has decided it is better to invest in Oracle than to stay with Ingres, and it has therefore chosen to license Oracle for its 3,000 dealers and 20 subsidiaries worldwide.

SUN'S KONA DUE BY YEAR END

Sun Microsystems Inc's CEO Scott McNealy was demonstrating a prototype "Java client" running its "minimal operating system layer" - codenamed Kona (UX No 575) - at Uniforum last week, according to the *San Jose Mercury News*. The device should be ready by the end of the year, the paper reports. Kona will provide support for network connection and multithreading, but not the more traditional desktop operating functions such as memory protection, virtual memory and files systems.

OPEN HORIZON OFFERS JAVA ACCESS TO ODBC, OLTP AND LEGACY APPLICATIONS OVER CONNECTION MIDDLEWARE

Belmont, California-based Open Horizon Inc is creating a link that will allow Java applets to access ODBC databases, TP monitors and legacy applications through its Connections connectivity middleware, which currently supports Distributed Computing Environment directory, authentication and security services. A Connection for Java applet will be available for \$100 from May. Open Horizon will offer the applet as part of a QuickBrew program of services it'll offer for developers to begin creating Java applications for the Web. QuickBrew also includes a Connection Client for up to 50 users, Connection Server for one platform, one Connection Database Broker for Oracle, Sybase, Informix or DB2/6000, plus seminars, supporting and documentation. QuickBrew Secure includes all of the above plus Connection Security and Directory Brokers that provide integration with DCE security and directory services, plus two days installation and training. QuickBrew 3-Tier includes QuickBrew plus a Connection Application Broker providing integration with three-tier development architectures. Connection for Java is up on NT and Windows initially, with Unix ports to follow. Connection Client is up on AIX, Solaris, HP-UX, NT and Windows 3.1 with Mac, Windows 95 and other Unix versions to follow. Connection Server runs on NT, Solaris, AIX, HP-UX and NCR MP-RAS. Java QuickBrew is priced from \$7,500. QuickBrew Secure and QuickBrew 3-Tier are \$15,000 each. The QuickBrew packages are being jointly sold and supported by Beaverton, Oregon-based integrator Claremont Technology Group Inc. A new release of Open Horizon's Connection software in April will provide native socket support and is decoupled from all security, directory and other distributed services. DCE Directory, Kerberos, RSA, NIS+ naming and other services will be available as add-on options. The company says it hasn't decided whether to support the Sun-derived Open Network Computing Remote Procedure Call (RPC) in addition to DCE RPC. Meantime, Claremont has acquired Internet firewall and network and project management specialist The Node Connection, Vancouver, Washington on disclosed terms.

EMC BUYS NEW WEAPONARY FOR STORAGE BATTLE, SPENDS \$40m ON MTI RAID PATENTS

The storage market is a hostile place to do business and EMC Corp is stocking its arsenal with 29 "far reaching" patents in the areas of RAID, fault-tolerance and networking which it's acquired from storage integrator MTI Technology Corp for \$40m. It says it'll use the patents offensively - it has taken over patent infringement suits against CMD Technologies and Falcon Systems that MTI did not have the resources to prosecute effectively - and as a defence against rival storage companies. It believes that new products which span the entire storage industry will have to tread on the ground of the patents it has acquired. Specifically there is one amongst the 29 which EMC reckons is tied to original RAID work carried out at the University of California at Berkeley in the mid-1980s. As well as the \$40m, to be paid over five years, cash-strapped MTI will receive additional royalties over the same period worth a minimum of \$10m and up to a maximum of \$30m.

Rights

It's also got rights those and other EMC patents under a cross-licensing agreement that gives each rights to the others' existing and future patents for the next five years. MTI will account for the \$40m in its fiscal fourth quarter to the end of March as a sale of assets which will push it well into the black and maybe used for acquisitions. The additional royalty payments will be amortised over the period. The company denies it's retreating from the RAID storage marketplace but admits it did not have the financial muscle to try and collect on the patents. The sale will give it more working capital for the data management and storage software market it's been leaning towards since its \$5m acquisition of Raxco Inc's storage management software unit in January 1995. MTI, the Anaheim, California company that is the last resting place of the former System Industries Inc, says it's still digesting its \$9m acquisition of Unix storage company National Peripherals Inc in April 1995.

WINDOWS NT TO BE MADE POSIX.2, XPG4 COMPLIANT; EVERYTHING TO BRAND IT UNIX95

by Maureen O'Gara

A series of add-on products due out from five-month-old start-up Softway Systems Inc and dubbed OpenNT will make Windows NT Posix.2-compliant in short order and fully XPG4-compliant by mid 1997. At that time, Softway says NT will be Unix95 brandable, meaning it complies with the famed three-year-old Spec 1170 that defines a Unix operating system. As of last week, the Unix95 designation was claimed only by DEC and HP. ~~X/Open, which oversees the brand, expects the major Unix companies to be Unix95-branded by the end of the year. Posix.2 conformance is supposed~~ to be available to NT-on-Intel by March 31, days before the FIPS 189 mandate goes into effect on April 3 requiring that all operating systems procured by the US federal government, the single largest IT consumer in the world, comply with both Posix.1 and Posix.2 standards. NT is currently only Posix.1-compliant - and then only just - and Microsoft has given no indication it would add Posix.2. In fact it has been obvious that Redmond does not want to be seen building products that conform to Unix standards. This situation may have raised false hopes among the Unix fraternity that NT would not compete for the fortune in government and end-user contracts in Europe and the US that demand more than the highly rudimentary Posix.1 compliance NT currently provides. Rather than do it itself, Microsoft has effectively subcontracted development and marketing to Softway, giving it access to NT source code for integration purposes. Microsoft is not believed to have another deal like it. Microsoft only added the optional Posix.1 subsystem to NT to squeak by government requirements.

Hullabaloo

Critics charge that it is not even functional and doesn't meet the Posix.1 spec. That is why such a hullabaloo continues to be raised over Unix' loss of the \$187 million Coast Guard Standard III contract appeal last year and the simultaneous court decision that NT is "open." Softway's technology, however, even according to an expert witness who appeared against NT at the Coast Guard hearings, will be the "real McCoy." Softway only has 10 people but several sister firms including Software America Inc and Softway SA in France, both currently Unix distribution channels that will be turned to OpenNT's advantage. Softway Systems numbers among its folk R&D VP Stephen Walli, vice chairman of the Posix technical editing committee and author of X/Open's XPG Unix95 guide. Also on board is chief scientist Jason Zions, chairman of the IEEE Posix.1f committee and the Posix project management committee. He was once vice-chairman of the X/Open networking committee.

Shell

Softway's first product, one of three, will be OpenNT Commands and Utilities 1.0, a character-based Unix-like shell conforming to the Posix.2 Execution Environment Utilities standard and providing those old Unix favourites awk and grep among its repertoire. It will add new functionality to NT by providing support for file links, file and group ownership and protection, filename case-sensitivity and background processing. It will cost \$200 (\$100 to start) and supply mandatory Posix compliance. Further iterations of this program - releases 2.0 and 3.0 - will provide the optional Posix.2 User Portability Extension Utilities and XPG4 Commands and Utilities V2 respectively. Softway says it will replace the existing Posix.1 subsystem with one that is more functional including features such as enhanced tty semantics which is missing from what Redmond wrote. Where critics charge there is no integration now, Softway says there will be better integration between the Win32 and Posix subsystems, with its optional Posix.2 facilities like fully networked talk, a graphical man utility and a cron daemon.

Challenge

Softway's second product, due in July or August, will be a \$100 software development kit for porting standards-based Unix applications across to NT as NT binaries, retaining their Unix characteristics. It will ultimately include all system services and libraries, commands and utilities, DLLs, networking interfaces such as sockets and XTI and curses on character graphics interfaces. The SDK, which will represent a challenge for products like DataFocus' far pricier Unix-to-NT NuTcracker, should be useable for developing apps that are portable across FIPS 151-2 (Posix.1) and XPG4 Base branded platforms. In November or December, Softway expects to provide NT with a \$100 X11R6 environment, a \$200 X Windows server and a \$150 Motif environment, all gathered under the product name OpenNT X11/Motif. X11 and Motif applications will run in windows on NT, according to Softway CEO Doug Miller, former head of European operations for both Unix maven Interactive Systems Inc and then SunSoft Inc which acquired it. The add-ons will allow Unix initiates to run their favorite utilities and recycle many a mission-critical application. The third release of OpenNT Commands and Utilities combined with the second release of the SDK will constitute a platform capable of

being branded as XPG4 Unix95. The start-up has licensed the X/Open VSC Test Suite to verify absolute "Open Systems" conformance and will pursue NIST FIPS 189 certification and X/Open branding, it says. Softway's initial focus will be on NT for Intel machines but it expects to port its products to the RISC platforms in time. The company is expecting considerable OEM interest which is natural enough considering X/Open currently puts the value of the procurements requiring the X/Open brand at \$14.4 billion.

JSB JAZZES UP ITS INTRANET SUITE

Six months ago "intranet" was a virtually unknown word, but now JSB Corp has designed what it calls the first integrated intranet suite for corporate Internet implementations. The suite, Intranet Jazz, offers an HTML interface, the Kiosk, for Windows clients and a browser for terminal-based servers, the AlphaBrowser. The Jazz Client is OLE-enabled, with the Kiosk complementing or replacing Windows GUIs for companies not wanting to deal with their complexities. The Jazz Server is a combination communications and proxy server, and the AlphaBrowser provides a menu-driven interface across platforms for utilities like Telnet, ftp and Gopher services. The company rolled out the product last week at Uniforum. The Intranet Jazz Client will run on all Windows platforms, while the Intranet Jazz Server will run on AIX, SCO Unix and NT, with additional platforms seeing market over the next three months.

BRIO BRINGS OLAP TO THE DESKTOP

Brio Technology is readying a desktop decision support program that combines query, desktop online analytical processing (OLAP), interactive charting and reporting. BrioQuery has its own desktop OLAP engine and metadata interpreter for off-line multidimensional analysis that Brio calls "anytime, anywhere analysis." The program can get data directly from Oracle, Sybase, Red Brick Warehouse and Microsoft SQL Server. It can also access other databases via SequeLink, EDA/SQL, DAL and ODBC. A Unix version of the program is \$1,800. The Mountain View, California company is asking \$800 for a Windows NT/3.1 or Mac version of either BrioQuery Navigator to view pre-built reports or BrioQuery Explorer for accessing native databases and pre-built data models. BrioQuery Enterprise designer for database administrator to design and maintain the data models and queries used by Navigator and Explorer is \$5,000 on Unix, \$3,000 on NT or Mac.

NEWS IN BRIEF

- Hewlett Packard** is buying itself an Internet security business but to tell you the God's honest truth we forgot to ask them which one.
- Insync Software** has changed its name Passport Corporation and moved to New Jersey.
- Hewlett Packard's** Jim Bell, on loan to the Open Software Foundation as CEO and soon to return, got himself the 1996 Uniforum Achievement Award. Tory's salary would have been better, Jim.
- Pure Software Inc** has persuaded Silicon Graphics president Tom Jermoluk and Wilson, Sonsini, Goodrich & Rosati powerhouse attorney Larry Sonsini, to sit on its board. Impressive.
- NCR** has named Charles Picasso VP, professional services. He was president and CEO of AT&T Istel France and Belgium. Now he has to move from France to Dayton, Ohio.
- HP** worked over one of its staff with the truncheon for having the gall to return our phone calls. This is after they turned over the phone records. We gather they're picking up some of the finer points of Gestapo tactics from Intel who's been leaning on them to shut up about Merced.

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The weekly information newsletter for the UNIX™ community worldwide

Thinking Machines Corp, now of Bedford, Massachusetts and a pure software and technology licensing operation these days, has won its discharge from Chapter 11 bankruptcy: it is now a recapitalised, debt-free company focused on parallel software tools and data mining for multi-processor computing; it has received a \$10m capital infusion from an investment group led by New York investment and merchant banker **Ladenburg, Thalmann Group Inc** to finance the firm's marketing and product development plans.

This year's Uniform affair, back in its home base in San Francisco, appeared to garner no better turnout than last year's pitiful showing in Texas. People appeared to be downgrading the spaces they'll take next year when, to give it a fillup, it'll be paired with a new-fangled Comdex Internet show in the North Hall when Uniform is in the South.

Silicon Graphics Inc chairman and CEO Ed McCracken has joined the board of **Acument International**, a human resources assessment, training and development ISV in San Rafael, California.

The *San Jose Mercury News* last week described Java as "the Colin Powell of technology: an unknown quantity onto which people projected all of their hopes, fears and dreams."

In keeping with Internet excess, last week they posted a message from Mount Kilimanjaro in Africa. It was part of **Utopia Inc's** Project Candidate, a three-week safari into East Africa designed to test the limits of networked communications.

So it seems those reports we heard and didn't believe about it getting a couple of hundred resumes from folks interested in running this new-fangled **Open Group** combination of **X/Open** and the **OSF** were true. The week before last we reported it was down to three candidates - two independently wealthy and one who works for a living - as of early last week one of them was out of the running - someone said it was the guy it really wanted - and now, it seems, it might be up to five again or maybe it's four. (Like so many things touching on Unix, the story changes with whomever you speak to.) **NCR** exec Dennis Roberson, **OSF** chairman and now the new combine, wasn't expecting an imminent appointment.

The *Microprocessor Report* doesn't think **Sun's** new Java chips have much chance of penetrating the embedded market. "Most embedded designers would not want to give up 90% of their performance to switch to interpreted Java," it says. (Java applets run between 10x and 30x slower than compiled C). "For those who insist on Java, the PicoJava core may be interesting, but it must be backed by a complete ASIC program, which Sun does not offer." It notes that Sun is looking outside to the ASIC vendors to overcome this hurdle but has nothing in hand so far.

Aside from **Nintendo** using the Mips 4300i in its next-generation games, Mips says it's got 40 to 50 unrevealed design-wins for the widgets in the consumer and embedded markets.

Kanwal Rekhi, the man who put **Novell Inc** in the Unix business, has been named to the board of **Exodus Communications Inc**, a Sunnyvale, California-based Internet service provider.

SunSoft Inc says there are a million copies of Wabi deployed to date and that it's expecting to add to its short OEM list in the next month. Currently **HP**, **IBM** and the **Santa Cruz Operation** handle it. Sun is also concerned lest it be misunderstood that the Willows Software Twin Cross Platform Developers Kit can do the same things Wabi does. It can't. Meanwhile, SunSoft is now shipping **Insignia Solutions'** SoftWindows 2.0, introduced in September.

Unisys Corp chief technology officer Ron Bell, VP and general manager of the company's Unix Systems Group from 1991-1993, has gone off to **LSI Logic Corp** as VP of its newly organised Advanced Architecture Division responsible for its overall technical direction.

HP CEO Lew Platt will make an appearance at DB/Expo '96 in San Francisco April 15-19 as a keynoter.

IBM Corp's made new recruit Frank Moss - boss of its **Tivoli Systems Inc** acquisition - VP and general manager of the 1,300-person network and systems management business.

Momentum Software Corp will offer version 3 of its X*IPC messaging software in the Spring including a fault tolerant catalogue to track network queues, clients and servers, a threaded architecture supporting simultaneous network links, load balancing and the creation and manipulation of message chains as discrete messages.

Data General Corp's Clariion disk storage unit is using 100MHz PowerPC 603e boards from Motorola in new versions of its series 2000 RAID subsystems. It claims a 2x throughput performance on the 2800, 2810 and 2900 which will support up to 84Gb from next month using 4.2Gb drives. Pricing starts at \$1.53 per Mb. DG was also showing its Fibre Channel-based Series 200 at Uniform last week. Clariion has 10 accounts generating more than \$1m; HP is its largest customer.

Hitachi Ltd, so far the only company that's declared a financial investment in the **HP/SCO** 3DA development project, says it will create a development organisation in Silicon Valley - presumably at its HDS headquarters in San Jose - to support the effort.

Red Brick Systems Inc has appointed former **Liant Software** executive Gary Smith to run its European operation from Guildford, Surrey. Alec Wilson becomes VP North American sales and Glen Livingston is promoted to VP sales operations and programs. All three report to Thomas Henn, VP worldwide sales.

Oracle Corp's claiming best price/performance, best performance on **Intel**-based systems, best performance on a quad processor and best performance on a system under \$1m in total cost for the 3,849 tpmC - \$161 per tpmC - recorded by Oracle 7.3 running on a four-way **Compaq ProLiant** 4500 5/166 with UnixWare 2.0.

Intel Corp senior VP Dave House said its lawyers forced it to drop the name P7 in favour of Merced.

As part of this week's festivities (UX No 576), **IBM's** PC Server division is supposed to announce an Internet server that runs on Solaris.

HP's VLIW-alike software that'll allow PA-RISC binaries to run on Merced will take advantage of 3DA's processor optimisation facilities.

Pencom Software is spinning out from its parent company, **Pencom Systems Inc**, and calling itself **PSW Technologies**. It did \$20m in revenues last year under president Frank King.

NCR Corp's going to demonstrate an 11Tb Tera-data database in Japan this month.

Intel Corp director of Enterprise Programs Mike Pope gave the first public presentation on Merced at Uniform last week, but added nothing to what's already been reported.

X/Open claims the new **Open Group** will provide a place for standardising Java specifications once **Sun** and it are agreed that its code base is stable. **OSF's** Research Institute has already ported Java to a slew of other architectures - even creating a 64-bit version for **DEC Alpha RISC**. It's currently working to incorporate technologies such as a real-time garbage collector, which it's getting from **INRIA**. Its Java developments have reportedly caught the eye of **Sun's** JavaSoft unit since it lost some of its key people.

DEC's 64-bit Digital Unix actually supports 41-bit addressing. **HP's** 64-bit cut will support 42.

The **European Community** is set to kick-off a couple of Esprit research projects based upon **OSF** Research Institute work in the areas of **DEC** and **Web**.

Hewlett-Packard Co says it's got a verbal agreement from the US government that it can begin pilot exports of 256-bit encryption technology in the second half.

SGI's Mips R5000-based workstations due in March are currently dubbed Moose or Moosehead, depending on who you talk to.

One of **Open Group's** first projects will be to extend **X/Open's** **DEC**, **HP**, **IBM** and **Sun**-sponsored Single Unix Documentation framework for publishing Unix 95 manuals in common CD-ROM, web, Troff and paper versions formats to its other areas of work.

MKS Inc is readying a bunch of Web tools for Software Development in San Francisco next month. It's pushing on into configuration management.

HP and **SCO** are styling their 3DA operating system technology Summit after a sign at the crest of one of the hills separating Palo Alto in Silicon Valley from Santa Cruz on the Pacific coast of California, past which the development teams have become accustomed to driving during their design work. The name's unlikely to find its way into product.

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BULL AWAITS RED OCTOBER, THE "REAL" 620

Compagnie des Machines Bull SA expects to begin receiving deliveries of what it calls the first "real PowerPC 620" processors from Motorola Inc on March 24. The 180MHz parts, reportedly produced in Somerset's 0.37 micron "Red October" design process, are the first of the 64-bit CPUs enabled for SMP. The part is said to overcome previous design flaws which have crippled 620's performance until now. Bull expects to have 200MHz parts for use in systems based upon its four-way PegaKid boards by the beginning of next year. By that time Bull will also have a full-function version of its PCI/MCA bridge chipset in place. Its initial focus will be NT, Unix thereafter. Bull expects 620 performance to rise from 12 SPECfp95 and 9 SPECint95 initially to around 18 SPECfp95 and 13 SPECint95 when the Somerset design process achieves 300MHz parts around the end of 1997. It puts 620's floating point performance neck and neck with Sun's UltraSparc and HP's PA-8000 but some way behind Mips and top performer DEC Alpha. Those same 1997 performance estimates would, at least in the chart we've seen, put 620 behind DEC on integer processing, but ahead of the rest of the pack. The same chart tracks the performance of the desktop 604e (nee 604+) rising from 5 or 6 SPECint95 and SPECfp95 this quarter to around 9 SPECint95/SPECfp95 by the third quarter of 1997. The low-power 603's performance is seen rising to around 4 SPECint95 by the third quarter of this year. The roadmap describes Somerset's design process for 620, 604e and 603 or their follow-ons (IBM and Motorola agreed to develop a common PowerPC design process last October (UX No 562)) moving to 0.25 micron in 1997, 0.2 micron in 1998, 0.15 micron in 1999 and 0.12 micron in 2000. The PowerPC 106 PCI bridge memory controller follows one step behind to reach 0.15 micron in 2000. Bull says the 100MHz bus clock its PegaKid technology will feature will drive 620 system performance significantly higher than 604e. Bull will bring the mini operating system environment it's got running on prototype PegaKids up on uniprocessor, then SMP Red Octobers. Bull, which has great hopes of commoditising PegaKid against four-way Intel Corp Pentium Pro-based Standard High Volume boards, has comparisons which rate a 200MHz Pentium Pro (66MHz bus clock) with 256Kb L2 cache at a base performance of 1.0 and a 512Kb L2 cache part at 1.3, versus a 200MHz 620 with 1Mb L2 cache and a 100MHz bus clock at 1.77 and a 4Mb L2 cache part at 2.13. The MCA-only Pegasus technology, productised as Escala, will move up to 620. IBM has rights to market the SMP 620 technology, but hasn't said it will. Bull's now promising eight-way 604-based Escalas in April and says it'll double the server's 3,515 tpmC performance by year-end. Bull's entry-level PCI bus NT and AIX Estrellas, based on the guts of Motorola Inc's PowerStack technology, will be available with a higher speed 604 and SunSoft Inc Solaris PowerPC edition in April, and with a Red October cut of 604e in September. It's working on a high-performance uniprocessor 620 desktop for the beginning of next year. Bull hopes the addition of Solaris on Estrella, future SMP units, plus the Internet makeover it still has in the pipe for its servers and desktops next quarter (UX No 573), will prove attractive to channel partners. The merging of its Zenith Data Systems subsidiary into Packard-Bell means it has lost that channel as the PC company is said to have no interest in PowerPC. ZDS' ZPower box bites the dust.

JOE BRINGS JAVA ORB TO SUNSOFT NEO; HERALDS INTERACTIVE JAVA APPLETS

SunSoft Inc believes a Java object request broker (JORB) and Interface Definition Language (IDL) compiler that it will beta next month and ship in the Spring should eventually allow users to download interactive Java applets that retrieve remote OMG Corba objects automatically. At present, Java can distribute executables (applets) across the net to run on client systems; "but that's it." In future, SunSoft says, a user could select an item from an interactive catalogue downloaded as an applet and have either more information or perhaps an order form for that item retrieved into the applet by the JORB. The JORB is seamlessly downloaded onto the client Web browser with every applet, and would automatically call-up Corba objects on the retailer's server, based upon the user's interaction with the catalogue. The applet itself is written without network-level code as JORB handles the location of, connection to and communication with the remote object, providing single API for developers. Initially JORB and the IDL compiler can be used only in conjunction with SunSoft's own NEO object development environment and the services it supports, as part of a bundle of technology code-named JOE the company will unveil in a couple of weeks. Only when SunSoft migrates NEO and JORB to use OMG's TCP/IP-based Corba-to-Corba Internet Inter-ORB Protocol which guarantees interoperability between objects passed between different Corba request brokers, will JORB be able to interoperate with other vendors' Corba objects. The addition of JOE will allow SunSoft to position NEO as an advanced Web server application development environment that goes beyond existing object-based HTML development systems such as NeXT Software Inc's WebObjects (even though NeXT's OpenStep is also used in NEO). Used in conjunction with the Iona Technologies Ltd's Orbix request broker which NEO supports, JOE should provide Web page access to Microsoft Corp OLE objects too. NEO's shared services can be modified and redeployed as a Web server application's requirements evolve, the company says. The server application can be written in any language for which a Corba IDL language mapping exists. Client applications are written without regard for the server implementation. SunSoft's also preparing a turn of its Workshop development tools tailored for Java. Licensing terms for JORB and the IDL compiler will be similar to those for Java itself.

ROGUE WAVE RIDES JAVA TSUNAMI

C++ house Rogue Wave Software Inc, Corvallis, Oregon, dives into the Java tsunami this week, unveiling a JFactory visual application builder and code generator for Java, which runs on Solaris, Windows95 and NT, with a Mac version poised. It allows developers to create stand-alone Java applications or Java applets that run within a Web browser by dragging controls, lists and buttons from a menu. Written in C++, JFactory is built upon the well-regarded Zapp Factory cross-platform GUI builder from Inmark Development Corp, the Mountain View, California-based company that privately-held Rogue Wave acquired last October (UX No 559). JFactory can test an application's interface, generate code, compile and run the application. It comes with its own editor, but can also be used with vi or emacs. It's priced at from \$500 until March 31 - \$800 thereafter. Stuff still missing from Java will be added in future revs. Through its relationship with SunSoft on C++ development tools, Rogue Wave says it's in the fortunate position of being one of the maybe 20 companies that are able to get time with JavaSoft. One cloud on the horizon could be a Terminal Scripting Language (TCL)-based generator for Java that SunLabs is creating, though it's apparently not as far advanced as JFactory. The companies were meeting as we went to press to forge a relationship. C++ shop Rogue Wave believes Java, which it describes as a "three and a half GL," could be the death knell for Smalltalk as it includes the automatic garbage collector and dynamic runtime binding mechanisms still missing from C++, and will challenge Delphi, Oracle Power Objects and other C++ environments. The portability of Java object code is its key advantage, according to Rogue Wave. "You don't need a large porting team," it says, "which typically accounts for up to 30% of a project's cost." It has other Java data access and manipulation products underway and is readying Java components for each of its five C++ development packages. It's re-vamping its math products for the general purpose business market for doing forecasting and analysis, and add other distributed products. Rogue Wave competes with object-relational house Persistence Software in the class library market, but potential synergies in database mapping lead Rogue Wave to approach Persistence about a merger last year. The offer was rebuffed by Persistence, which has acquisition/IPO plans of its own. Rogue Wave expects to do \$1m on JFactory to the end of its fiscal 1996 in September. JFactory has cost it around \$500,000 so far. The 180-employee company did \$12m last year and anticipates revenues between \$20m and \$25m this year. It's been consistently profitable for sometime, but an IPO's not quite upon it. It says it hasn't yet reached the \$100m market valuation it believes investment banks need to see to guarantee their \$2m-odd commission and 10% share of an offering.

PORTABLE GRAPHICS READIES HP VERSION OF OPENGL

Portable Graphics Inc is set to launch a hardware accelerated implementation of OpenGL for HP 9000 Series workstations at the end of next month. The OpenGL 2D and 3D graphics API utilises HP's 3D graphics accelerators and Colour Recovery Technology. PGI developed OpenGL for HP and will sell it for them as well. The Austin, Texas-based company, a subsidiary of Evans and Sutherland since the end of 1994, says it will also be the first to ship the new 2.11 version of Silicon Graphics Inc's Open Inventor 3D developer toolkit for non-SGI platforms - PGI's implementation will run on "most Unix and NT platforms" that support OpenGL. The company is looking increasingly to Open Inventor for its future, as most of the non-SGI OpenGL market has now been ~~sewn up. IBM and DEC are doing their own implementations, so is Sun, despite initially licensing the OpenGL code from Evans and Sutherland last August~~

MOTOROLA GETS RIGHTS TO SUBLICENSE APPLE'S MAC OS

Apple Computer Inc finally announced that it had granted Motorola Inc a comprehensive Mac OS licence under which Motorola is allowed to license and sub-license the software to other computer manufacturers to which it sells motherboards or complete computer systems on an OEM basis. Motorola gets access to System 7.5.x and Copland, it can build hardware based on the current Power Macintosh designs, as well as the forthcoming PowerPC Platform (CHRP) machines. Joe Guglielmi, the former Taligent Inc boss who's now general manager of Motorola's Computer Products Group, said Motorola is in active talks with several potential licensees, but he declined to be more specific. The agreement fulfils the plan Motorola had to license Mac OS when it launched its PowerPC strategy with the PowerStack server series back in October 1994 (UX No 508). Motorola is the largest company so far to license Mac OS, but the company has a very poor record in computers, and despite the hiring of Guglielmi to head the business and give it a higher profile, little seems to have changed so far, although the company looks for big things from its technology and shareholding alliance with the French company Compagnie des Machines Bull SA. Motorola will use Mac OS in \$1,200 and cheap Apple clone PCs it's assembling in Nanjing, China, for the Chinese market.

MARKET SEES ONLY SUPERB FIGURES AS HP WARNS OF SLOWING IN US, EUROPE

Hewlett-Packard Co has reported first quarter net profits up 31.2% at \$790.0m on turnover that rose 27.2% at \$9.288m. Net per share rose 30% at \$1.50. Even if, as some suspect, HP is losing money on personal computers as it goes all out for market share, rivals will get no relief - it is doing so well in the rest of its businesses that it can afford to go right on losing money on personal computers. Not that significant losses are likely, since the company is applying the model it perfected with its inkjet and laser printers to make good money on even the most low-margin products, while keeping the customer satisfied. Reporting on its fiscal first quarter, when profits rose 31% on sales up 27% the company says orders totalling \$10,100m were received in the first quarter, up from \$7,800m this time last year. US orders were up 24% at \$3,900m and foreign orders rose 32% to \$6,200m, 61% of the total. Sales in the US rose 20% to \$3,800m and sales elsewhere rose 33% to \$5,500m. Margins were crimped a little because cost of goods sold for the quarter was 64.5% of net revenue, compared with 62.3% a year earlier but down from 65.3% in the prior quarter. Operating expenses rose 15% over the year-ago quarter and were 22.6% of net revenue, compared with 24.9% a year ago and 24.3% in the fiscal fourth quarter. However "we didn't do as well at managing inventory as we need to," HP said, complaining that "growth was greater than expected, outpacing revenue growth. Competition remains intense, pricing pressures are persistent and customer expectations continue to rise. In addition, there are signs of slowing in some major economies, including the United States and Western Europe."

ORACLE JOINS FORCES WITH VERIFONE ON SECURE INTERNET COMMERCE

Oracle Corp and Verifone Inc last week announced their answer to the perceived Internet security problem for financial transactions. The products combine Oracle's WebServer software and Verifone's secure payment software and for consumers, Oracle will sell a new Web browser that contains simplified commands to complete a transaction. Wells Fargo Bank already has committed to using the software, which verifies a credit card transaction immediately rather than in batch; it ships in late summer. VeriFone's Pay Window software will provide transaction options, such as different credit cards, and make the PowerBrowser easier to use. The two companies also said that they will develop new Oracle/VeriFone Internet Gateway software to be used by financial institutions and others, for accepting transactions for payment over the Internet.

HP BUYS WAY INTO NET SECURITY MARKET

Hewlett-Packard Co has acquired an Internet security business that will reportedly make widespread Internet transactions possible. HP announced last week that it is buying for undisclosed terms the operating system-level security assets of SecureWare Inc, including over 40 executives and "security gurus" who will form an Internet Security Lab in the former SecureWare building in Atlanta. The B1-level security technology HP is buying - and that it helped develop - is a trusted-OS system that doesn't rely on firewalls or encryption. The conventional internet security model shows a web server hidden behind a firewall so that only certain data can come through. If hackers get through the firewall - and firewalls can be breached - they can access proprietary information. SecureWare's trusted OS has mandatory access control with different levels allowed for different users so that even if a hacker breaks through he is left with no place to go. The technology will be integrated with HP-UX, followed most likely by a port to NT. Although it will eventually make its way to other Unix platforms in hopes of becoming a universal standard, HP pointed out that it has an NT business and "at last glance" no vested interest in Solaris or AIX. The trusted gateway has been licensed to companies like IBM and Sun and is the underlying technology for the first completely online bank, Security First Network Bank, FSB. The bank hired hackers to try to break into its systems and when they failed the FDIC gave its approval. About a third of SecureWare's employees will remain with the company and work on its network-level security products, Hannah and Troy. It will work in close conjunction with Five Paces Software Inc, a marketing-oriented company that created the virtual banking technology that Security First wrapped around SecureWare's trusted OS. SecureWare CEO Michael McChesney, who is also CEO of Five Paces, will remain with the company while its president David Arnovitz will join HP as chief scientist of the security lab, reporting to Jan Silverman, director of the Internet Solutions Group. It was HP's relationship with SecureWare that in part gave rise to a multimillion antitrust suit against HP, DEC and the Open Software Foundation several years ago that is still pending.

NCUBE COMES OUT WITH TWO MORE MEDIA SERVERS

Foster City, California-based parallel processing systems pioneer nCube Corp, now almost wholly focussed on multimedia servers, has added two new multimedia models to its line, the MediaCube 30 and MediaCube 3000. The MediaCube is described as no larger than a tower personal computer, and the company says it can be configured to deliver up to 300 concurrent streams and more than 600 hours of content storage. It is also the engine of nCube's new all-in-one nAble interactive multimedia development system. The MediaCube 3000 server can deliver from 500 to more than 20,000 concurrent streams and will support more than 24,000 hours of content storage, the company claims. The MediaCube 30 starts at under \$80,000. The MediaCube 3000 is priced in scalable configurations at under \$1,000 per stream. Production versions will be available in June, with alpha versions available immediately and beta versions to be available in April. The nAble system includes MediaCube 30, a complete Asynchronous Transfer Mode network, television set-top boxes from Apple Computer Inc, a terminal server and an application server. It is offered in partnership with Oracle Corp, and includes the Oracle Media Server and optionally, the Oracle Interactive Application Objects development kit. It's out in June; no price was given.

HEWLETT PREVIEWES ITS SECOND GENERATION LINE

Hewlett-Packard Co has a new generation of its Broadcast Video Servers, designed specifically for the broadcast industry and starting at \$100,000. They are claimed to deliver about twice the performance of the current ones, with up to six channels and up to "50 hours of award-winning video quality in a single package." The Broadcast Video Server includes full networking capabilities, fault-tolerant architecture, MPEG-2 video compression and from two to six channels, which can be expanded as needed for high-bandwidth Fibre Channel networking. It comes with options for from eight to nearly 50 hours of video storage. The six-channel version costs \$215,000; they arrive in the second half.

IBM ACQUIRES OBJECT TECHNOLOGY INTERNATIONAL FOR ITS SMALLTALK

International Business Machines Corp, Armonk, New York, is buying long time Smalltalk technology partner Object Technology International Inc, Ottawa, Ontario, for an undisclosed sum. OTI, which will be operated as a subsidiary of IBM Canada, started working with IBM in 1988, eventually licensing its Smalltalk software for use in big blue's graphical VisualAge language tools in 1993. Founder David Thomas will remain president and CEO of OTI, reporting to John Swanson, VP Application Development Solutions at IBM's Toronto-based Software Solutions Division. OTI will retain all 110 employees. OTI says its Smalltalk virtual machine and class libraries will run on everything from set-tops to mainframes and is also used in the leading Unix Smalltalk platforms including ParcPlace-Digital's VisualWorks (also the basis of Hewlett-Packard Co's Distributed Smalltalk). OTI expects mainframe and AS/400 cuts of VisualAge Smalltalk products. Thomas rejects the notion that Java will eventually deep six Smalltalk; "they're virtually the same under the hood," he argues. What Java really threatens he says, is Visual C++-type environments.

DEC VETERAN ZERESKI TO RUN BULL AMERICA; MAINFRAMES AND OPEN SYSTEMS PUT INTO ONE GROUP

Following its profitable 1995 - *see back page* - Compagnie des Machines Bull SA chairman and CEO Jean-Marie Descarpentries has also reorganised the company's management structure, appointing DEC veteran Don Zereski, lately a Data General Corp VP worldwide services, as president and CEO of Bull North and South America. Zereski will oversee all of Bull's business in these areas and also becomes CEO of Bull HN Information Systems Inc. Bob Kelly remains as president. The company's mainframe Enterprise Systems and Open Systems and Software divisions have been rolled into one Enterprise Information Systems Division under Khaled Marrei who's on board from NCR Corp. The company's snared Siemens Nixdorf's Jacques Reboul to run Bull France networks and has installed Robert Aydabirian to run a sales and channel development and customer satisfaction operation. Bull's now divided into three geographic entities; France, Europe, Asia and Africa, and North and South America. Systems integration and services; systems operations and customer services are its three service divisions. Technologies and basic business development; sales and channels development, customer satisfaction and communication; materials and logistics quality; and Groupe information systems and special projects are its four new horizontal organisations in addition to the two already in place, people, performance, development and satisfaction; and finance, control and cash. Descarpentries' "Bull 2000" vision includes achieving growth twice that of the market, reducing costs further and further and consolidation by external growth or consorting.

JAVA API FOR DATABASE ACCESS

Sun's JavaSoft unit has an API allowing developers to write Java applications that access databases and will make an initial version available from March 8. A final cut of the spec, plus driver management software, will be released later in the summer after incorporating feedback from developers. JDBC is part of the group's Java Enterprise Platform SUITE, and will support interchangeable database drivers via a Driver Manager that automatically loads the right JDBC-compatible driver to talk to a given database. The manager will be bundled in future Java releases, along with a bridge from JDBC to Microsoft Corp's ODBC database driver interface. A slew of database vendors are developing support for JDBC whilst SunSoft object partner Persistence Software Inc is implementing object-to-relational mapping technology in the JDBC API. JavaSoft will support compliance test suites that can be used to test JDBC-based products from June.

TANDEM OFFERS DECISION SUPPORT PACKAGES

Tandem Computers Inc's kicked-off a new Information Delivery programme targeted at the decision support market that includes Integrity NR (the re-badged Silicon Graphics Inc SMP Challenge servers) with Oracle or Himalaya with NonStop/SQL hardware/software configurations, packaged offerings from the likes of Andyne Computing, Angoss Software International and SAS Institute, plus services and consulting. Prices start at \$284,000 for a two-way Integrity with 512Mb RAM and 50Gb disk (\$505,000 for a 150Gb solution), to \$5.3m for a 32-way Himalaya with 256Mb RAM per processor, 100-user NonStop/SQL database and 1Tb disk.

NCR TO "MAKE TOP-END OPEN" AS PART OF NEW MIDDLEWARE PLAN

NCR Corp took its turn on the OLTP centre stage last week, detailing a plan to "make Top End open" by turning source code and porting rights over to an additional half dozen master distributors which will peddle the transaction processing software, plus value-added technologies through their respective channels. Currently "de-merging" from AT&T Co, NCR is moving swiftly to resuscitate key middleware and databases technologies stifled under AT&T GIS' captaincy (UX No 577). Its LifeKeeper fault tolerant software will be the next boat it pushes out to partners. Bridgewater, New Jersey-based EnterSoft Systems Corp is the first of NCR's new Top End recruits and the summer 1995 start-up already has Silicon Graphics Inc and Santa Cruz Operation Inc Unix ports on the runway, plus MVS CICS and IMS, and Tuxedo gateways in the hangar. EnterSoft will market Top End through channel partners and won't sell to end users direct. It claims five integrators and vendors in the programme but declined to name any of them; potential customers will have to wait for a marketing campaign to roll out in around three weeks time. EnterSoft claims Top End is technically further advanced than Tuxedo and vastly better suited to large scale implementations and as a result will gradually de-emphasise and phase out its Tuxedo products. It says Top End has 25% of the open systems TP market, BEA claims Tuxedo's share is 40%. EnterSoft says the LifeKeeper software it will get under a further agreement is inexpensive (less than \$14,000 at the high end) fault tolerant software especially suited to NT environments that are less robust than Unix. EnterSoft president is Ward Geise, formerly of Information Management Co, one of the OLTP companies swallowed by Tuxedo start-up BEA Systems Inc (UX No 575). EnterSoft expects to double its headcount to 24 within a couple of months, following which it'll be ready for a second round of venture funding. The company isn't saying who its backers are or how much they have given.

Exposure

Open systems OLTP vendors are positioning themselves to best catch whatever part the \$70bn investment already made in mainframe transaction processing systems spills over to open systems. NCR's plan for outsourcing Top End is not as extensive as the relationship BEA Systems has created with Novell Inc for Tuxedo (UX No 575); NCR will retain responsibility for core Top End development, albeit with its distributors' input. Its OLE-enabled NT version - releases 2.03 - is due shortly, features and functions of which will be integrated with the current 2.02 Unix cut in a 2.04 release by year-end. Top End badly needs wider industry exposure, as only 20% of installs are currently on non-NCR platforms. The company wouldn't say how many Top End customers it has or how large the business is but reckons that for every dollar spent on Top End it gets a further \$80 of business in systems, service and support. It lists Top End's key advantages over Tuxedo and Transarc Corp Encina as scalability, high-availability, distributed TP and global administration. NCR's other master distributors and source licencees include Nippon Steel's Enicom IT arm in Japan, Samsung in Korea and Independence Technologies Inc, the Fremont, California-based company also part of BEA Systems. ITI has already ported Top End to Sun and HP Unices, it has Unisys, DEC Unix and Pyramid versions in beta. NCR says it's currently lining up a licencee in China and has a set of mainframe gateways for Top End on the runway.

UNIX ONLY - A NO SHOW?

Maybe it's time for virtual trade shows on the Internet. Unix Expo wasn't any great shakes last time out and Uniform never managed to pull out of its three-day tailspin the week before last (UX No 577). It never managed to pull in the 27,000 people it promised exhibitors. The party line has it saying it drew 15,000 but it'd be lucky to have gotten 10,000. One exhibitor said you could have sprayed the place with machine gun fire and not killed anybody. It never sold the sidebar Enterprise Solutions show so that folded up and drew no crowds. Vendors, to say the least, were ticked and those not downsizing simply weren't ante'ing up. The Santa Cruz Operation Inc, for instance, now the official home of Unix, hadn't signed up for next year's Uniform last we heard, although its buddy Hewlett-Packard Co, Unix's other champion, increased its 1997 real estate much to the surprise of the troops manning its booth who simply asked "Why?" Sounds like there's going to be a lot of deals going down between now and next year. Uniform, the organisation, seems to be of the opinion vendors should take a hand in marketing the show. Meanwhile, it appears Uniform didn't know Softbank, its show manager, was going to pair Uniform '97 with a new Comdex Internet show and isn't too pleased. Sources say that as a result of the poor turnout the Uniform board held an emergency meeting the day the show closed.

PLATINUM TO BETA POEMS SYSTEMS MANAGEMENT IN SUMMERTIME

After fleshing out its data warehouse story a couple of weeks back (UX No 576), Platinum Technology Inc's focusing attention on systems management, upgrading three of its products in that area and claiming to have completed the major components of its Platinum ~~Open Enterprise Management System (POEMS) (UX No 538)~~. The Oakbrook Terrace, Illinois company offers tools for distribution management; enterprise automation; job and process management; networking and connectivity; performance management; problem resolution; repository; security management; and storage management. Its promising a POEMS beta in the summer with integrated data warehouse and systems management tools. It'll tweak the systems management line in the second quarter, adding the WireTap transaction management tool acquired from Englewood, Colorado-based AST/DCG (UX No 575).

System sitting

A new addition to the company's management suite is Platinum CIMS, which produces job accounting, chargeback, cost analysis, resource utilisation, capacity planning and resource monitoring reports. It supports MVS, VM/VME, Windows, NetWare and most flavours of Unix. CIMS for MVS start at \$25,000, VSE at \$12,000. Unix prices were not available. Also new is AutoAction which is claimed to manage and monitor distributed processing tasks, automatically responding to messages and commands according to predefined parameters overseeing system activity from a single console; "system sitting," as the company puts it. In a CICS environment, a message indicating that a journal file or log is full would ordinarily be suspended until the problem was resolved. AutoAction allows CICS to be automatically switched to an alternate journal file, requesting the job scheduler to release a job for processing from the full journal file, the company says. AutoAction is up on NT, OS/2, OS/400, MVS, VSE and most Unix. Unix pricing starts at \$5,000. The Oakbrook Terrace, Illinois-based company has also revamped and renamed its UniVision tools as the Enterprise Performance Management suite, and enhanced the DBVision and ServerVision agents that work with it. EPM uses distributed agents - DBVision and ServerVision - to communicate with its POEMS central management console. Platinum has added SNMP support, expanded extended retrieval options, faster archive facilities, three dimensional graphs and online advisor texts to the architecture. DBVision monitors and manages large, multiple relational database environments simultaneously and can be programmed to automatically correct problems it identifies, or notify specific personnel via e-mail or pager. The environment includes a Motif console. New features include support for Informix and Oracle replication environments and integration with Platinum's tablespace reorganisation utility TSReorg. DBVision is \$2,800, consoles are from \$8,000. ServerVision is Platinum's 24x7 performance and resource utilisation management system for Unix. ServerVision includes automatic problem correction, online advice and problem notification by e-mail and pager. New features include increased scan points, archive data from non-relational stores as well as DBVision supported databases and alarm and corrective action scripts. No prices.

VR view of systems management

Meanwhile Platinum's venture capital spin-out, Platinum Venture Partners, has made an undisclosed equity investment in PC-based virtual reality authoring tools specialist Vream Inc. It's got itself a seat on the board and will deploy the Chicago, Illinois-based company's VRCreator, virtual reality interface and Web page development tool in its Platinum Open Enterprise Management Systems console. It'll enable users to view networks and systems in real-time, 3D interactive modes, the company says. Its due by the end of the year and sounds similar to Computer Associates International Inc's Next Generation interface to CA-Unicenter. Platinum Technology Inc CEO Andrew Filipowski also has a seat on the board of Dynasty Technologies Inc.

- Platinum Technology Inc last week reported fourth quarter net losses of \$66.6m, after \$65.7m in merger-related charges, up from \$2.8m losses last time, which included \$12.6m in similar costs, on turnover that rose 43.2% at \$91.2m. Net losses for the year to December 31 were \$112.5m, after merger-related charges totalling \$108.5m, against profits last time of \$600,000, which included \$19.1m in similar charges, on turnover that was up 36.2% to \$275.9m.

ELLISON PROMISES JAVA SUITE ON NETWORK COMPUTER

Oracle Corp chief executive Larry Ellison says that his \$500 Network Computer will come with a free suite of applications written in Java. "We are writing a Microsoft Office-comparable suite in Java, and it will ship free with every Network Computer," US *PC Week* quotes Ellison saying at the ~~Upside Technology Summit in Carefree, Arizona~~. The Oracle programmers earlier worked on ~~Borland International Inc's Quattro Pro spreadsheet~~. "Our word processor will be measured in Kb, not in Mb as in Word 7," Ellison is quoted as saying. "The applications will be a lot easier to use, and they would run on any machine that supports the Java language." As well as 8Mb memory the Network Computer will have 16-bit CD-quality audio, video processing capable of 30 frames per second, and a 28.8Kbps modem. Ellison claims it will support nine concurrent full-motion windows with audio and will include optional local storage in the form of a Flash memory card. Personal Oracle Lite will come on a Flash memory card Ellison dubbed "Flash cache." The operating system takes up about 200Kb and is Posix-compliant, Ellison said - skinny Unix-compatible operating systems include Venix and VxWorks. The system will be processor- and operating-system-independent with an open set of application programming interfaces - he sees both ARM RISCs and iAPX-86 parts being used in Network Computers. And it will be disposable: "A corporation can pay \$500 to \$1,000 for a Network Computer and have no administration cost since if it breaks, you can throw it away and get a new one," he suggests, adding that they are likely to be bundled with subscriptions as cellular phones are by airtime resellers. He says Oracle and its OEM partners will offer a family of Network Computer devices, including Internet phones with electronic mail, smart televisions, Personal Digital Assistants and games machines.

SUN DESCRIBES \$500 JAVA CLIENT INTERNET TERMINAL

Sun Microsystems Inc chief Scott McNealy showed off his Sparc-based Internet terminal and called it a "Java client" at UniForum two weeks ago. He says it will ship at the end of the year, but insisted that Sun will be a minor player in this hardware sector. It has 8Mb memory on the Sparc but no disks, and does not even have an operating system - it boots up from the server. He says a user could access a Java word processor over the Internet, use it to write a document on the Java client and send the word processor back over the network. Sun doesn't want to be big in the low-margin terminals but will make its hardware designs available to others.

OSI INTEGRATES ISICAD FOR DEPARTMENTAL NETWORKING

Objective System Integrators Inc (OSI), Folsom, California, is integrating its NetExpert high-end CMIP-based network management system with Santa Clara, California-based Isicad Inc's Command infrastructure management products for tracking, managing and controlling the delivery of data voice and video network services. OSI says the combine will enable it to extend its traditional enterprise market focus to the departmental end of the network management business. NetExpert is designed for use with network management, data collection and service management systems. Isicad's Command is a Unix CAD-based network design system for consolidating network and connectivity information. The two plan to reference sell each others solutions. NetExpert collects event data and using its rules based language corrects problems or alerts an operator. Administrators can define various levels of problem alert, perform configuration management, create and manipulate trouble tickets, access reports and execute bi-directional dialogs from OpenLook and Motif GUIs. NetExpert supports Advanced Transfer Mode, Frame Relay, wireless and video-on-demand connections, runs on all major Unixes, and supports CA-OpenIngres, Sybase, Oracle and Informix databases. NetExpert will be up on NT by year-end and is readying Internet and Java releases of NetExpert. Its prices start at \$150,000. Isicad's Command costs from \$17,500 for a single seat. OSI went public last December and has 275 staff. It says it hardly sees London, UK-based rival Micromuse Ltd in the US. It's usually up against custom shops, internal development teams or general purpose environments such as HP OpenView or IBM NetView.

IST OFFERS ENHANCED X-DESIGNER

Imperial Software Technology Ltd, Reading, Berkshire, is offering a new 4.5 release of its X-Designer GUI builder which allows developers to migrate existing Motif applications into X-Designer without requiring the source code and to have all actions used in building applications to be saved as a script. In addition re-usable application templates can be developed and resources can be set for groups of widgets. On Sun, HP and SGI Unixes from April, prices start at \$3,500.

INTERNET: IBM TURNS ENTIRE LINE OVER TO THE WEB; NEW RS/6000 SERVER SUPPORTS NT; SOLARIS AND MAC OS TO FOLLOW

In one of the company's famous old-style announcements where it dumps everything in regardless, IBM Corp last week made what was ostensibly an Internet announcement, but included a new RS/6000, a new AS/400 ~~Advanced 36 and the OS/390 operating system bundle. The idea of the~~ Internet software for mainframes, AS/400s and RS/6000s is to make it easier for users to make the contents of their existing databases accessible at Web sites. The new RS/6000 Model F30 can be bundled with Internet server code from either IBM or Netscape Communications Corp, plus DB2 and CICS mainframe World Wide Web gateways under AIX - but the machine is also the first RS/6000 to be offered with Windows NT (from June) as well as AIX. The PCI bus F30 is a 133MHz PowerPC 604 uniprocessor server that comes in above the 100MHz E20. It can accommodate 512Mb RAM now - a future 960Mb configuration is expected to perform 850 tpm - up to 512Kb L2 cache, 40Gb disk, three PCI, 3 ISA and 4 shared slots. It's priced at from \$14,000 from March 1 and is rated at 4.74 SPECint95, and 3.49 SPECfp95. IBM's other PCI bus RS/6000s are the 43P workstation, which runs AIX, NT (from April) or the desktop version of Solaris for PowerPC, 2.5.1X (\$900 from March 1) and the former Power Series 820 and 850 Thinkpads (now folded into RS/6000) which already run AIX and NT and Solaris (from March 1). OS/2 is a "special order" on the PowerPC RS/6000s. IBM isn't saying when a server version of Solaris-for-PowerPC will see the light of day on an RS/6000, although it's certainly part of the long-term plan. Its existing agreement with SunSoft extends only to Solaris on the desktop and Thinkpad Power Series systems and SunSoft hasn't had access to RS/6000 server technology. There's no technical reason it can't happen, SunSoft says. Each told us to talk to the other about it, which we did, but each just referred us back to the other.

Attraction

Meantime, coming the day after Motorola Inc's licensing of Apple MacOS for its PowerPC systems, RS/6000 assistant general manager Jeff Mason said it was "entirely reasonable" to assume that IBM would make Mac OS available on future RS/6000 desktops and servers that conform to the PowerPC Platform standard (formerly the Common Hardware Reference Platform spec), but it has no agreement yet, either with Apple or Motorola. Boosting RS/6000's attraction as a video server, IBM's offering new Multimedia Server software on AIX for distributing audio and video to NFS and TCP/IP-based clients over Ethernet, Token Ring or FDDI. It's up on the PCI bus E20 and 59H and G30 micro channel architecture servers. It'll integrate Java into a future AIX release. The company's expected to move selected middleware over to the other operating systems it supports on RS/6000 over time. Michael Coleman's PC server group - which last week stood up and supported the HP/SCO Summit Unix project (UX No 577) - has bitten the bullet and licensed Sun's Solaris x86 Internet bundle - the operating system, SunSoft Internet gateway and the Netscape Commerce server - which is one of three packaged Internet options its offering bundled with a PC Server 320. The SunSoft solution is from \$8,900; OS/2 and NT packages are both priced at from \$7,970. SunSoft will make the Internet technologies available for PowerPC later this year. The PC Server group has also renamed its NetInfinity LAN management software PC SystemView 4.0 which costs from \$450. The OS/390 bundle - which can save users a lot of money, but only if they would have otherwise bought everything in it separately, and that applies to only a tiny number - now comes with a suite of Web software, and OS/400 is being extended with a new Internet Connection for AS/400 browser - but it will not be out until the second half. The new AS/400 Advanced 36 is the Model 436 - actually three models, the smallest of which only matches the existing one. They are claimed to be two to six times faster in interactive response times, four to 30 times faster in batch, not than the first Advanced 36 but compared with the biggest old-style 36.

HDS READIES NETWORK COMPUTER FOR MULTIPLATFORM ACCESS

X terminal company Human Designed Systems Inc, King of Prussia, Pennsylvania, is readying a desktop Network Computer which it claims will provide access to application and data - including video, graphics and text - running on multiple platforms, including mainframes, VMS, PCs, Mac and Unix servers, plus all varieties of networks, internal, public and the internet. It will offer support for Java and bundle Spyglass Inc's Mosaic Web browser. Based upon Intel's i960 processor, it's due in April and prices will start at \$750.

X/OPEN CLI SPEC TO STANDARDISE MULTI-PLATFORM DATABASE ACCESS

X/Open Co Ltd's SQL Access Group will deliver version 2 of its ISO-ratified Call Level Interface third generation language API next quarter (UX No 576). CLI for C and Cobol defines calls for applications to interface with SQL. The group's shy on detail but says version 2 will flag extensions and descriptions used by two-phase commit mechanisms that implement its Distributed Transaction Processing Model. More important is that Microsoft Corp's ODBC 3.0 release, due by mid-year, will include all the X/Open CLI additions, providing real interoperability between Microsoft and non-Microsoft databases, X/Open claims. X/Open will offer a test suite for ODBC 3.0 compatibility. Meantime X/Open has a bunch of other developments in the pipe, including a specification for stored SQL procedures, a preliminary version of which it'll make available by year-end. The specification covers definition, management, authorisation, the invocation of stored procedures and the planned extension of SQL3 language definition for multimedia support. A finished version is due in 1997, along with a preliminary specification for building interoperable data replication services.

LEGATO REVS STORAGE MANAGEMENT SOFTWARE

As expected (UX No 555), network backup specialist Legato Systems Inc, Palo Alto, California is shipping version 4.2 of its NetWorker network storage software. 4.2 includes StorSuite, an integrated suite of storage management applications for backup, archive and hierarchical storage management which it gets from Eastman Kodak subsidiary Imagery Software. NetWorker 4.2 for Solaris, HP-UX and AIX comes with simplified administration and combines automated storage capacity management with data protection. NetWorker can operate from anywhere on the network and can be integrated with other storage system management frameworks including DEC PolyCenter, SNI Transview, Sun Enterprise Storage Manager, Tivoli Plus and HP OpenView. The software comes in a server edition for high performance file, application, or database servers, and network edition for managing data from multi-platform environments. Legato will offer Exabyte Corp's high-end automated tape libraries with its NetWorker for Solaris. It's also including Smartmedia, a suite of automated media management routines such as media pools for rapid recovery, bar code support for media tracking, automated drive cleaning and automatic write verification. NetWorker StorSuite is up on NetWorker Version 4.2 for Solaris and HP-UX with AIX to follow. Network Server Edition prices start at \$3,000, Network Edition \$2,500. NetWorker options include HSM Application Module \$15,000, Autochanger module from \$1,500 and five client connections for \$1,250. PC, Mac, NetWare, NT and Unix clients are priced at \$1,500.

AUTODESK BRINGS UNIX AUTOCAD INTO LINE WITH PC VERSIONS

Autodesk Inc, the San Rafael, California-based author of the best-selling AutoCAD computer-aided design tool, has released four updated versions of AutoCAD Release 13 for Unix, bringing the Unix version into line with its mainstream PC versions. Release 13c4 for IBM, Sun, Silicon Graphics and Hewlett-Packard Unix workstations includes the same AutoCAD Runtime Extension (ARX) as in the PC versions for Windows95, Windows NT (Intel and DEC Alpha), Windows 3.1 and MS-DOS. The company claims to have 1.3 million AutoCAD customers worldwide, many of whom work in design teams using different platforms. The release also includes performance enhancements and new CAD features, and supports the CDE Common Desktop Environment. On CD-ROM, the product has a suggested retail price of \$3,750 per copy - the same price as the PC version. It's due by the end of February. Autodesk is now the world's fourth largest software company, and last month reported net revenues of \$534.2m for the fiscal year ending January 31st 1996, up 17% on the previous year. Income was \$87.8m, up 55% on last year. Despite the growth, Autodesk has seen some resistance from its customers faced with the move up to 32-bit software required to run Release 13.

HITACHI ADMITS IT'S SEDUCED BY INTERNET ACCESS CONCEPT

Hitachi Ltd became the first of Japan's computer majors to reveal plans for such a device when it declared last week that it was considering whether to launch in Japan an Internet access terminal at a retail price of about \$500, probably in the autumn. Hitachi's Internet machine would include either one of Hitachi's own SH embedded RISC microprocessors or an Intel Corp iAPX-86 processor. It would have a CD-ROM drive and a modem, and use a television set as the screen.

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Compagnie des Machines Bull SA is hoping for further profit growth this year after reporting a return to the black in 1995: it saw net profits the equivalent of \$61m, against losses of \$392m in 1994; there were no restructuring hits this time, against \$260m previously; chairman Jean-Marie Descarpentries said the plan was to "win the battle for growth and improve our profitability" through further restructuring this year; there would be no job losses at the group level, though some local units may limited job cuts.

Industry analysts who spoke to Rich Sevcik, the **Hewlett-Packard Co** VP chartered to pull all this Aspen 64-bit stuff together at Uniforum quote him as saying "I haven't got time for any consensus." So much for industry-wide participation. Sources also claim that the pact between HP and SCO would rule out companies getting very close to things unless they were covered by pre-existing co-development agreements limiting such things to the likes of Hitachi and NEC.

With 1,000-odd engineers on the Summit 3DA Unix project, **HP's** calling the shots. It'll add stuff to its version, whilst **SCO** serves the OEM market. According to the SCO, HP's extensions aren't supposed to break the APIs as far as ISVs are concerned.

Uh-oh. We identified NTrigue as belonging to **NCD** (UX No 576). Things have long since passed that point. It's strictly an **Insignia Solutions Inc** product now.

For some reason or another, Sun's chip arm, the recently restyled **Sun Microelectronics** is said to be disclosing its UltraSparc Spec95 numbers under NDA. Another vendor, however, has estimated a 200MHz UltraSparc at 6.5x SPECint95 and 11.5 SPECfp95.

Bob Kavner, the man who sold Unix to **Novell** and then advised **Matsushita** on the sale of **MCA** to **Seagrams**, has turned up on the board of Pasadena, California-based **EarthLink Network Inc**, which describes itself as the fastest-growing privately held Internet access provider. Kavner is now a private investor and a consultant on Internet services and content, interactive entertainment and telecommunications.

Our spies tell us **Cray Research Inc** is readying an UltraSparc makeover for its high-end Sparc server product line in April as Xfire (Crossfire). Cray's current 4-to-64-way CS6400 SuperServers use 85MHz SuperSparcs and are OEMed by the likes of Amdahl Corp. Sun's UltraSparc servers, dubbed SunFire, are due April 15 (UX No 574)

Momentum Software Corp, Englewood, New Jersey, is offering an Internet version of its X*IPC messaging system which includes support for Java

Former director of **IBM Corp** AIX business in the UK, Val Rahmani, has been appointed executive assistant to chairman and CEO Louis Gerstner, she becomes one over several staff in this role who handle meetings and correspondence on Gerstner's behalf.

Motorola is sketching out a PowerPC chip for Java and the Internet, according to *Electronic News*.

Precise Software Solutions, Braintree, Massachusetts, is offering **Inspect/SQL** for examining Oracle Corp database performance and system-level resources from March priced at \$5,000 on Windows and OS/2 clients, IBM, HP and Sun servers.

Software licence management company **Elan Computer Group Inc** has revamped its License Manager to include exportable DES-encryption, a single API for supported platforms, cascading locks and a single GUI. Version 4.1 prices start at \$7,500 on most Unices, NT, VMS, Windows and NetWare.

VMark Software Inc has released an enhanced release of Universe Objects, an OLE Custom Control (OCX) for building Windows client/server applications. The latest version gives Windows clients access to its Universe relational database servers running Unix and NT. UniVerse Objects is priced at \$250.

Once legal and tax questions are resolved, **Open Group** says it'll probably phase out the **X/Open Co Ltd** and the **Open Software Foundation** names.

Unisys Corp's chief technology officer Ron Bell has gone to **LSI Logic's** new Advanced Architecture Division where he's set up as VP, responsible for defining the design, methodology and architecture the company will use in its system-on-a-chip schemes.

Novell Inc has named Glenn Ricart, who joined the company as senior VP for corporate research and development in December, as its chief technology officer, replacing Sheldon Laube, who resigned in January to join other Novell refugees at **US Web Corp**.

Pure Software Inc's snared former **Informix Software Inc** NewEra tools director Geoff Roach for the new post of director of marketing.

Sun says more than 1,300 organisations and individuals have registered to take part in its Java Cup International. Applicants have to register their intent to submit an applet by March 1, applets must be in by March 31. Winners will be announced at the JavaOne developer conference in San Francisco between May 29 and 31.

Bernard Guidon, the **HP** computer systems group VP and general manager who worked for computer systems operation boss Wim Roelandts, is now reporting directly to Rick Belluzo, computer organisation chief and presumptive heir to CEO Lew Platt, as senior HP computer organisation strategic consultant. A replacement for Guidon, who'll report to Dick Watts, who took Roelandts' job, hasn't yet been named.

Information Builders Inc is offering version 6.8 of its Focus 4GL and reporting tool for Unix, now including an external sort capacity claimed to improve query performance. New parallel table support allows concurrent users to have read and write access to the same database. Prices start at \$3,000 for a single user.

SCO is now offering UnixWare 2.1, admitting the **Novell Inc** technology is its "its first true product for the enterprise market."

Maximum Strategy Inc, Milpitas, California, is offering a new series of SCSI Strategy S-Series storage subsystems for Unix and NT that can accommodate up to 400Gb disk and data transfer speeds of 200Mbps over up to eight SCSI connections.

Object Management Group is seeking technologies that can form the basis of common business object specifications and has issued request for proposals. It's specifically looking for objects that represent business concepts and entities which are common across most organisations plus a business object facility - an application architecture and services - that support business objects acting as application components. Letters of intent are due by October 15.

Meantime, **OMG** says it's definitely not in discussion about being merged into the **Open Group** (UX No 577).

NeXT Software Inc has integrated Security Dynamics' ACE/Server and SecurID one-time password Internet identity verification technology into its WebObjects programming tools which provide Web page creation and service design.

InSync Software Corp, Ronkonkoma, New York, has changed its name to Passport Corp, the name of its three-tier application development environment, and is moving to Paramus, New Jersey, on March 31.

Raj Parekh, CTO of **Sun Microelectronics**, the former Sparc Technology Business, will also serve as VP and general manager of the group's newly-formed embedded products organisation.

Tivoli Systems Inc is offering new parent **IBM Corp's** AdStar Distributed Storage Manager and **Legato Systems Inc** storage management software to its Tivoli/Plus integration software (UX No 551). Other Tivoli/Plus components include **Remedy Corp's** AR System help desk and **Unison's** Maestro workload scheduling application (UX No 562). Tivoli/Plus for ADSM and NetWorker prices start at \$9,000.

Berkeley Software Design Inc is offering version 2.1 of its Internet Unix Web server software and utilities for Intel iAPX-86. New features include an authentication scheme enabling the establishment of classes and easy configuration and installation tools which remove the need to edit Unix configuration files. Prices start at \$1,000.

Burlington, Massachusetts-based **SourceCraft Inc** is offering NetCraft and ObjectCraft tools for producing Java browser/server and C++ client/server code respectively from the same interface. NetCraft costs \$1,000 from April - or free for developers through June 30. ObjectCraft is \$2,000, today.

Bud Tribble, **SunSoft Inc's** object guru picked up from NeXT some time back, has swung over to Sun's hardware arm as Internet advisor to SMCC president Ed Zander. Since Tribble is literally both a brain surgeon and a rocket scientist, he should be able to figure out what to do.

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DEC ADVANCES WORKSTATION CLAIM; NEW ALPHAS, DIGITAL UNIX V4, POWERSTORM GRAPHICS

Digital Equipment Corp will introduce the 'Strong Arm' shrink of its 21164 Alpha RISC, plus Digital Unix V4 and a new PowerStorm graphics adapter in a refresh of its AlphaStation workstation line on March 11. The long-anticipated chip - which would have been called the 21164a if DEC was still using the "a" tag to distinguish it, which it's not - is done in the company's 0.35 micron EV56 process - a shrink of the EV5 21164 - and is supposed to dissipate 20 Watts at 2.2 volts from some 9.66m transistors. A 400MHz part implemented in a new AlphaStation 500/400 is pegged at 11 SPECint95 and 14 SPECfp95. The 500/400 will ship in June, though it's not clear what support silicon will feature, as the Kodiak six chip-set was recently deep-sixed and plans for Alcor derivatives are hazy. The 500 series comes in for the existing 250 desktop family and below the high-end 600 line. It's targeted at EDA, GIS, scientific and software developers. Other new models in the series include the 500/333 and 500/266 - which use 333MHz and 266MHz EV5 21164s respectively. Each of the 256-bit memory bus models include up to 8.5Gb disk, four PCI slots, 21" screen, Digital Unix V4 and the new PowerStorm 3D30 PCI-based workstation graphics card - *see below*. The 333MHz machine is from \$25,800 and is rated at 8.8 SPECint95 and 11.6 SPECfp95. The 266MHz box delivers 7.29 SPECint95 and 10.5 SPECfp95 and is priced at \$20,800. NT versions will ship with 32Mb RAM, 2Mb L2 cache, 1Gb disk, 17" screen and PowerStorm 3D30 graphics. The 500/333 with NT is priced from \$15,800. DEC puts the 500/333 up against Sun's UltraSparc 170E and HP's two-way 120MHz J210 7200s which delivers 10.1 SPECfp95 and 7.6 SPECint95. The entry-level AlphaStation 255 line comes in for the existing 200 models. The two 21064a (128-bit memory bus) Alpha boxes come with 32Mb RAM, 1Gb disk, two PCI and one ISA slots, up to 6.4Gb disk, PowerStorm 3D30 graphics, 17" screen and Digital Unix. The 300MHz Model 255/300 delivers 4.51 SPECint95 and 5.71 SPECfp95, the 255/233 performs 3.8 SPECint95 and 5.09 SPECfp95. The 255/233 is priced at \$8,500; the 255/300 is from \$13,000. NT versions start at \$7,500. The new AlphaStations bring in a new naming convention that's sure to confuse us all which does away with any way of identifying what generation of the chip the things house, such as the 100MHz, 21064-based 200 4/100.

Competitive knock-offs

For some reason DEC is expected to bury the release of Digital Unix V4 in next week's announcement. As well as Unix 95 branding, LP64 (Aspen) compatibility, an advanced file system parallelised for SMP, increased logical storage manager capacity (512 disks, 1 terabyte per volume), key new functionality is reportedly a new GUI-based SysMan for easy installation and system management. DEC-watcher Terry Shannon expects these new features to reduce competitive knock-offs, especially among Unix vendors trying to migrate VAX/VMS customers to their platforms. Apparently only 18% of OpenVMS emigres chose Digital Unix 18 months ago; today 65% of customers leaving OpenVMS choose Digital Unix. It costs from \$800 for a two-user licence. Meanwhile, the new PowerStorm cards are designed for 2D and 3D wireframe and solid modeling graphics applications. They come in three versions. An 8-bit 3D10 with 1280 x 1024 resolution for 2D and 3D vector processing costs from \$400. The 3D30 includes a dithering algorithm said to display virtual 24-bit images in colour. It costs \$800. The 4D20 has a 24-bit frame buffer for image processing, medical imaging and desktop publishing and includes colour maps and support for 1600 x 1200 resolution with 75Hz refresh rates. It's priced at \$2,500. 3D30 and 4D20 also support video playback. DEC will offer PowerStorm 4D60T with 32-bit texture maps including 32Mb graphics memory and support for 24-bit buffering in the summer.

SGI BUYS CRAY FOR HIGH-END TECHNOLOGY, CUSTOMER BASE

It looks untidy at first glance, but Silicon Graphics Inc's acquisition of Cray Research Inc gives it access to the Eagan, Minnesota company's supercomputer franchise and its 500Mbps scalable interconnect. Cray has 51% of the \$297m market for systems above \$5m, many of which are installed at secretive government and research agencies, and a healthy \$437m order book. SGI, now competing with other RISC server vendors' high-end clustering, global shared memory and parallel processing technologies, is readying its own high-end solution that'll accommodate 200 CPUs or more this summer, currently dubbed Lego. SGI will use the Cray 3D Torus interconnect as a building block to accommodate up to 1,000 or more processors thereafter. As expected (UX No 567), Thinking Machines Corp will also begin selling a version of its GlobalWorks parallel application software for connecting multiple SGI workstations as one processing node. The SGI/Cray combination looks messy because Cray currently uses SuperSparc (soon UltraSparc) RISCs in its Solaris-based SMP servers (UX No 578), and Alpha RISCs in its T3D and T3E massively parallel systems. SGI is keeper of the Mips Inc R-series design. Cray has always said that the Alpha was in no way a lock-in, and that it had written the code base in such a way that it could switch to a different RISC with a minimum of disruption. It will begin the move to next generation versions of the Mips R10000 from 1998, processors it'll help design on its Alpha-based simulation systems. The R10000 follow-ons will be implemented in different versions for SGI's games console-to-supercomputer requirements. Cray's migration should be complete by 2000, though both companies make it clear the SGI and Cray products lines won't merge into single product offerings. In the meantime Cray is readying new versions of its SMP, parallel and supercomputer products for the second half of the year. SGI and Cray will work to implement a common programming model across their architectures and integrate their Irix and Unicos Unices. *More details page 3.*

CONVEX READIES PA-8000 PARALLEL PROCESSOR

Hewlett-Packard Co subsidiary, Convex Computer Corp is pushing its next generation scalable parallel processor closer to availability, perhaps in the second half of the year. The box is the Exemplar SPP2000, follow-on to the PA-RISC 7200-based SPP1200 Convex debuted last year as a new member of its SPP1000 family (UX No 536). It's supposed to embody many of the features which would have gone into a C5 system, the Gallium Arsenide supermini line Convex has canned. The behemoth can reportedly accommodate between 32 and 512 processors, in this case 180MHz variants of the 64-bit PA 8000, joined through the company's Coherent Torodial Interconnect (CTI). SPP2000 will accommodate between 16Gb and one terabyte of shared memory across processing nodes, presented as a single programming target through the company's Global Shared Memory model. A single hypemode, measuring 36" x 36" x 30", would house 16 processors, 16Gb memory, 24 PCI controllers and 18 3.5-inch drives. It's I/O is said to be 2Gbps and its system bandwidth 8Gbps, perhaps double what it's offering now. The box is expected to be run by a revised operating system. The SPP1200 was fitted with Convex's OSF/1 Mach implementation and an ABI layer that could run standard HP-UX applications and middleware. A 180MHz PA-8000 chip is supposed to be capable of 720 MFLOPS at peak.

IBM QUILTS X TERMS, HANDS BASE TO NCD

IBM Corp is exiting the X terminal building business and is to begin reselling Network Computing Devices Inc's Mips-based Explora and HMX terminals to the RS/60000 base in place of its own X Stations. NCD is taking on six IBM employees at its Austin, Texas facility that'll provide technical support for existing X stations for two years. IBM will phase out its X Station Models 140, 150 and PowerPC 603-based 160 within 90 days. According to Zona Research Inc, the X terminal hardware business declined from \$645m in 1994 to \$520.5m in 1995 (UX No 576); IBM's share fell from \$65.7m (10.1%) to \$25.5m (4.9%) in revenue terms over the same period. The business is expected to decline even further as NCD estimates its relationship with big blue will be worth \$50m over the first three years. NCD's 21.4%, \$111.4m share of the 1995 market was down on the previous year's \$143.3m, 22.1% share. NCD believes IBM is only the first of the major companies still building their own X terminals - including Sun, HP and DEC - which will be forced to quit the business. The market is simply not big enough to sustain the multiple development efforts, it says. X terminals never became the ubiquitous low-cost diskless desktop their proponents hoped - because of the network resources they take up (applications run on the server) and their lack of access to PC applications. Many are now so heavily spec'd they differ little from low-end workstations.

CLIENT/SERVER LABS READIES HIGH-END DATABASE TESTING

RPMark benchmarking house Client/Server Labs in Atlanta is working on RPM/dbs, a new benchmark for large-scale database servers, ~~due out at the beginning of the second quarter. It claims it will be the first open, scaleable, mixed-workload benchmark of its kind.~~ It says it will be able to test any type or size of client/server configuration including ones supporting hundreds of users. Currently it's configured to represent 450 "real" users but the company says the number can be expanded. RPM/dbs tests OLTP and decision support workloads, the former using what is called a highly modified subset of the TPC-C benchmark, the latter using a highly modified subset of TPC-D. Presently, OLTP transactions are concentrated in a 1.2GB database; DSS transactions in a 10GB database. RPM/dbs measures performance and price/performance. The first score consists of the difference between the performance of the configuration tested and that of a hypothetical reference platform. The higher the number, the better the score. Price/performance derives from dividing the cost of the system by the RPM/dbs score. Atlanta-based Client/Server Labs says RPM/dbs can measure the impact of a single component like a server, OS, database software or driver and claims there's no hardware or software limitation, making it extremely portable across hardware, applications and operating systems. Hence, it says, two database applications could be run against one another to determine which outperformed the other in a proposed configuration. The cost of running the benchmark and certifying it will begin at \$25k. Vendors can also purchase an annual site license for \$2,500 to use the test suite in development.

PEDIGREED VENTURE TAKES TO THE NET

A pedigreed and powerfully backed Web start-up called Middlegate shows that the Internet that was once the playground of research scientists and college students has given way to one that's now become the battleground of seasoned corporate warriors from the computer trade and other industries. Middlegate, a New York-based company set up to provide travel information and booking services for small businesses and individuals, is led by notables from the publishing and online industries: John Evans, former president of Murdoch magazines and the founder of the News Corporation subsidiary News Electronic Data and Peter Miller, former VP of interactive services at Viacom Inc, head of engineering of Apple Consumer Products Division and the head of the Advanced Technology Group at Lotus, founded the company. John I Williams Jr, who while at American Express headed its Consumer Travel Network, managed its Platinum Card operation and developed its ExpressNet online service, will be President and CEO of the new venture. The company is backed by prominent VCs, Accel Partners, New Enterprise Associates and Hummer Winblad Venture Partners in a partnership with Intel and News Corporation.

COLD FUSION TO SUPPORT JAVA

Allaire Corp's Cold Fusion Professional, the first tool developed for building database applications on the Web, is adding support for Java, JavaScript and VRML. The development environment, now in version 1.5, links databases to HTML files through SQL Server, Access and other ODBC-compliant databases. The graphically based environment, said to be faster and simpler than creating web sites in C++ or Perl, also adds a scaleable architecture, integrated messaging, scripting enhancements and high-speed database caching. The Minneapolis-based consulting firm says "hundreds" of corporations are building database-enabled Web sites with its software. Cold Fusion Professional 1.5 is shipping now for \$500.

APPLE LAUNCHES ITS FIRST AIX UNIX SERVERS

Apple Computer Inc is finally through with its A/UX Unix, but it is far from through with Unix, and the company this week launched its first PowerPC-based Unix servers, the Network Servers 500/132 and 700/150 - 132MHz- and 150MHz-based PowerPC 604 servers running IBM Corp's AIX 4.1.4 Unix - or AIX OS, as Apple likes to call it. They come with two Fast/Wide SCSI-2 channels and two PCI buses with slots for up to six boards. They take up to 512Mb memory and support hot-swappable disk drives, while the 700 can also have redundant power supplies. Prices start at \$8,800 (£9,600) for the 500/132, going to \$15,000 (£13,000) for the 700/150.

ROADMAP? WHAT ROADMAP?

Somerset folk, who got back to us too late for last week's issue (UX No 578), tell us the PowerPC process design schedule we've been shown doesn't define a specific set of process targets, but should be regarded as a general statement of design direction. The 106 PCI bridge memory controller family will never be produced in 0.15 micron technology, for example. Meanwhile the SMP-enabled Red October cut of PowerPC 620 which Motorola Inc will begin delivering to partners next month is being fabricated in the company's 0.35 micron PTC 2.0 design process. Red October's not expected to find its way into systems until the end of this year or beginning of next. A 166MHz version of 604e due in the summer is done in the same design process. Somerset claims it's working on another PowerPC roadmap which neither Motorola or IBM Corp are willing to make public. Nor have either yet made public their intent or otherwise to manufacture the 620s.

ONE COMPANY, TWO SPIN-OFFS, TWO OPPOSING CAMPS

Two spin-offs of the same company have fallen in with two opposing Internet camps: Cambridge Technology Partners (CTG), the systems integration spin-off of the Cambridge Technology Group (CTG), will do integration and training for Netscape and Sun, while its fellow spin-off Business@Web has allied itself primarily with Microsoft for an OLE-enabled Web development tool. Announcements of the product and integration plans came almost simultaneously. While the two companies were born of the same group, Business@Web said there is little involvement between them and that the announcements were not joint strategy but simply the result of ironic timing. CTP will train 100 people to implement Netscape sites.

Training

It will establish training workshops and centres for both Java and Netscape and support Internet products like Raptor's NT firewalls. Business@Web, called Object Power Inc until last month when SAP America head Klaus Besier jumped on as CEO is shipping its OpenScape tool that integrates OLE, legacy and Intranet development. A basic version sells for \$145, OpenScape Pro for \$400, OpenScape WorkGroup for \$3,500 and OpenScape Enterprise for \$23,000. Enterprise integrates with RDBMS's, legacy systems, TP monitors and environments like SAP R/3, DCE and Corba. Kerberos security can be added in Pro and Enterprise.

UNIX GETS OLE CONTROLS

Mainsoft Corp, the folk licensed by Redmond to provide the Windows API on non-Microsoft operating systems, has gone to beta with OLE Controls for Unix. It's adding OLE Controls to its MainWin XDE development environment on Suns for the beta and on most other Unices once MainWin XDE 2.0 is ready to ship late next quarter. The Mainsoft OLE implementation supports both OLE Control and Microsoft Foundation Class 4.0, a combination designed to let developers re-use original Windows source code, MFC, resource and help files. Price stays the same at \$5k per developer per platform. Meanwhile, Mainsoft last week went gold with the latest version of MainWin, adding Windows 95 Common Controls support plus Unix support of several NT APIs including file and memory mapping. MainWin 1.3 now also support SCO Unix 5.0, HP/UX 10 and AIX 4.0.

THOMSON SUN WINS OPEN TV ADOPTERS IN FRANCE, HOLLAND

Nethold Dutch, a South African television company based in the Netherlands, and France Telecom have each chosen the Thomson Sun Interactive Open TV system to offer interactive television, the joint venture of Thomson Multimedia SA and Sun Microsystems Inc told *Reuter* in Cannes. Thomson Sun has been demonstrating interactive television at the Milia show, revealing how a viewer watching a pop concert on television could get information about other concert venues and could make bookings for them by using the remote control. And in a game show, viewers could compete with the on-screen players.

X INSIDE LICENCES SUNSOFT CDE FOR OTHER UNIXES

SunSoft Inc this week will reportedly announce that it's licensing the Solaris CDE - the Common Desktop Environment - to Toronto, Canada-based X Inside Inc which will port it to AIX, HP-UX, SCO Unix, BSDI and Linux. It is believed X Inside will begin with a Linux port for Linux pusher Caldera Inc and pair CDE with the X Inside X server, said to be the fastest one around for Intel Corp boxes. Caldera's a natural target since of all the Unix folk it stands the best chance of capturing the most Unix desktops. Sources say X Inside's Caldera work is already in beta. The deal will give Solaris CDE users common functionality across multiple platforms and SunSoft a theoretical chance of becoming a standard user interface for Unix users.

NEWERA 3.0 PUT BACK TO JUNE

Informix Software Inc has put back the Windows 95, NT and object repository release of its NewEra graphical application development toolset until June. Originally due by the end of last year (UX No 557), the company will say only that it decided to integrate all of the technologies due in both 3.0 and 3.1 in a combined 3.0 release. Other work due in 3.0 includes an application partitioning wizard, a new application builder and a new look and feel. The object repository is based upon technology from Versant Object Technology Corp. 3.0 will go to eight beta sites this month. Informix says it's looking at how it can support the generation of Java applets and Web applications from NewEra code, but has no timeframe. It's also working on a release that'll support the multimedia/object DataBlade modules from its Illustra Information Technologies Inc acquisition and the Universal Server release of the Informix database that supports DataBlades which is due by year-end. Anne Buzbee is now heading NewEra tools marketing following Geoff Roach's departure to Pure Software Inc (UX No 578).

SGI TO PAY \$750m FOR CRAY RESEARCH

Under the two-part deal, Silicon Graphics Inc GI is paying \$576m, or \$30 per share cash for 75% of the Cray Research Inc shares outstanding, and once SGI has control, the balance of the Cray shares will be swapped for its own shares on a one-for-once basis, expected to represent around 3.5% of SGI's outstanding stock, for a total cost of \$731 million. The deal will be closed in SGI's fourth quarter ending June 1996, when SGI expects to take a non-cash charge on the deal of \$50m to \$100m. SGI is on target for turnover of almost \$3,000m this fiscal to June 30. Cray's been looking for a partner such as SGI for some time. After losing \$226m after \$188m in charges last year on sales that plummeted 27% to \$676m, its blue-chip government customers were apparently loath to give more business to Cray on grounds that it might not survive for the term of the contract. Its says it'll be profitable this financial year. Cray claims 800 installations, 25% up on last year, 40% of them new customers. The combined SGI-Cray will hold an estimated 43 percent of the \$1.9bn high-performance supercomputer market, according to Smaby Group Inc; it's interesting that Cray also did better than SGI in the \$500,000-to-\$1m market last year. SGI will retain use of the Cray name, which it describes as US "national asset," even releasing SGI products under the brand. Sales and R&D units will be merged over time although there'll be no word on restructuring or how existing Cray partners will be handled until SGI gets control. SGI has 7,200 employees, Cray 3,700. One option of course would be to sell the Sparc-based servers line to Sun Microsystems Inc. Cray CEO Phil Samper - one-time president of Sun's SMCC hardware unit - isn't expected to stay on after the deal closes.

3DA COULD LEARN FROM MICROKERNEL WORK, SAYS CHORUS

Santa Cruz Operation Inc's real-time development partner Chorus Systemes SA believes it has already "componentized" the operating system technologies which SCO's 3DA next-generation Unix venture with Hewlett-Packard Co needs to succeed. Chorus doesn't know what its relationship with SCO/HP 3DA will be - if any - but it wants to educate the HP people in charge of 3DA on what it's achieved with its Mach-based microkernel over the last three years. The Chorus kernel now scales down to usable kernels with less than 10Kb footprints. Each kernel function is supported by optional, replaceable and customisable components (modules) for things like interrupt management, timers, synchronization services, memory management and inter-process communications. Meantime Chorus' real-time/embedded operating system development project with SCO for the telcos, MK2, is on track for early next year, will reportedly now use the merged OpenServer/UnixWare code. SCO says Chorus will not be a part of the 3DA development effort but will remain a niche partner for the telco, video server and other embedded markets.

VISIX SETS LOW-END PRODUCT FOR CHANNEL, GALAXY 3.0 FOR INTRANET APPS

Fattening the company up for an initial public offering down the road, Visix Software Inc plans to "take the covers" off its cross-platform application development environment, creating a new low-end product line for the channel and re-tooling its Galaxy technology for Intranet development. The plan's being executed by a cadre of ex-Sybase Inc executives now running Visix's day-to-day affairs - including president and COO Chuck Teubner and marketing director Ben Martindale - who promise to "re-launch" the company over the next couple of quarters. With 2,000 installs at 420 customers - one third of them ISVs - Visix's Galaxy is regarded as the high-end and high-brow technology provider in the cross-platform development space. "With so much power," Galaxy is sometimes seen "as difficult to use," the company admits. Galaxy Interactive was an early name for what will eventually come to market as a new line of low-price, entry-level offerings that emphasize front-end technology for simple application development. Currently known as Project 11, Galaxy 'lite' is being written in Java and will include an object repository for object design, storage and reuse.

Aggressively

Visix is currently putting a channel together that includes ISV technology partners, integrators and VARs, and is ramping its own marketing team accordingly. At the same time, the company also plans to position its Galaxy environment more aggressively towards use by mainstream MIS shops with a 3.0 third quarter release expected to include all of the Internet and Web server components required for Intranet application development. Galaxy 3.0 and Project 11 will get public airings sometime before their release; a preview of 3.0 should find its way out in the next couple of weeks. In addition to those technology partners it already has, including Atria Software and Mercury Interactive, Visix promises other relationships for configuration management, performance tuning and testing functionality. Other Visix technology still in the hangar includes an ODBC interface for its dbSpectrum database connectivity suite that provides automatic, as opposed to hand-coded, links to Oracle and Sybase databases. There's no demand for other links yet, the company says. In other news, Visix has opened a wholly-owned Visix KK subsidiary in Tokyo run by Yasuhiko Mukohata that'll support customers of its exclusive distributor there, Osaka Gas Information System Research Institute. Visix has named Ed McLaughlin VP international sales with responsibility for Europe and Asia. He's on board from integrator ACSYS, where he was VP and general manager for Asia Pacific. Privately-held Visix, which ran up 13 profitable quarters before engineering and increased marketing expenses pushed it into the red says it'll be back at break even this quarter or next, estimating it'll do 30% more business than the \$75m it did in 1995. 30% of its business is now international.

CRAY 3D TORUS INTERCONNECT "NOT TIED TO ALPHA"

Cray Research Inc says the 3D Torus bi-directional mesh interconnect that prospective parent Silicon Graphics Inc is interested in - it currently connects up to 2,048 Alpha RISCs in a T3E MPP system - is much faster and ultimately more scalable than multi-stage interconnects such as IBM Corp's Vulcan switch. Currently operating at a hardware latency of one microsecond and at up to 500Mbps data bandwidth, the interconnect is organised into macro (processor and support shell) and micro architecture technology components specifically so it could be implemented in conjunction with non-Alpha processors. Indeed the idea, Cray says, was to move the interconnect over to which ever generation of processors provided the best performance at a given time. The interconnect's not specifically tied to the PE processing element configuration of T3E's system design either. The interconnect, Cray says, is a classic shared everything, Non Uniform Memory Access (NUMA), Multiple Instruction Multiple Data (MIMD) topology. Although a processor can access all RAM, either locally or remote, as if it were its own, NUMA programming models must still understand the memory hierarchy in which instructions will be processed more quickly (even if only a microsecond) by a CPU's local memory than by a distributed processor. Speed improvements are most likely to occur at the data bandwidth level - as they were between the T3D (Alpha 21064) and T3E (21164) system implementation - as the one microsecond hardware latency, the time it takes to send a message between processors, is not a bottleneck.

LASERMOON TOUTS CHEAP, STANDARD LINUX FOR SCIENTIFIC/ACADEMIC USERS

UK Unix freeware specialist Lasermoon Ltd, Wickham, Hampshire, already has Posix 1-compliance for its Linux-FT Rev 1.2 implementation. It expects to achieve Unix-95 branding in the fall (UX No 576). Posix 2 and XPG4 branding will be reached in the interim, probably in June, it says. The company thinks standards support in Linux will attract the attention of ISVs. Linux-FT comes with dynamic caching, multithreading and an optional controlled configuration for easy installation. Current Linux versions include a mixture of BSD and SVR4 personalities and lack formal standards compliance. Lasermoon claims a bunch of distributors in the US and Europe and expects to win academic and scientific users. The company also offers Motif for Linux and BSD, and porting technology. Other Linux flavours have been developed with Posix compliance, but the term Posix displayed on some Linux boots is almost meaningless as it doesn't define to which Posix standards it refers, Lasermoon says. The company says it's done significant bug-fixing in the kernel, plus the C library, the math library and header files all needed modification. Instead of licensing the software, developers can buy a CD-ROM for \$100 for an unlimited number of users. However Lasermoon director Ian Nandhra is banking on developers getting fed up with passing around a single CD and expects them to order more copies. The company claims it will make its money on backup and support. Lasermoon is an X/Open Co Ltd ISV Council member where it claims its presence is met with either strong support or outright hostility. "Hardly surprising," says Nandhra, "when you consider Santa Cruz Operation Inc made an \$80m investment in its binary source code and we're giving ours away."

ROSS AIMS TO ENERGISE SPARC WORLD WITH ENTRY INTO SYSTEMS BUSINESS

Fujitsu Ltd's majority-owned Sparc outfit Ross Technology Inc, Austin, Texas has formed Ross Microcomputer in Sonoma, California to produce and offer system-level Sparc products for the value-added reseller and OEM markets. The declared objective is to provide the performance of UltraSparc at hyperSparc prices for SunOS users that have yet to make the switch to Solaris. It will offer a new line of hyperStation products, broadening the Sparc user base, and offering an alternative to the software migration necessitated by UltraSparc. Ross customers for microprocessors and microprocessor-based products include Sun Microsystems, Fujitsu Ltd, its PFU Japanese affiliate, ICL Plc, Axil Workstations Inc and Auspex Technologies Inc. Ross will provide multiprocessing systems using a new high-performance 66MHz MBus. Sun Microsystems Inc is a minority shareholder in Ross Technology.

HEWLETT-PACKARD TAKES A STAKE IN BUSINESS@WEB

Business@Web Inc has already caught the attention of the SAP America Inc arm of SAP AG - and its former chief executive - and now the Cambridge, Massachusetts company has attracted the attention of Hewlett-Packard Co. Hewlett is to make an undisclosed equity investment in Business@Web, and the two will do joint marketing and Internet consulting. As part of the marketing agreement, Hewlett's Professional Services Organisation and Business@Web will begin joint delivery component-based Internet offerings to their customers using Business@Web's OpenScape software. OpenScape is designed for extending mainframe and client-server applications both across private intranets and over the public Internet. *Also see page 2.*

MOTOROLA AND SUN POOL THEIR RESOURCES FOR CABLE INTERNET

Motorola Inc's Multimedia Group and Sun Microsystems Inc agreed in principle to establish a strategic alliance to develop new means for cable television companies to deliver high-speed data communications and Internet services to the home. The so-called Cyberspace Alliance is structured around Motorola's CyberSURFR cable modems, and Sun's head-end and Internet servers and its Java programming language and tools. The two describe the planned end as tightly integrated end-to-end systems based on complementary technologies that use open interfaces. The two reportedly claim that their system is able to transfer data over 700 times faster than most homes can currently access the Internet.

SUPERSCAPE TARGETS IRIX FOR RUN-TIME VIRTUAL REALITY VISUALISER

Having set out its stall as a provider of virtual reality software that runs on an ordinary Pentium-based personal computer, Hook, Hampshire-UK based Superscape YR Plc aims for a drastical reduction in customer's development costs by putting its Visualiser run-time software onto Silicon Graphics Inc's machines. The company, which is giving its run-time software away over the Internet, is concentrating on making its money from its development software, VRT 4.0 and believes the Silicon Graphics deal will open up the virtual reality development market. "Silicon Graphics developers will now be able to develop virtual reality applications on a standard personal computer and then run them on a Silicon Graphics workstation, dramatically reducing development costs" said Roger Frampton, Superscape group director of worldwide communications. The Silicon Graphics visualiser will run on the company's Indigo2 Impact workstation family and the Onyx Infinite Reality visualisation supercomputer. It is ideal for applications that require high resolution graphics, such as design and animation. On a Silicon Graphics machine, resolution increases from 20 to 30 frames per second to around 60. The software, which does not need special hardware to run on a personal computer, will take advantage of Silicon Graphics graphics accelerators, giving faster and sharper resolution. The run-time software for Silicon Graphics also has more intelligence than the standard personal computer version and therefore, says Frampton, the company has not finalised its pricing. In addition to developing the Silicon Graphics Visualiser, Superscape has been named an authorised Silicon Graphics reseller. The company has also announced its support, in conjunction with Silicon Graphics, Netscape Communications Corp and 56 other computer companies for VRML 2.0 Virtual Reality Modelling Language, the emerging standard for providing virtual reality on the Internet. Pricing for the Silicon Graphics Visualiser will be announced in May, when the product ships. Superscape has expanded its US operations with new offices in Raleigh, North Carolina and Richardson, Texas.

ORACLE'S NETWORK COMPUTER SHOWN ON UNIVERSAL SERVER

Oracle Corp last week began deliveries of Oracle7 version 7.3, calling the database the Universal Server, the same name Informix has taken for its object-relational database server, which should thoroughly confuse everyone. The all-purpose server is claimed to enable desktop users to access and manage any information for any application over any network simultaneously. The Universal Server can deliver video, text, email, spatial and audio information to users in any location. It's a combination of the Oracle7 client/server relational database, plus Web, text management, messaging and multimedia offerings. It's said to handle network-centric computing, on-line transaction processing (OLTP), on-line analytical processing (OLAP) and data warehousing applications. Oracle Universal Server is available in Enterprise Edition and Workgroup editions. Enterprise Edition includes Oracle7 and Enterprise Manager network management plus support for a new ConText Option which handles unstructured data, Video Option (allowing developers to create applications that access video data in Oracle7), Spatial Data Option for GIS applications, Messaging (the Pegasus module) and OLAP Options.

Options

Other options include bit-map query, data distribution and replication, security and network administration and parallel query. ConText and bit-mapped indexing options aren't due until next quarter. A Workgroup Edition includes Oracle7 7.3 and Enterprise Manager, and is Web-enabled out of the box to support systems with up to four CPUs. Both database editions are up on Solaris today, other platforms in 30 to 60 days. The \$5,000 HTTP Listener and Web Agent modules now ship bundled as Oracle Web Server Option for the databases, though as there are no prices for Oracle 7.3 it's unclear whether there's any saving. All components are available for use with Oracle's Designer/2000 and Developer/2000 toolsets. The database and toolsets support a new version 2.3 of the PL/SQL language. Version 1.3 of Designer due next month will automatically create HTML documents when used in conjunction with Oracle WebServer 2.0. There's also a new OLAP API for building on-line analytical applications against Oracle Express Server called Structured N-dimensional API, or SNAPI. Universal Server was demonstrated at the Oracle Developers' Conference in San Francisco last week on a working prototype of the Network Computer, the company's low cost Internet box.

NEURON DATA POSITIONS ELEMENTS FOR WEB/OBJECT DEVELOPMENT

Now re-cast as a second generation application development company, Neuron Data Inc, Mountain View, California, is touting version 2.0 of its Elements Environment solution for object and internet/intranet development. 2.0 includes InterOperable Objects, Web Element, Distributed Messaging Element, Data Access Element, Open Interface Element and Intelligent Rules Element modules. Neuron Data objects, including GUIs, business rules, data access and Web objects can now be accessed from Visual Basic, Java and C/C++ applications. The company says third-party object servers can be integrated for use with Elements 2.0 using its Visual Basic-alike OOScript language, allowing developers to embed Elements, OLE, Corba and Web objects in the same application. A 2.0 SDK will be up on Solaris, HP-UX, NT and Windows 95 this month with an OLE interoperable object driver. Corba and Java support will follow in a later version. Production versions are due by year-end from \$9,600. OS/2, Mac and other Unix versions are planned.

BAAN TARGETS ELECTRONICS INDUSTRY, READIES TRITON 4.0 FOR APRIL

Baan International BV, Ede, Netherlands, is pressing ahead with its vertical market campaign (UX No 561), now delivering versions of its Triton financial, planning and distribution software modules tailored for the electronics industry. It's also expanded agreements with existing partners to include the marketing of value-added solutions for the electronics market with Triton, including i2 Technologies (ATP planning engine for semiconductor fabs), Premenos (EDI) and Aspect Development (component supplier management). KPMG and Origin are to develop a business model for multi-site electronics manufacturers using Baan's OrgWare technologies. The company still has complex manufacturing and food and beverage initiatives in the hangar. Baan will debut the next major release of its Triton manufacturing software in April. Version 4.0 will include new OrgWare tools and development technologies plus support for Microsoft Corp SQL Server. Support for DB2/6000 is also promised this year - work on a Sybase implementation is still underway. Triton 3.0 was introduced in July 1994.

RS/6000 ROUND-UP

- IBM Corp will use the single-chip, cache-enabled Power2 Super due by year-end - what it's calling the P2SC - in technical RS/6000s next year. IBM claims it will challenge DEC's Spec95 Alpha performance numbers. The Apache (PowerPC 625) implementation of AS/400 group's SMP-enabled, 64-bit PowerPC AS will take the strain in commercial, non floating-point intensive systems. IBM Microelectronics' PowerPC 630, a merged Power/PowerPC architecture due in systems in 1998, will take over thereafter. Beyond that a single instruction set will be used in RS/6000 and AS/400 PowerPC engines. Although the 620 does not appear in its plans, new RS/6000 chief Mark Bregman says the group may reassess its progress in the summer.
- Bregman says he's set three goals for the division in the near-term. First improve its reputation as a supplier. One of the problems last year was its inability to meet demand, especially for memory parts, he said. Second to re-establish internal discipline - meeting development schedules. Three, "change our mindset about business partners," and create relationships and not simply transactions.
- IBM will licence Macintosh from Apple Computer Inc for use on a PowerPC Platform-compliant RS/6000, rather than sublicense it from Motorola Inc. It'll have a compatible client system ready to go by year-end, though it hadn't signed with Apple the last we'd heard.
- Bregman says there'll be a server version of Solaris PowerPC edition available for the PCI bus RS/6000s by mid-year (UX No 578).
- Aspen "doesn't mean we are going to rush into a 64-bit AIX," says RS/6000 group AIX honcho Donna Van Fleet; "no customer has come to me and asked for a 64-bit operating system." The anticipated AIX 4.2 release is now due next quarter. Van Fleet's boss, Mark Bregman, told us a 64-bit AIX is up and running in the labs.
- RS/6000 branding problems will be attended to this year (Bregman likes Silicon Graphics Inc's campaign).

GENE AMDAHL'S NEW FIRM OUT TO BEST IBM IN CMOS MAINFRAMES

Cryogenically-cooled CMOS uniprocessors are the medium-term aim of Commercial Data Servers Inc, formed 18 months and working out of Sunnyvale, California, but more immediately, it is working on a line of desk-side systems. The latest charge of "father of the IBM 360," Dr Gene Amdahl, the company reckons it will become the first new company to produce a family of IBM-compatible mainframes for more than a decade later this year when it begins beta testing its new low-end System 390 desk-side systems, writes our sister publication Computer Business Review. The new system is being based around IBM's P390 desk-side system, which combines a 390 CPU with a personal computer, and will be supplied by IBM to Computer Data Servers on an OEM basis. But Computer Data will add a high-speed input-output subsystem providing support for IBM channels, so that mainframe peripherals can be attached alongside high speed SCSI disks. The subsystem will also support Asynchronous Transfer Mode communications. The system will run a choice of IBM's mainframe operating systems - MVS or VM - as well as Amdahl Corp's UTS implementation of Unix.

Agreement

Computer Data Servers says it has an agreement with IBM that the software licence fees will be at the bottom of IBM's scale; it envisages that the main market will among mainframe customers wanting to add cheap, fast departmental power to their System/390 environments. Later systems will be powered by new CMOS processors that are not only expected to be substantially more powerful than competing IBM Corp, Amdahl Corp-Fujitsu Ltd or Hitachi Ltd uniprocessors, but will eventually be supercooled to give them extra performance. The company's first CMOS microprocessor is being designed to deliver 67 IBM mainframe MIPS - but the design is not finished yet; a more powerful machine, using chip running at minus 50oC, should give about 100 MIPS. A further supercooled system will follow in 1997, which will run at minus 198oC. This will give at least 150 MIPS. The cooling systems, as reported, are being provided by Superconductor Technologies Inc of Santa Barbara, California, the company formed 10 years ago by Robert Schrieffer, a Nobel prize winner for Physics in 1972. Computer Data Servers is owned and controlled by some of the oldest and most experienced designers and businessmen working in Silicon Valley. Working with Gene Amdahl is Ray Williams, co-founder of Amdahl Corp, and Bill O'Connell, the man who oversaw Amdahl's attack on the initially sceptical IBM customer base. Bill O'Connell, chief executive of Computer Data Servers, also hinted at multiprocessor designs in the future. The superconductive effect lowers resistance as electricity travels down a wire, so the interconnecting bus on such designs could be much faster than most systems today, so reducing latency between processors.

CLARIFY EXPANDS HELP DESK FUNCTIONS

Clarify Inc is readying a slew of new modules for use with its help desk software. It says a new customisation environment called ClearBasic will reduce application deployment and maintenance time and costs. Order Operations is a tool for managing all types of parts requests and pricing with interfaces to SAP and Oracle Manufacturing applications. Spares Manager tracks both physical and financial data and includes some forecasting capabilities. It's already offering Change Manager tracks moves, adds and changes - such as moving employees - across an organisation, and can add software or change network addresses. It's priced at \$5,000 per server and ships in June.

SYBASE DELIVERS HIGH-SPEED QUERY TOOL AS SYBASE IQ

Sybase Inc has at long last introduced the high-speed database query technology it picked up with the acquisition of Expressway Technologies Inc in October 1994 as Sybase IQ. Although originally touted as IQ Accelerator, the so-called Bit-Wise technology hasn't been productised until now. It's being targeted at data warehouse customers and prices start at \$32,500 for a single CPU machines. Additional CPU and user licences are \$7,000 and \$800 respectively. DEC, HP, IBM, NT and SGI versions are due later this year.

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Motorola Inc is sketching out a cut-down PowerPC chip for Java and the Internet, says *Electronic News*.

IBM Corp said it will announce its Software Servers CDs, code-named Eagle, on March 26 on OS/2 Warp, with AIX and Windows NT versions later in the year. It will eventually offer them on major Unices.

There's a rumour going round that Uniforum might be willing to dump its expo manager Softbank Expo and take up with rival Blenheim, owners of the competitive Unix Expo, in the face of such a poor show a few weeks ago. Meanwhile, SCO wants to change Uniforum '97's floor plan.

That 64-bit Unix development operation that **Hewlett-Packard Co** now has in Florham Park, New Jersey, made up of old USL-Novell folk just decoupled from the Novell network fully expecting to simply hook up with HP's - or did until HP's counter-intelligence arrived and noted that the unit was housed in a multi-occupant building sharing the same roof with **Novell** and **SCO** and that is how they came to have a bunch of pricey rent-a-cops patrolling their halls.

Meantime, with New Jersey and Japanese development teams coming on stream alongside its California and Watford, UK R&D units, **Santa Cruz Operation Inc** has stripped the 30-strong development team from its Toronto group, where it'll retain a sales and marketing effort.

DEC's Unix clustering announcement is set for Wednesday April 17 at the Equitable Building in New York, sight of its victorious Turbo Laser debut last year.

HP has named Sam Ginn, 58, chairman and CEO of AirTouch Communications, the old PacTel, to its board. It's also losing Harold Haynes, former chairman and chief exec of Chevron Corporation and Shirley Hufstедler, senior counsel at Morrison & Foerster. Both are 70.

In certain quarters the prospective **Silicon Graphics-Cray** merger is referred to as SiliCray.

HP's Convex Computer Corp is going to have to be quick on its feet; **Cray Research Inc** has hired **Wizard Systems Inc** to develop an application source compiler and metadata converter it says will automatically convert applications written in the Convex Fortran dialect, including library references, directives and operating system dependencies into Cray F90 dialect. Applications can be re-compiled for Cray systems. The metadata converter will convert Convex UniTree or CSM file management information into Cray Data Migration Facility (DMF) hierarchical storage information. Cray is developing DMF to allow UniTree and CSM data files to be read by its systems.

As we said it would (UX No 572), **OpenVision Technologies Inc** last week registered with the Securities and Exchange Commission for an initial public offering of 2.6 million common shares. 100,000 shares will be sold by stockholders.

Revenue ships of **DEC's** third-generation Alpha process, EV6, the industry's first eight-way instruction part are now expected early next year. The 21264 is touted at 500MHz and 1,000 SPECint drawing 2.2v across what DEC said was one hundred million transistors, although we're sure they meant ten million. Meantime the 21164a EV56 CMOS chip used in a new workstation due in June (UX No 561 and *see front page*) will be available in limited quantities in the next week at 366MHz and 400MHz clocks.

Rather than just upgrading its interface repository for Corba 2 (UX No 538), **Iona Technologies Ltd** has decided to re-write the thing from scratch. It's got a prototype available now - production versions are due next quarter.

Fujitsu Ltd's Ross Technology Inc Sparc shop will begin deliveries of 200MHz HyperSparcs next quarter. **Sun Microsystems Inc**, which already has an exclusive on Ross' 150MHz parts for the upgrade market, will also get first right of refusal on the 200MHz part. Other integrators and end users are currently restricted to buying 133MHz HyperSparcs - that part will move to a 166MHz clock later in the year.

BEA Systems Inc, Sunnyvale, California, says it's now the exclusive developer and distributor of Tuxedo on Unix, NT and all non-NetWare platforms. Novell Inc will do NetWare development. It says most of Novell's tuxedo employees, development and marketing, have joined BEA and BEA has assumed all contracts with Tuxedo partners, distributors and customers. It has exclusive rights to the Tuxedo trademark. Joe Menard, VP Novell's Tuxedo business unit becomes VP product planning and strategy at BEA.

Perhaps opening the door to the possibility of future consolidation in the microprocessor industry, **Silicon Graphics Inc** was last week highlighting the similarities between its Mips RISC and the DEC Alpha CMOS designs.

O2 Technology Inc will debut a Smalltalk version of its object database at Smalltalk Solutions in New York this week. Meantime, it's appointed former IBM software business unit executive Kevin Castillo as VP sales.

Hewlett-Packard Co's put the AdminCenter and Network Node Manager components of OpenView together in IT/Administration, saying the \$26,000 module saves customers \$5,000 on individual component purchases. The combines now also supports Oracle as a repository for network management information in addition to Ingres.

No matter what **IBM Corp** and **Motorola Inc** would have us think, *Business Week* has a point. The original Somerset plan is "in tatters." Intel Corp's not going to blink. Apple may be "critical" now, but it wasn't supposed to have the whole burden resting on its shoulders. Where are those companies that publicly pledged themselves to it... Canon, Hitachi & co? If nothing else Somerset does not seem strategic for IBM Corp - it's majoring on Power and AS/400 designs.

Open Horizon Inc is to begin integrating Hewlett-Packard Co's Encina/9000 and Tuxedo TP implementations with its Connection Application Broker which will allow HP transaction processing customers to access TP services from ODBC and Java Database Connectivity databases and desktop development tools using Open Horizon's client/server Connection middleware.

An *International Data Corporation* report says **CheckPoint Software Technologies Ltd** has a leading 40% share of the worldwide commercial firewall market, with more than 4,000 units shipped in 1995. According to the report, more than 75% of all web server software shipped in 1995 is being used for Intranet servers, and by 1999, this number will grow to more than 91%. CheckPoint last week snared Mercury Interactive CFO Hagi Schwartz as its new chief financial officer.

As expected, **SCO** chairman Lars Turndal has stepped down (UX No 576); he may not be replaced.

Data General Corp's offering version 2.0 of its AV Image imaging software for use with AViiON servers and Clariion RAID subsystems, including a new customisable GUI, support for multi-object records through Win-Track, rapid document indexing via Express-Track and a new release Staffware workflow management software. Meantime Data General is expected to announce a family of Internet products and services this week.

Transarc Corp's now offering its DE-Light cut-down DCE and Encina TP client for Windows 3.1 priced at \$2,000 for the base server code plus \$100 per client. A version that works with Java-enabled browsers is due in April. DE-Light doesn't require DCE or Encina code on the client. The idea is that corporations can deliver DCE and Encina services to users via Web browsers.

Dun & Bradstreet Software CEO Doug MacIntyre; **Marcam** chairman Paul Margolis; **SAP** founder Hasso Plattner; **Software 2000** chairman Bob Pemberton; and **System Software Associates** chairman Roger Covey are to keynote on a business application panel hosted by **OMG** president Chris Stone at Object World show in Boston between May 7 and 9. **Computer Associates** president Sanjay Kumar is keynoting on the opening day. **OMG's** forecasting 5,500 attendees this year compared to 1995's 3,700. It expects its West Coast event in August, this year in San Jose, to top 10,000.

Rogue Wave Software Inc has a joint submission into **OMG's** object collections services RFP with C++ Standard Template Language container partner Hewlett-Packard Co. It's going up against rival **IBM Corp's** specification after the three companies couldn't find a way to merge the two.

Well able is the Dennis Ritchie crowd over at **Bell Labs** to claim it's shelved Plan 9 to work on Java rival Inferno. The Plan 9 work moved six or eight months ago to a Plan 9 follow-on called Brazil (UX No 521), named - in Plan 9 tradition - for the Terry Gilliam (Monty Python) film of the same name. Brazil stuff, said to focus on communications, is supposed to be rolled back into Plan 9 down the road.

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IBM PROMISES NEW USER INTERFACE PARADIGM "FOR WORK AND PLAY"

IBM Corp's got a new user interface technology in the labs it says borrows the best techniques from video arcade games such as Myst, visual methodologies from Disney, as well as technology from Taligent Inc's People, Places & Things front-end metaphor and Kaleida Inc's ScriptX. It's got a shed full of code names for the technology but isn't yet sure if or how all of the pieces can make it through development, quality assurance, legal and trademark and other hoops. "This will not be another AD/Cycle... we want to set real goals," IBM says. It's insistent, however, that what does come through will be "a brand new user interface for work or play." Completely separate from underlying logic or data, IBM says the interface will leverage advances in CPU power to offer a new visual environment on top of existing operating systems and graphical front-ends, application environments and development tools. Why? Because "Windows is 20 years out of date," it says. The 1988 IBM Corp/Microsoft Corp development project to "put objects on glass" led to the creation of Common User Access rules - but no tools - and was Microsoft's jumping off point for Windows. The IBM team began studying new ways of presenting abstract concepts visually, such as Disney's methodology and video arcade games as well as the latest GUI techniques, before arriving at the new interface paradigm. It's showing the stuff under NDA. Currently a professional development environment, IBM says Taligent's People, Places & Things metaphor will also be pressed into use for desktop application design at the other end of the scale. Bart, its Web-executable development language, has an interface that's very similar to Microsoft Visual Basic but will offer much more powerful features, it says.

SMP SP2 NODES DUE IN AUGUST - OTHER OS's NEXT YEAR

In line with its plan to carve out separate commercial and technical product streams in the SP2 PowerParallel series (UX No 569), IBM Corp will offer its first (Micro Channel Architecture bus) SMP nodes for the systems in August, configured with two-to-eight 112MHz PowerPC 604s. The Power2 Super Chip, or P2SC, due at the end of this year will find its way into compute-intensive nodes for the scientific and education markets. The PowerPC nodes will be less expensive than the Power2 models, and support the popular threads programming model. Power2 and PowerPC will be tied together in PowerPC 630, but not until 1998. Meantime, SP2's 40 megabytes per second (Mbps) Vulcan switch will be upgraded to around 100Mbps performance next month. Direct Memory Access support will reduce latency to 22 microseconds and increase bandwidth to between 200Mbps and 230Mbps next year. The group is looking at getting one-to-four way PCI bus-based SMP nodes into SP2s as soon as possible so it can support more than just AIX - IBM supports Solaris and NT on some PCI bus RS/6000s - but that won't happen this year.

PYRAMID OFFERS SMP/MPP CLUSTERING

Pyramid Technology Corp will this week announce the availability of its Reliant RM1000 Cluster Server. It's essentially a scaled down version of the Mips R4400-based massively parallel RM1000, using the Meshine interconnect to cluster Nile SMP servers and MPP nodes. The Cluster Server acts as a host I/O node enabling SMP and MPP applications to run under a single system image. Pyramid is targeting data warehouse and enterprise-class OLAP users. It expects Cluster Server to be used to tie SMP-based multi-dimensional data stores into back end relational data warehouses running on MPP nodes. Pyramid says the mesh interconnect removes the need for SCSI cabling as in traditional clusters and comes with hot swappable components for adding nodes.

NETSCAPE BUNDLES MKS' VERSION CONTROL

Canadian Unix utilities and porting company Mortice Kern Systems Inc, Waterloo, Ontario, has won a big fillip for its version control software, with Netscape Communications Corp agreeing to bundle the expected MKS Integrity 1.0 with every copy of its \$1,000 Netscape Enterprise Server (UX No 577 and see page 6). MKS Integrity 1.0 is functionally equivalent to the company's existing Source Integrity version control software, but has been applied to the Web so that development teams can manage and maintain distributed HTML document projects. MKS has been working with Netscape for around seven months and says it's had interest in Integrity from users developing Intranets for tens of thousands of users that are desperate for version control. It claims it's well ahead of traditional version control houses, including Atria, Continuous and Intersolv, which don't have HTML implementations of their products. MKS says the Netscape bundling arrangement is a technology evangelising deal rather than a money spinner. It hopes Netscape Enterprise/MKS Integrity users will roll over into its \$500 Source Integrity product - claimed to have 45,000 users - for their client/server version control requirements. Other Web server versions will follow - a Microsoft Corp release will be available free of charge from MKS' Web site by the end of the month. MKS claims Integrity can archive anything that's created on the Web and stores changes made between them.

SUN READIES JAVA-KONA INTRANET BREW

Sun Microsystems Inc's set to shift the Intranet solution market up a gear within a couple of months, promising end-to-end Java solutions including terminals and servers running the Kona operating system. Back-end servers, possibly Netras re-vamped with UltraSparc, will host Java-based desktop terminals. They'll move to the Java chips over time. The JavaStations, which currently have a bevy of code names associated with them, are coming out of VP general manager Gene Banman's desktop group. JavaSoft's currently readying remote message indication middleware that'll link Java client and servers to move objects around. It's Bud Tribble, now Ed Zander's VP Internet strategy at Sun Microsystems Computer Co who's been quickly pulling the pieces together. He sees hotels as ideal users of the combination, where reservation system operators don't need to run spreadsheets or multiple desktop applications. Through a process of disintermediation - or cutting out the middle man - Tribble believes these kinds of Intranets will be quickly externalised for end users and customers to connect directly with their service supplier, eliminating the need for many 1-800 or switchboard operators. Web-based sales and marketing services can bypass traditional retail channels and go directly to the customer whilst automated customer service efforts will reduce the need for customer representatives and house calls.

ICL ADDS TEAMSERVICES

ICL Plc will demonstrate a new Gi family of Pentium-based TeamServers at CeBit in Hannover this week (14-20 March). The servers come with one or two Pentiums, up to 64Mb RAM and 2Gb disk. Operating system options are SCO UnixWare 2.02, SCO OpenServer 5, NT and NetWare. The three Gi models are the 100MHz G530i, the 133MHz G550i and the 166MHz G580i. They won't be formally introduced until the beginning of April. ICL's promised four-way HyperSparc SuperServers are said to be "imminent." Meanwhile ICL slipped into the red last year, reporting a pre-tax loss in the year to December 31 1995 of £188.3m compared with £28.4m profit in 1994. It blamed heavy competition and £152m in exceptional charges to cover restructuring. ICL plans a £200m rights issue to strengthen its capital base, it said, and will break up its volume products business, creating a PC business unit led by parent Fujitsu Ltd. It's spinning out its contract electronics business D2D and plans a new interactive services business. It will partner with Fujitsu to sell its GroupWare software in the US and Asia.

CLEARING UP MISCONCEPTIONS ABOUT THE NETWORK COMPUTER AS SEEN BY ORACLE

By Abigail Waraker, *Multimedia Futures*

Ever since Oracle Corp founder Larry Ellison introduced his concept of a cheap \$500 networked computer last year, the market has scrambled to work out what the device will actually do. Now the company has begun to fill in the blanks and it becomes apparent that the device won't only be for consumers wanting Internet access, electronic mail and word processing. Indeed such a terminal will be only one in a family of devices, each configured for a specific function: some for communication, some for information browsing and others for entertainment. Oracle is planning a small hand-held device, like a Personal Digital Assistant, that communicates via cellular networks. Oracle reckons it will be more widely used than current Assistants because it will integrate with existing personal computer- and server-based information. A two way pager is planned too, which will send and receive electronic mail and select data such as stock quotes. Finally, the set-top box will be for use with a television set to give access to interactive services. But the devices everyone is talking about are the ones for home and office Internet access, electronic mail and word processing. Each will have a simple operating system to manage network access and the data downloaded. Because it doesn't need to manage so many peripherals it can be a slim-line system which will use less power and memory, says Philip Crawford, managing director of Oracle UK. The amount of memory will vary, but Crawford believes between 2Mb and 4Mb is about right, with some having Flash memory for durable storage. The Network Computer won't need permanent storage since data and applications will be kept on the central server - offered by a service provider for the home or on an in-office server for businesses. The first machines are due around September. Last month Ellison said the Network Computer would come with a free suite of Java applications. "We are writing a Microsoft Office-comparable suite in Java and it will ship free with every Network Computer," US PC Week quotes him as saying at the Upside Technology Summit in Carefree, Arizona. "The applications will be a lot easier to use, and will run on any machine supporting the Java language." The system will have an open application programming interface, and it will be processor- and operating system-independent. The first ones will use either ARM RISCs or iAPX-86 chips. Price, ease of installation and maintenance will be the big selling points, Oracle hopes.

Flaky

Changes to software applications, including bug fixes and upgrades, will be made on the server. For the user, changes will take effect the next time the device is activated,' states Oracle's White Paper on the Network Computer. The Network Computer is not intended to do what a personal computer does. "The personal computer is a general-purpose machine and not designed for simple tasks. It has become more powerful and more costly," said Crawford. "The personal computer is good for file back-up and complex development work." The Network Computer will be a cheap device for people who don't need that everyday processing power. It will do spreadsheets and word processing or enable every worker to have a machine on their desk for electronic mail. Not only will the Network Computer reduce the initial investment cost, it is claimed to be cheaper to run because it won't need maintenance support. Oracle bases its case on figures showing that a single office personal computer costs \$8,000 a year to maintain. But the network will take on the burden the personal computer sheds. More traffic will zoom around it. Data processing managers may need to invest in the network to support new demand and repair the network rather than the personal computer. Maintenance costs maybe shifted, not cut. Networks can be flaky. Even Crawford admits that "the network is the creakiest part of the whole set-up." If a local net goes down now and word processing software is stored on each personal computer, users can continue on typing and be annoyed because they can't get database access. If the word processor is on the central server, users' hands will be tied. The home user will rely on his standard phone or cable connection for network access to a server. Someone like an Internet service provider, telephone or cable company will maintain a database of software and the user will pay for the download time as he calls software into RAM and the upload time as he saves a document back to the server. "Currently, if someone wants to use spreadsheet software once a month, they have to buy it," said Crawford. Although at this stage the cost of an account with a service provider is unknown, so the real savings can't be calculated. Internet access can be notoriously slow. The average home user, who until now has been discouraged from home computing by the high initial outlay on hardware is not going to pay out another \$500 or so for a faster ISDN connection. Oracle counters this. Bandwidth is increasing and costs are coming down all the time. But faster networks may take longer to arrive than the Network Computer.

Universal server

"Maybe [the telecommunications companies] would decide the volume is worthwhile and once there is demand, prices would come down," Crawford said. Oracle is talking to network providers because they are interested in the technology, he said, but the technology isn't dependent on a deal. At the far end of the network is a server - and Oracle hopes it will be its own Universal Server, to be previewed at CeBit this month. In it is the Universal Database,

which will store distributed objects accessible to Network Computers. The Universal Server will be sold to content service providers or organisations wanting to recast their data for the Network Computer. The database will support creation of HyperText Mark-up Language and Java objects. Oracle wants to use the Network Computer to reach current non-computer users at a low cost of entry, but even its White Paper says given the bandwidth limitations on the World Wide Web, the initial primary market will be corporations with their own Intranets. In other words Oracle is hoping that the corporates - many of whom were too nervous to upgrade to Windows95, will throw out the whole personal computer.

BROADVISION ROLLS OUT ITS ONE-TO-ONE ON-LINE MARKETING APPLICATION SYSTEM

Los Altos, California-based Broadvision Inc is aiming to become to the Internet what SAP AG is to enterprise computing, with the launch of its One-to-One application system for on-line marketing and selling. The company was founded in 1993 to become an applications provider for Internet commerce. One-to-One, which has been two years in development, offers a three-tier environment enabling businesses to tailor their World Wide Web sites to individual customers, by enabling the customer to interact with the site. In this way, companies can build up very detailed profiles of their customers, enabling them to target specific advertising and promotions to individuals. According to Broadvision's founder, president and chief executive Dr Pehong Chen, companies can build up long-term relationships with customers and ensure repeat business. Rich coming from someone who apparently built up a loyal customer base in his previous company, Game Technology Inc, only to sell it to Sybase Inc in 1992 for what he calls "north of \$100m." Chen admits that interactive, personalised marketing is not new, but says that the Internet is enabling it to be practised on a very large scale. He says Broadvision looks at the complete life-cycle, from attracting customers to the site initially, encouraging them to want to buy over the Internet, offering incentives to give their details to the company and to stay with the company, and finally enabling the actual payment transaction. Chen maintains that most other electronic commerce firms at present are hung up on the actual payment transaction and issues such as security, without looking at getting people to make the transaction in the first place.

Dynamic command centre

Of course, anyone for whom the novelty of personalised direct mail has worn thin may be slightly underwhelmed by a Web site that welcomes Jo Smith and bombards her with adverts and promotions relevant to her personal interests, likes and dislikes. However, Chen is convinced that by building up a deep understanding of your customer, you will keep them from the competition. One-to-One consists of a set of development tools, to enable Web authors to set up customised interactive Web sites, an application engine and Broadvision's patented Dynamic Command Centre. The command centre enables business managers to both monitor performance, for example how a particular promotion is being received, and to control output, for example dynamically sending a particular advertisement to a certain demographic group of customers. The system consists of a user interface, a set of business rules and links to users' back office systems. It is written in C++ and supports both Oracle and Sybase databases, with access from Corba using Iona Technologies Ltd Orbix request broker. Since its beta launch in December, it has picked up what Chen calls major aggregator business, aggregators being on-line service providers and virtual shopping malls rather than individual companies. It is providing a complete service for Virgin Entertainment Group in the UK, for its Virgin Net on-line service. Other customers include Prodigy Services Co for its virtual mall, Ameritech Corp and Thomson-Sun Interactive in the US, Ing C Olivetti & Co SpA, Itochu Internet Corp, Fujitsu Ltd and NTT Data Communications Systems Inc in Japan, and Hong Kong Telecom Ltd. Pricing for the system is naturally on a dynamic interactive basis, dependent on the number of customers accessing the site, and the number of services a company offers. One-to-One is shipping now, and is available direct from the company, and through its reseller partners.

AXIL GIVES ITS SPARCS THE INTERNET TREATMENT

Finally getting all of the pieces in place, Axil Workstations Inc this week rolls out an Internet/Intranet campaign, debuting five configurations of SunSoft Inc's Solaris-based commerce, publishing and net access software packaged on its Sparc-based systems as the AxilNet line. Software components being offered are Internet Gateway for Solaris, the Solarnet WebScout TCP/IP Internet client for Windows, Solstice FireWall-1 (the Checkpoint Software Ltd security software) and Netscape Communications Server for Solaris (the Netscape Communication Corp software which Sun resells). AxilNet Access is targeted at providing networks with a single point of Internet access. The 85MHz microSparc II system comes with 16Mb RAM, 1Gb disk, two Sbus slots, Solaris 2.5, Internet Gateway for Solaris (IGS), a two-user WebScout client and is priced at from \$5,500. AxilNet Publisher-1 is the company's low-end Web server offering which is designed for sites anticipating up to 10,000 hits on their Web pages or ftp server per week. An 85MHz microSparc II box with 32Mb RAM, 1Gb disk, three Sbus slots, Solaris 2.5, IGS, a two-user WebScout client and NCSA Web Server costs from \$8,000. The AxilNet Publisher-2, for sites with over 10,000 hits per week, is a 100MHz HyperSparc system with one or two CPUs, 32 Mb RAM, 2Gb disk four Sbus slots, Solaris 2.5, IGS, WebScout and Netscape Communications Server. Prices start at \$11,500. The AxilNet Commerce-1 is uses Axil's Sun Ultra I workstation-compatible 143MHz UltraSparc system with 64Mb RAM, 2Gb disk, Solaris 2.5, IGS, WebScout and Netscape Commerce Server. It's priced from \$21,000. The AxilNet Commerce-2 is the Internet version of the company's multiprocessing SuperSparc II server. With one or two 85MHz CPUs, 64Mb RAM, 2Gb disk, Solaris 2.5, IGS, WebScout and Netscape Commerce Server it's priced at from \$36,000. The Checkpoint FireWall-1 security firewall is an additional cost of \$5,000 for a configuration that supports 50 clients the other side of the wall; \$18,000 for an unlimited client licence. Axil claims its tags are around 10% lower than Sun Microsystems Inc's best-selling Netra line of Internet servers and more in line with the low-end D-Class servers Hewlett-Packard Co has dollied-up as Internet servers (UX No 573). It hopes the packaged solutions will account for between 10% and 20% of new sales over the first six months. The company admits its sales team would like it to unbundle the Internet software packages so they can target the installed base but says it's still evaluating the possibility. Axil, the workstation arm of Hyundai Electronic America Inc, says it'll begin selling its own UltraSparc systems using its own designs ASICs in the second half of the year.

POSTMODERN READIES BLACKWIDOW FOR TP

Mountain View, California company PostModern Computing Inc has been showing off its Java-enabled BlackWidow object request broker (ORB) that generates client and server Java code which can run over OMG's Corba 2 Internet Inter-ORB Protocol (IIOP). It allows Java applets to call Corba objects. BlackWidow applications run on all Java-enabled platforms - an IDL compiler is available for Windows 95, Mac and Solaris with other Unixes to follow. BlackWidow beta site Fusion Systems Group was last week demonstrating a derivative options calculation application using BlackWidow with Sun's Java front-end at the Application Development Conference in New York. BlackWidow sits on the Solaris back-end with Netscape browsers on the clients. PostModern says Sun's own Java ORB - Joe (UX No 577) - won't drown BlackWidow or other ORBs as it doesn't yet support IIOP and runs only against SunSoft Inc's NEO object server environment. ORBs written in C++ or other languages will always be required to provide access to object servers written in those languages. Although Sun will enable Joe for IIOP, PostModern says it'll stay ahead of Sun by offering other Corba 2 services in BlackWidow. It expects to beta a new version of BlackWidow in a couple of weeks that implements Corba transaction services and will ultimately provide transaction support for Java applets. The company's got other load-balancing and fault-tolerant extensions planned.

ONE YEAR LATE: ORACLE PROMISES ORACLE8 BETA RELEASE IN JULY

Oracle8 will be a year late, Oracle Corp confirmed last week. The company says it will release a beta test version by July and hopes to start selling it sometime in 1997: "We hope to open it up to anyone beginning in the next calendar year," Oracle vice-president for database technology Jan Dash said at a Raymond James investment conference in St Petersburg, Florida. Oracle8, which had been planned to be ready this quarter, will expand the range of data types, such as text, audio, images, or video, that can be stored and accessed.

APPLE AND SGI WORK ON CROSS-PLATFORM CONTENT SUPPORT; SGI UNVEILS DIGITAL STUDIO DEVELOPMENT SUITE

Apple Computer Inc and Silicon Graphics Inc are being drawn closer and closer as they seek to drive home their expertise in digital film and animation technologies, and last week SGI subsidiary Silicon Studios Inc said it would support Apple's QuickTime multimedia technology in a new suite of archiving and authoring tools it has developed for building digital studios. The two also plan to develop file viewers and converters that will allow 3D and animation content to run in applications on each other's systems. The SiliconStudio suite includes StudioCentral server-based asset management software, described as an object-oriented program for capturing and archiving digital content into a shared repository which can be extended to support Cosmo MediaBase Oracle, Informix, Illustra, Sybase and IBM Digital Library databases. (The existing Cinebase application is standalone). A \$15,000 StudioCentral SDK will be available for ISVs to create plug-in modules from the summer. A StudioCentral Silver release, for small networks is due in the fall priced at from \$5,000. A Gold workgroup version will be priced at \$20,000 in the winter. Keys which link StudioCentral's repository to third party databases will cost \$10,000 each from the summer. The tools are available on SGI Irix platforms only to begin with; Oracle and XFS (Irix's 64-bit file system) Keys will be released first. The base price covers a five-user licence only. The company says it hasn't decided whether it'll put StudioCentral up on Mac or PC clients yet. A FireWalker 3D authoring system for creating games and interactive titles that run on multiple platforms, including PCs and the Sony PlayStation is being developed in conjunction with customers and is due as part of the SiliconStudio line in December. Sega Enterprises Ltd, Time Warner Interactive, SegaSoft and MediaX/toonsmiths are on board the FireWalker alpha programme. Single user prices will start at \$10,000. SiliconStudio support services, forums, news and other information will be offered through StudioLive on SGI's web site. SGI said its workstations have been selected as a programming and creation environment for Sega Saturn, Sony, PlayStation TM and Nintendo 64 game players. Sega's development tools division, Cross Products Ltd and Sony's game authoring division, Psygnosis Ltd, will run game programming tools on SGI workstations.

APPLE SUPPORTS MOVING WORLDS VRML SHOT

Meantime, Apple has said it'll support the Moving Worlds Virtual Reality Modelling Language 2.0 format proposal that's been submitted to the VRML architecture group by some 50-odd companies, for parsing 3D objects across the internet (UX No 577). SGI, Netscape Communications Corp and Apple say they will develop a new binary file format for Moving Worlds based upon Apple's 3D metafile format (3DMF), which will provide higher compression, file streaming and faster parsing of objects.

FREE TEA FOR JAVA BREWING

San Francisco, California-based Web site and HotJava developer Dimension X is offering a high-level drag and drop tool it calls The Easy Animator, or TEA, for incorporating 2D Java animation applets into a Web page. TEA is said to allow designers to create, edit and sequence Java animations including audio sequencing, motion path control, content management and simple behaviour functionality. TEA will eventually be extended to include plug-in libraries for sound, images, and behaviors. Free TEA is demo version available from the company's web site. Lite and Professional versions will come with additional libraries. TEA is an animation application built upon the company's Jack Java toolkit for animation, itself the result of an earlier JAM Java animation development tool.

JAVASOFT TO GROW BY 55

JavaSoft, which for a time only had 12 employees, plans to hire at least 55 people immediately, most of them in engineering, testing and support. According to a "Want Ad" on the Java Web site, Sun's looking for 21 engineers, including 14 software engineers for specific areas such as optimizing Java for NT, OLE and network security. Sun is also seeking HotJava designers and an engineering manager. JavaSoft alumna Kim Polese, who basically ran a one-woman marketing department before she left to form a Java start-up, will be replaced by at least 12 marketing people, with four product managers, a manager for the Java developer program, the rest devoted to business and market development. Sun will hire 22 people for testing and support, with some of them focused on helping ISVs and licensees. The JavaSoft people began moving to their own building last Thursday.

JAVA: "SMALLTALK DONE CORRECTLY?"

A sense of foreboding is the best way to describe the mood at last week's Smalltalk Solutions '96 conference in New York. And the word on everyone's lips was not Smalltalk, but Java. Motivation for the recent consolidation in the Smalltalk market - IBM Corp's acquisition of Object Technology International Inc and the handing of Hewlett-Packard Co's Smalltalk business to ParcPlace-Digital Inc - is in part attributed to Java's rise (although the firms are loath to admit as much). ~~What's evident is that Smalltalk does not play in today's key software development areas. Web/Java and three-tier. Microsoft Corp doesn't sell Smalltalk, and it's not widely taught at universities. Analysts we spoke to said Java alone would be unlikely to send Smalltalk to the place where artificial intelligence and CASE have gone and that the object-oriented language's relatively small and loyal user base will continue to grow at a decent rate: "If Smalltalk's the answer, what's the problem?"~~ one said.

Hedging

Smalltalk vendors we spoke to agree that Java is important for their market. "Java is the Smalltalk story told correctly," one vendor mused. It doesn't have all of the tools and support that Smalltalk does, but it employs a similar virtual machine to run code, is object-oriented, low-cost and easy-to-use. Most of the Smalltalk shops we asked said they are hedging their bets, with Java versions of products already underway or on the drawing board. Routes to accommodate Java include a the creation of common development front-ends with a button allowing the developer to generate Smalltalk or Java code.

Code base

ParcPlace-Digital Inc, spiritual home of Smalltalk, is currently figuring out how, and which pieces of Java it'll incorporate. It's also still working out how it will get all of its products on to the same code base. Objects created using the VSE environment it inherited from the acquisition of Digital do not currently work with the ParcPlace VisualWorks environment. Distributed Smalltalk, Hewlett-Packard Co's Corba 2-enabled version of VisualWorks that ParcPlace is now responsible for developing, distributing and supporting, is on a separate code base again. The company hasn't yet made public a roadmap for integrating all three, but the non-appearance of a VisualWorks-VSE integration roadmap promised by the end of last year (UX No 567), suggests that work's been put further back. HP says it turned Distributed Smalltalk over to ParcPlace to carry forward the core technology it needed to either acquire a company to build a next-generation Smalltalk engine, or find a partner. Under the licence terms, HP gets a royalty on ParcPlace's Distributed Smalltalk sales and will provide engineering support to develop future versions of the distributed product. HP will also distribute the product in Europe, where ParcPlace is thin on the ground.

Safe

Fast-growing C++ and Smalltalk training, consulting and technology development company ObjectSpace Inc, Dallas, Texas, says it's already experienced a huge demand for the Java training and consulting services it's begun to offer. The company will begin moving its Object/Catalog, /Sockets, /Metrics and /Systems away from Smalltalk starting with a new Web front-end for Object/Catalog later this month. It's up to 100 staff from 45 a year ago, the company says it'll reach 200 by year-end. It's got another couple of US offices ready to come on stream and plans to open a UK subsidiary in a couple of months. As well as focusing effort on vertical markets, the company will also turn the spotlight on its library and framework products; it plans to begin marketing its C++ framework technologies aggressively against Rogue Wave Software Inc, starting with a head-to-head advertising campaign. If Smalltalk appears under threat C++ is definitely "safe," it says. Around 50% of privately held ObjectSpace's revenue is now derived from product sales. The company has no VC funding but says it's taken development cash from two unidentified companies who are paying ObjectSpace to develop products on their behalf. The products will be unveiled towards the end of the year. It's previously said it's doing NDA work for Microsoft Corp on Network OLE (UX No 553).

- O2 Technology Inc, Palo Alto, California, says it'll support Java just as soon as it can. In the meantime it has implemented an ODMG-93-compliant Smalltalk binding for its O2 object database, aiming to cover the 20% or 30% of the object market its C++ edition doesn't yet reach. The Smalltalk binding means the same O2 database can be declared in and accessed from C++ and Smalltalk. O2 Smalltalk developer seats will cost \$3,000 from next quarter.

Hot

Skip McGaughey, IBM market manager for VisualAge and advanced object-oriented development strategy, market, sales and planning, says Smalltalk is under attack from the bottom - Visual Basic and Delphi; and from above - Powersoft and Forte. C++ and Java will fight it out in the language wars, he says. IBM, which a couple of weeks ago acquired its Smalltalk supplier Object Technology International Inc (OTI), says it'll implement versions of its VisualAge for Smalltalk graphical programming environment on Windows 95 and NT. IBM Smalltalk, its implementation of OTI Smalltalk is already up on OS/2, AIX and Windows and will shortly be available for AS/400, as well as

on Macintosh, which is apparently connected to half of the AS/400 installed base. IBM says OTI will continue to enhance the Envy code repository and supply it to ParcPlace. Although a speedier version of the IBM System Object Model may eventually be used to distribute Smalltalk objects, right now the company's distributed implementation utilises a proprietary mechanism. Turkey and Brasil are hot for Smalltalk, the company says.

- Meantime, Object Technology Inc is to create, support, maintain and enhance a version of its Envy/Developer repository implementation for GemStone Systems Inc's Smalltalk development environment and object database. GemStone will licence, market and distribute it to its customer base. OTI says C++ will never work in MIS labs because application programmers need a high-level language and visual programming tools.

- All of the Smalltalk vendors we spoke to said the market is growing, but none wanted to tell us by how much or how many customers they have. Show organiser SIGS claimed 500 conference attendees and 500 show floor punters. To put that into perspective, at the same time, on the other coast, Netscape sold out the 3,000 places at its Java and JavaScript Internet Developers Conference.

Briefly

Adele Goldberg and others created Smalltalk at Xerox PARC. The CIA took control of it and built the pioneering Xerox Analyst for Cold War spooking. VC funding saw Xerox spin out ParcPlace to commercialise Smalltalk. At around the same time Computer Sciences Corp got funding from Ing C Olivetti & Co SpA to create a Smalltalk venture in Italy called Digital. Xerox sold base Smalltalk licences to IBM, Digital and OTI which each got rights to class, protocol and comment names, but not to source, which each had to create.

DO ALPHA AND MIPS HAVE MUCH IN COMMON?

Our report that Silicon Graphics Inc was chatting-up the similarities between its Mips chip and the Alpha RISC may have been no more than pure smoke to present its acquisition of Cray Research Inc's Alpha-based massively parallel systems technology in the best possible light (UX No 579). But it sure piqued some interest out there. We asked DEC whether there is much that's common. It told us the Alpha architects looked at all the other RISC architectures around, and grabbed any ideas that seemed useful. They saw the features that were starting to cause pain in other implementations and it made them avoid things like register windows (Sparc), flag registers (everyone to its knowledge), and branch delay slots (Sparc and Mips). "All of these apparently get very painful once you try to build superscalar (multiple-issue-per-clock) processors." Having said that, it admits "the stuff that x86 cloners have done to increase performance vindicates the statement that the "inherent" difference between any of the architectures is smaller than the difference that a good design team could achieve for a given generation of implementations." DEC says that if Alpha, Sparc and Mips are compared feature-for-feature then Alpha probably looks more like Mips than Sparc, but "isn't sure that there is any deeper similarity than that." DEC has made several small changes to Alpha's bus interface specifically to satisfy requirements that Cray had.

NOVELL KK PASSES ALL UNIX CONCERNS OVER TO NIPPON SANTA CRUZ

Novell KK completed the hand-over of its Unix business, including UnixWare 1.01J, 1.1J and 2J to Nippon Santa Cruz Operation KK, as of February 1. UnixWare support was handed over to Santa Cruz on February 19. Nippon Santa Cruz KK is a new 100% subsidiary of Santa Cruz Operation Inc, currently completely separate from Santa Cruz KK, in which trading company Tomen Corp has an investment as part of its investment in IXI Ltd. The 11 executive and marketing staff of Novell concerned with UnixWare, former Unix System Labs Pacific people, including Jiro Monden, the new president, and Ms Endo, the flack, have all moved to Santa Cruz. Novell Japan is a joint venture in Japan, 60% owned by Novell Inc, 20% by Softbank Corp with 20% split among major Japanese vendors including Fujitsu Ltd, Hitachi Ltd, Toshiba Corp and Sony Corp.

IF COMPUTER'S PROLOG-BASED ARTIFICIAL INTELLIGENCE APP FORMULATES EYEGLASSES PRESCRIPTIONS

Tucked away in a quiet suburban corner of northern Tokyo are the offices of IF Computer Japan (formerly Interface Computer Japan), a company specialising in the sale of IF/Prolog and the development of knowledge engineering applications. Headed by Dr Oskar Bartenstein, a German native who came to Japan initially to do robotics research at the University of Tokyo, IF Computer has a small staff of five and a worldwide perspective via its association with the IF Computer group which has similar small-scale offices in Munich, San Francisco and Hong Kong. The predecessor of IF Computer, Interface Computer, started operation in Japan in 1987 as a subsidiary of the German company, but the international companies are now separate entities. IF/Prolog is owned by Siemens Nixdorf Informationssysteme AG and IF Computer is in fact the international marketing and support representative of Siemens Nixdorf for the product. As a process engineering language, the number of Prolog implementations is still increasing but there are few commercially available products such as IF/Prolog. In Japan the language sells for \$2,66 for a Windows95 version, \$9,600 to \$14,280 for Unix versions. Run-time prices can be as low as \$10 per program. In Japan both sides of the business are important: the IF/Prolog language is sold both to universities for training and research and to industry for software development, while the application development side of the business is focused on understanding user problems and applying IF Computer techniques to applications such as real-time process monitoring (a project for Toda Construction for use in the Tokyo Bay tunnel construction), robotics (for another construction company Takenaka Komuten), stock evaluation and sales support. One application of which Dr Bartenstein is proudest is a concurrent engineering system for Paris Miki, a manufacturer of eyeglasses with retail shops around Japan. In the shops, terminals running the MikiCIM system are used to offer the customers individually-styled glasses, by evaluating the shape of a customer's face with other factors such as lens thickness and manufacturing needs, in other words integrating medical, fashion and manufacturing requirements. Paris Miki is using the system as the basis of corporate image advertising in major Japanese business newspapers. Development of the system commenced over five years ago and was first completed two years ago. The MikiCIM system is 98% IF/Prolog-based; only the interfaces with graphics and other system components are developed in other languages.

Research is healthy

Prolog is particularly good for processing and manipulating the language of specialists such as medical doctors, says Bartenstein, and successful projects such as the Paris Miki one are always close to the core business of the client, he adds. While the days when anything with the title "Artificial Intelligence" attracted attention in Japan are long past, IF Computer believes that artificial intelligence research is healthy and that the topics addressed are worthwhile. In their own research, Dr Bartenstein and his colleagues are following up with research into "machines which generate trust" and the manipulation of emotions, an area which he says is only just beginning to be recognised as a valid research area.

RISC WILL QUIT BY THE YEAR 2000, SAYS SOLTIS

AS/400 chief architect Frank Soltis told our sister publication *IBM System User* he's convinced that Very Long Instruction Word techniques (VLIW) will replace RISC (reduced instruction set computing) technology which he believes is reaching its limits. "RISC performance is not enough. It will quit by the end of the decade. What is needed is a different processing structure," says Soltis. This is where VLIW fits in. VLIW is a set of compiler techniques that moves scheduling off the processor. With RISC architecture part of the processor space has to be given up to schedule the best order in which to execute instructions. Because scheduling is carried out at compilation VLIW should enable greater parallelism in instruction execution. Each VLIW consists of any number of instructions between 1-20 which can then be executed simultaneously. Intel and Hewlett-Packard are jointly developing VLIW technology but Soltis believes that the AS/400 developers have the lead. "Hewlett-Packard is saying it is getting three times the performance using VLIW. We are getting improvement of five times," he says. However, Soltis admits that his enthusiasm for VLIW is not shared throughout IBM. "Some believe RISC has a much longer future. It is a debate under way now," he says.

AS/400 will lead IBM's VLIW

In the traditions of the AS/400 division, Soltis is convinced that the AS/400 will lead IBM into implementing VLIW throughout its machines. He is confident of the outcome of the debate. "The AS/400 wants VLIW and it won't go it alone. It will pull other divisions along to keep compatibility," says Soltis. The need for all the different divisions to agree a long term strategy fits well with another of Soltis' ambitions for the AS/400 and IBM - a single server, enabling components to be used across IBM different operating systems, from OS/2 through to MVS. "At some point there should be an IBM single server - one box where the only differentiator will be the operating system," he says. But at the moment Soltis says there is still resistance within IBM. "I believe customers would support it. It is just in selling and marketing at IBM that don't want it," he says. "We already share a lot of components with PC server, RS/6000, AS/400 and the mainframe," says Soltis. There are already plans for a new low-end AS/400 server using common components with IBM PC servers that will be priced at the same level as IBM's PC servers. "They will blow away the theory that PC Servers are cheaper." Alongside development of VLIW, Soltis claims the AS/400 division is also leading IBM's development of NUMA (non-uniform memory architecture). This is partly due to the architecture of the AS/400. "NUMA fits AS/400 much better than other types. The RS/6000 division is not going with NUMA as, with all traditional Unix systems, there is no address space sharing." For Soltis one of the key strengths of the AS/400 is in the capacity to build in new technologies. Since its launch the machines have been able to support a 128-bit architecture proving, claims Soltis, that in integrating new technologies IBM can change the internal structure of the AS/400 and not lose the customer base. There are also plans to run AIX on the AS/400 on I/O co-processors, but this will only be made available in the short term at least on a very limited basis.

HP TO CREATE INTEGRATED NETWORK, SYSTEMS MANAGEMENT SUITE FROM OPENVIEW ELEMENTS

As the next phase of its on-going programme of product releases, Palo-Alto, California-based Hewlett-Packard Co has turned its attention to network management: the company has launched an integrated network and systems management offering, OpenView IT/Operations and new Windows-based management for switched environments in the shape of Interconnect Manager. OpenView IT/Operations is basically an expansion of the company's OpenView OperationsCenter systems management product, which has been combined with the HP OpenView Network Node Manager - although the latter will continue to be sold stand-alone for users requiring only network management. The combined system is said to provide features including views of the entire computing environment (including network infrastructure); combined network- and systems-management tools; enhanced problem management; advanced allocation of operator responsibilities; simplified assignment of responsibilities in distributed environments and greater management of large heterogeneous environments. IT/Operations will ship in May with prices starting at \$40,000. OperationsCenter users can upgrade for free and upgrades to IT/Operations from the Network Node Manager will start at \$31,000. The company also announced HP OpenView IT/Administration, designed as a combined management offering for system administrators: IT/Administration is a combination of the OpenView AdminCenter and the OpenView Network Node Manager. As well as saving customers \$5,000 over the cost of buying the products individually, it is also said to streamline the installation process and documentation set. IT/Administration manages systems including HP-UX 10.10, HP-UX 9.X, Solaris 2.3 and 2.4, AIX 3.2 and 4.1, NetWare Servers 3.12 and 4.1, and Windows- and MS-DOS-based personal computers. It is expected to ship in June with prices starting at \$26,000. Hewlett-Packard coincided the announcement with the news that AdminCenter has now itself been expanded to provide support for Oracle databases. The new Interconnect Manager product, which is available for Windows and OpenView/Windows, provides features including an integrated traffic monitor that gives a graphical overview of network performance, including a display of gauges indicating utilisation, frame broadcasts, multicasts and errors, as well as a 'top-talkers' feature, which is said to monitor the two nodes on the network that are communicating the most. Interconnect Manager is shipping now at \$500.

INTEL MMX ADDS 57 MULTIMEDIA INSTRUCTIONS TO iAPX-86 SET

Intel Corp released details to software developers of 57 new instructions it intends adding to future versions of its Pentium processor line at the Intermedia World show in San Francisco last week. The MMX Technology additions are claimed to be the most significant enhancements to the Intel architecture since the i386, aimed specifically at speeding up multimedia and communications applications, and allowing multiple data elements to be processed in parallel through SIMD (Single Instruction Multiple Data) techniques. The instructions were arrived at by analysing existing interactive video, virtual reality and 3D graphical applications, which all tend to do a lot of computation, do lots of things in parallel, and use small integer data types. The first MMX-enabled chip will be the P55C, which Intel hopes to have in initial production by the fourth quarter of this year (UX No 547), but the MMX instructions will also be integrated into succeeding generations of Intel processors. Preliminary simulations and tests on development systems have apparently shown performance boosts of between 50% and 400%, depending on the application. Programmers should be able to get away with modifying only small portions of their code, by including their own enhanced sub-routines or calling MMX technology-enabled drivers and library routines through existing application programming interfaces (APIs). Intel claims the instructions will not significantly add to chip complexity, and will not alter the implementation of existing instructions or require changes to operating system software - MMX is operating system independent, but Intel expects that most applications supporting it will be developed for Windows95. Microsoft Corp promised to provide MMX support in its recently introduced Direct3D API (acquired through its acquisition of RenderMorphics last year) and through its ActiveMovie video technology. Adobe, IBM, Macromedia, NuMega and Powersoft also agreed to support the extensions, amongst a list of over 40 tools and applications vendors, independent hardware vendors and OEMs. The first software compilers and packages supporting MMX should be out by the end of the year, Intel said. Those gaining the most benefit are likely to be games using 24-bit colour and high frame rates, applications using multiple channels of audio, video or animation and Internet communication simultaneously, and those using data compression. Intel also expects MMX-optimised Internet plug-ins to become very common over time. For developers who can't wait for the P55C, Intel has a code emulator that could be used on current PCs, but hasn't decided whether to release it yet.

ARBOR REVS ESSBASE FOR "OPERATIONAL OLAP"

Data analysis software specialist Arbor Software Corp has introduced Version 4 of its Essbase multidimensional database which includes increased querying capabilities for decision support. It's calling the enhancements Operational OLAP claiming it has increased facilities for 'what if?', 'what happened?' and 'what next?' SQL queries. Other additions include an intelligent calculator for supporting incremental data loads and interactive data input. It computes data values impacted by changes or additions. A server-based OLAP Query Processor provides multidimensional data filtering, ranking and sorting enabling rapid targeting and retrieval of data subsets. It includes enhanced data load times, dynamic dimension building enabling 'many-to-many' multidimensional hierarchies and database recovery capabilities. Arbor has rounded up a bunch of ISVs with twenty five products supporting Essbase, including Applix Inc's Applixware, Lotus Development Corp's Lotus 1-2-3 and Microsoft's Excel spreadsheet; Andyne Computing Ltd's Pablo, Cognos' PowerPlay and IQ Software's managed query environments, Comshare's Commander Decision planning, analysis and management reporting system, AppSources' Wired for OLAP, Mobile Software's Pilot Lightship Link, Platinum Technology Inc's Forest and Trees and tools for application development including Borland's Delphi, Microsoft's Visual Basic and Powersoft's Powerbuilder, visualisation tools including Advanced Visual Systems AVS/Express, Management Science Associates BusinessWeb and system management tools including BMC Software's Patrol, Hewlett-Packard's Intelligent Warehouse OLAP Builder and IBM's DataGuide and DataJoiner. Essbase 4.0 comes as a 32-bit single-user or server version. The server version is up on NT and OS/2, with HP-UX, AIX and Solaris due in the next sixty days. Prices start at \$38,000 for a five user license. The single-user price goes for \$2,500 per user.

IBM TAPS INFINITY FOR RISK MANAGEMENT TECHNOLOGY

After Nick Leeson's little adventure with Barings Bank Plc's money, companies are rather more alert to the need for risk management strategies, and, realising that it might now be knocking at a half-open door, IBM Corp has rushed to bone up on the subject and done a deal with privately-held Infinity Financial Technology Inc, which develops modular building block risk management software in Mountain View, California. IBM will use Infinity's Data Model, C++-based Fin++ Class Library and applications to build new systems.

UB NETWORKS, CLAIMING PIONEER STATUS, INCORPORATES JAVA INTO ITS NETWORK MANAGEMENT PRODUCTS

Tandem Computers Inc's UB Networks Inc has announced that it will integrate Sun Microsystems Inc's Java networked application development language into its NetDirector and EMPower network management product lines. The Santa Clara, California-based vendor is claiming a world first with the announcement and maintains that Java applications embedded in the hub, running on the EMPower management module, will dynamically respond to network activity and significantly reduce the day-to-day burden of managing the network. The EMPower system runs inside the hub using a real-time multitasking microkernel operating system and has direct access to network data as well as the control points used for automated network reconfiguration and optimisation. Users are promised benefits from real-time graphical applications based on Java that will enable them to manage their networks anywhere, any time using Java-enabled Internet Web browsers.

Secure Java applications

According to UB, customers and third-party independent software vendors will be able to develop secure Java-based embedded applications. Supplementing these with those provided by UB Networks, users will have the ability to set policies for controlling the behaviour of their network in automated ways, such as reconfiguring the network around failed or congested links, automating bandwidth allocation or escalating problem report and alarms. The firm denied claims that it is putting too much faith in the emerging Java language and according to Mark Powell, UB's UK marketing manager: "The risk factor is minimal really... even if Java is not the language of tomorrow, it will certainly have a reasonable customer base and market share." The product offerings will be released in three phases, with the first, the EMPower application with Internet access capability across several systems, due this summer. EMPower code with embedded Java support and the first set of Java-based embedded applets will be released in the second half of 1996, with third-party Java-based EMPower applications due in 1997. The pricing is still to come.

NETSCAPE SLASHES PRICES ON ITS SERVER SOFTWARE

Netscape Communications Corp responded last week to the threat posed by Microsoft Corp's decision to offer its World Wide Web server software for Windows NT free by slashing the entry price for its own server to \$295, 40% less than its predecessor. The high-end version of release 2.0 is \$995, down from \$1,295 for the Unix version. Netscape's new FastTrack Server low-end product replaces Communications Server, and is aimed at small businesses and other nontechnical people. Netscape has also bundled Enterprise Server with a suite of applications to take on the Microsoft Corp BackOffice. It is called SuiteSpot and the elements sell for \$1,000 each, with a set of five components at \$4,000. They are Netscape LiveWire Pro, Netscape Mail Server, Netscape News Server, Netscape Catalog server and Netscape Proxy Server. LiveWire Pro comes bundled with the Informix database.

ILLUSTRATE TEXT DATABLADE RELEASED

Illustra Information Technologies Inc and Rockville, Maryland-based Personal Library Software Inc (PLS) have released a Datablade module that supports searching unstructured text. It will be compatible with the Informix Universal Server. The plug-in module for Illustra's extensible data ORDBMS provides natural language, concept searching and search-by example, among other features. First announced when Illustra was an independent company, it will sell for \$495, half its regular price until May 31. Immediately it's on Solaris with NT coming next month.

PLATINUM GIVES PARADIGM PLUS JAVA MAKEOVER

Platinum Technology Inc is fitting Java to Paradigm Plus, its object-oriented design and analysis tool which it got as part of its acquisition of Houston, Texas-based Protosoft Inc back in November (UX No 566). Currently in beta, the Oakbrook Terrace, Illinois company says the new Paradigm Plus will generate Java class definitions with attributes and member functions, which are then compiled in the Java environment. Platinum says C++ designs can be re-deployed in Java. Paradigm Plus with Java code generation will ship in the second quarter. It will also support an HTML code generator. Unix prices start at \$7,700.

SCO EXPLAINS UNIXWARE PRICING

Santa Cruz Operation Inc's been getting slammed in Usenet groups since it "SCO-zied" the pricing of UnixWare 2.1 by introducing user-based price bands (UX No 578). In its defence the company says that the new pricing actually reflects the lowering of some of the SCO OpenServer 5 prices and that for systems of 15 users or

unlimited license. The existing SCO OpenServer licenses for 1,000 and 5,000 users have been eliminated, and replaced with the same unlimited license. At the other end of the scale, UnixWare 2.1 Personal Edition is raised about 40%, but is \$100 less than the SCO OpenServer Desktop System Release 5. "Although raising the price

of the PE was regrettable, it was necessary given the projected unit shipments, cost-of-goods, cost-of-distribution and other related expenses," SCO says. The company believes "that the operating system provides commensurate value to the level of hardware used to deploy larger servers." The re-pricing represents "what we hope is a fair balance between com-

Product	UW 2.01	UW 2.1	OpenServer	Notes
AS/Enterprise	\$1695	\$1295	\$1295	SCO AS 2.1 & OpenServer are 5-User Both ASs include 2 CPU support SCO AS 2.1 & OpenServer tape +\$150 OpenServer Host System is \$695 AS 2.01 included single-user Merge SCO AS 2.1 upgrades include Merge New AS 2.1 includes Merge evaluation SCO AS 2.1 upgrades are unlimited (Both PEs include 2 CPU support) (* New OpenServer Release 5 pricing) New PE 2.1 includes Merge evaluation OpenServer includes 1 year SES (* OpenServer not yet recalculated)
10-User Licence		\$495	\$495	
25-User Licence		\$995	\$995	
100-User Licence		\$2995	\$2995	
500-User Licence		\$6995	\$6995	
1000-User Licence		N/A	N/A	
5000-User Licence		N/A	N/A	
Unlimited Lic incl.		\$12995	\$12995	
SMP	\$895	\$995	\$995	
SDK	\$145	\$395	\$395*	
PE/Desktop	\$445	\$695	\$795	
Upgrades to AS	\$399	\$550	\$595	
Upgrades to PE	\$199	\$395	\$395	
Upgrades to SDK	TBA	\$95	\$495*	

A new unlimited user licence to UnixWare 2.1 will cost \$13,000. SCO says "this is comparable to thousand-user costs for competing products - eg much less than NT and AIX; similar to HP-UX." (An unlimited HP-UX server licence is \$13,000). An old unlimited-user license will continue to service unlimited users when it is upgraded (a practice known as 'grandfathering'). In other words, users pay \$550 for an upgrade to SCO UnixWare 2.1 AS from an unlimited license under older UnixWare (1.0, 1.1, 2.0x) and they will keep the

competitiveness with return-on-investment for ourselves, our partners and customers. We believe that SCO UnixWare 2.1 provides excellent value for the prices being charged and that it was essential that both OpenServer 5 and UnixWare 2.1 be priced similarly. SCO is in the process of assuming greater responsibility and to have a greater impact on the Unix community as a whole. Part of that growth and success is assessing which battle we can and can't win, and deploying our resources appropriately."

PROGRAMMED LOGIC SHIPS SNAPSHOT UNIX FILE SYSTEM MODULE

Diskdoubler company Programmed Logic Corp, Somerset, New Jersey, releases SnapShot, its Unix file system module for the Stackable File System (StackFS) file on March 15 (UX No 557). SnapShot freezes versions of a file while enabling a second version to be modified. StackFS is Programmed Logic's pseudo-file system architecture enabling features to be layered on top of existing file systems without having to modify the underlying operating system. Instead of managing data on a disk, StackFS adds services such as Snapshot on top of existing file systems. Adding new file systems to working file systems, preserving data integrity and compatibility with existing file formats are therefore avoided, it claims. StackFS appears like any other file system mounted on top of different parts of a file system hierarchy. Applications access files through StackFS, which in turn forwards file operations to the underlying file system. Based on an object-oriented, stackable file system module, it works much like commands in a shell pipeline, the company says. SnapShot and other modules can be combined to provide additional semantics for existing file systems. SnapShot is mounted over other file system types such as Programmed Logic's High Throughput File System (HTFS). Other StackFS modules work by intercepting all attempts to access files within a snapshot and saving copies of the original contents of a file before applying any changes to that file. Access to files through SnapShot are translated into accesses to files in the underlying file system or in a save area. Privately owned PLC, staffed by a bunch of ex-Bell Labs and USL employees, claims it's got a bunch of StackFS OEMs in hand. As well as its TeraFile Unix file system, which provides 32-bit access to files larger than 2Gb size, other modules in the pipe will be used to merge multiple parts of a file system tree (now in beta), file mirroring and a caching semantics. SnapShot is up on most Unix servers; prices start at \$2,000. Clients cost from \$500. PLC has released the third generation of its HTFS journaling file system, including a DTP core compression plugin. It's up on UnixWare 2.x. Solaris and SVR4 MP ports will follow. Prices go from \$2000 per server.

ORACLE TO SHIP POWER OBJECTS IN MAY; INTEGRATES ORACLE PERSONAL LITE

Oracle Corp will release version 2 of its Power Objects cross-platform answer to Microsoft Corp Visual Basic in May. It's integrating Personal Oracle Lite in place of its current ANSI SQL 92 compliant engine, Blaze. Personal Oracle Lite, which is also available as a separate product, is a trimmed down version of Oracle7 which can run in as little as 1Mb RAM and 10Mb disk. Blaze was the project name for the completed database and Lite is a natural progression, claim Oracle. Lite includes improved performance, additional datatypes and provides an external ODBC API. Data and applications can be moved seamlessly between the two, he claims. Power Objects 2.0 will include native 32-bit support, support for over thirty OCX's including graphing and Dynamic Data Exchange, plus ODBC and OLE support. It will also support Oracle7 Symmetric replication. Oracle Personal Lite runs on Windows NT, 95, 3.x and Mac and runs applications built with Oracle's Designer and Developer/2000 development tools. Personal Oracle Lite prices go from \$200. Power Objects prices go from \$400.

CALDERA LICENCES WABI FOR WINDOWS APPS ON LINUX

Sun Microsystems Inc's Sunsoft unit has licensed Wabi, its Windows-on-Unix API translation software to Ray Noorda's Caldera Inc. Users of the Linux-based Caldera Network Desktop will be able to run selected Microsoft Corp Windows applications on the Unix-alike operating system. Wabi, which will cost \$200 from next quarter, will be available on Caldera's Solutions CD which also includes Corel Corp WordPerfect and CorelDraw and Delrina Forms Flow Filler. The offering is being seen as Noorda's latest shot at his bete noire, Microsoft, this time providing a convincing answer to Windows NT in the Internet world. Caldera's offering is based upon the the Linux-based Corsair operating system created at Caldera by two developers - Brian Sparks and Rantham Love - after its initial development project at Novell was cancelled but later funded by Noorda personally. The Internet-oriented Network Desktop costs \$100 and is claimed to provide everything you get in Windows NT plus the server software and Netscape Communications Corp's Navigator browser (UX No 574).

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IBM UK Ltd has forestalled the planned London flotation of **Data Sciences Plc** by making a £95m cash offer for the defense and general software and systems integration company that CINven Ltd, could not refuse.

ADA Software & Services - that's Application Development Aid - is to represent the **Object Management Group** in India. Pursuing its vertical market programme, OMG's also carrying issued a request for Information for standardising healthcare systems using Corba. Responses are due by May 6.

Dazel Corp, the output management software house, got itself \$9.5m in third-round financing from its current investors Austin Ventures, SSM Venture Partners, Sevin Rosen Funds and Sigma Partners plus newcomer Integral Capital Partners. It's earmarked for product distribution and further product development.

The Java start-up launched by JavaSoft veterans Kim Polese, Arthur Van Hoff and Sami Shaio is still nameless because the names it wants are already taken and being used as Internet domain names. The three have added John Payne from **Starwave Corp**, who worked on Java in its early days, to their ranks. Polese wouldn't give away much information on the company's first application, saying that there are a few details that have to be hammered out yet. The start-up wanted Java in its phone number, but the phone company surprised them with EATJAVA or FAT JAVA - take your pick. Polese said no message is intended there.

IDC figures that as of right now HP-UX, SCO's Open Server and UnixWare, the three Unix variants that are supposed to be brought together and consolidated, represent 53% of the Unix marketplace based on revenue.

We're starting to get the impression that the source tree that **Hewlett-Packard Co**'s basing its 64-bit code on is UnixWare, which would explain why HP's so very reluctant to say so. It doesn't want to make its installed base nervous. But users aren't the only ones wiggling around in their chairs uncomfortably these days because of HP. OEMs say that despite an agreement with the **Santa Cruz Operation Inc** not to seek out co-development helpers past folks like NEC Corp and Hitachi Ltd who are covered by pre-existing arrangements (UX No 578), HP is still sending feelers out, making those who's shoulders are tapped feel a bit ansy. The buy-in, as we've said, is reportedly \$55m-\$60m over three years. NEC's apparently in but **Hitachi** seems to be having second thoughts over the return on investment. We have to see what, say, **Fujitsu Ltd** does. The fact that HP is in the driving seat is also starting to sink in.

Sun's Java unit is reportedly readying a patented transparent persistence (binding) mechanism that'll allow Java objects to be stored in object databases which it'll licence freely.

Silicon Graphics Inc has named Robert Shapiro, chairman and CEO of Monsanto Co, to its board.

IBM Corp is celebrating an order from the Richland, Washington-based Environmental Molecular Sciences Laboratory at the US Department of Energy's Pacific Northwest National Laboratory for what the company reckons will be the most powerful IBM parallel computer ever, a 200GFLOPS peak SP2. At 512 CPUs, Cornell University's SP2 is actually larger than the 472-way Pacific Labs monster, but it utilises older generation processors.

San Jose Mercury News reports Sun will debut an early version of a new HotJava Web browser next month, and is readying Java Workshop tools for April or May including a client-based just-in-time compiler, a source-code editor, a project manager, a portfolio manager, a debugger, an applet tester, and a source browser.

Red Brick Systems Inc's got the 64-bit version of its data warehouse, VPT 4.0, running on the AlphaServer 8400 using DEC's Very Large Memory database-in-RAM technique. VPT 4.0 is priced at \$37,500.

IBM Corp told us that PowerPC 620's design and development problem was due in large part to Somerset's lack of resources. It says there were too many joint processor plans in the pipe, too few people in the organisation to achieve even the most simplified plans, and not enough experienced in SMP. IBM says the PowerPC design shop has hired a further 200 staff, including folks drawn internally from the AS/400 group. Motorola says Somerset's engineering and design staff has been increased by 30% recently. Neither will say exactly how many employees are assigned to Somerset.

SMCC VP Internet Strategy Bud Tribble says we ought to think of the company's Joe Corba object request broker which is implemented as a Java applet as a "remote procedure call for objects." Tribble believes it inevitable that **OMG** and **Microsoft** distributed object models will co-exist in much the same way as TCP/IP and IPX/SPX do today, with companies such as **Iona** technologies building the bridges.

The 64-bit 21164A Alpha RISC DEC is using in its shiny new workstations expected on March 11 (UX No 579), is a shrink of its 21164 CMOS5 process, although it gains only part of the advantage of the 0.35 micron, CMOS6 process. 21164A is a CMOS5 design implemented in CMOS6, hence the EV56 notation. It's certainly not, however, one of the low-power, ARM-architecture StrongARM RISCs. The only similarity is that they are both fabricated using DEC's new Fab 6 production facility in Hudson, Massachusetts. We got our arms - legs, eyes, ears and fingers - all crossed. The StrongARM SA-110 announced back in February uses a 'true' 0.35 micron design. Meantime, 21164a's support silicon is reportedly an extension of the Alcor chipset.

Just-in-time compilers that will execute pre-compiled, cached machine code rather than generating new byte code for each piece of an applet will make Java up to 20 x faster, **Sun** says.

X Inside Inc is of course now headquartered in Denver, Colorado (UX No 579).

Wal-Mart Stores Inc's gone back to **NCR Corp** for a further 384 processors - spread across its WorldMark 5100 massively parallel processors - and four terabytes of disk storage to add to its existing 3.5 terabyte data warehouse system.

Novell Inc has announced it will reduce product shipments to allow the channel to get rid of excess levels of stock, a move investment house **Morgan Stanley** says is a "long awaited and pragmatic move to clean up the balance sheet." The reduction in inventory levels will account for up to \$200m worth of product. As a result, Morgan Stanley's technology group has cut its estimates for Novell's earnings for the financial year to October 1996 from \$0.84 to \$0.34 and forecasts a loss of between \$0.08 to \$0.15 in the second quarter. It's also cut its estimate for Novell's 1997 earnings to \$0.42 per share from \$1.05. It gives Novell a year to get its Internet strategy sorted out, observing that "the company has networked more people and devices than any company but hasn't yet figured out a way to turn that into Internet gold." Novell has laid off 625 employees in the last and plans to be down to 6,000 by the end of its second quarter.

Open Software Foundation's readying it's promised 1.2.1 cut of Distributed Computing environment for this week.

New York city company **Information Builders Inc** is offering to make MVS data available over the internet with Web3270, a gateway between Web browsers and MVS applications. Windows, Unix, OS/2 or Mac users get either 3270 emulation or browser look and feel from Web3270, which runs on the mainframe. Information Builders will offer a Web390 Web server for MVS by year-end.

The company's also added a new release of its Focus Six client/server reporting tools, which includes a managed reporter edition allowing database administrators to hide database complexities from users struggling with fields and table names by creating a "plain language," menu driven interface for creating reports. Prices start at \$300.

We know, we got our kernels all mixed up. The **Chorus Systemes SA** microkernel is of course it's own making. It's not Mach (UX No 579).

Graphics benchmarking group, the **Graphics Performance Characterisation** organisation, has joined SPEC, the **Standard Performance Evaluation Corp**. GPC chair gets a seat on SPEC's board. Its Picture-Level Benchmark (PLB), Xmark93, and Viewperf performance results are now available on the web at <http://www.specbench.org/gpc>

The prospect of the full force of **Intel Corp's** legal machinery bearing down upon it has convinced London, UK company **Planning Sciences International Ltd** to stop using the name Gentium for its client/server EIS development environment after June 30. Intel thinks Gentium is too close to Pentium. It hasn't bought the name. Gentium becomes Gentia - which Planning Sciences says is designed to replace legacy decision support and EIS systems. The GentiaDB multidimensional and OLAP database will be included with Gentia 3.0 next quarter.

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DATA GENERAL TOUTS ORANGE BOOK SECURE COMMERCIAL INTERNET OFFERING

Data General Corp thinks it's found a unique way to capitalise on the Internet market. It's got itself a system that in government parlance is a hair's breadth away from being declared B2 secure and it's not some specialised spook machine for the intelligence community, it's a commercial number that banks and credit card companies can use for electronic commerce. The same system is up for E4 certification, the English version of B2. It says it's the only company that has kept its B2 offering in synch with its commercial AViiON line through all the painful gyrations of government evaluation, now scheduled to culminate the beginning of next year. It says the Secure Internet Server (SIS) security package is the only Unix system of any description up for a B2-level blessing (UX No 579). It's a combination of B2-secure DG/UX and McClean, Virginia-based BDM International Inc's CyberShield Internet security system to create both a secure Internet server and secure end-to-end communications so credit card numbers and other confidential data can travel over the Internet. They've already been out after business and the stuff is apparently being tested at key sites. DG is promising showcase wins by June. The paired software, which both companies will sell starting at \$25,000 per server (£27,000 in Europe), can run on any of DG's AViiON servers, both its Motorola and its new Intel boxes. DG says the scheme will allow corporations to do away with duplicate systems, one for insiders, one for outsiders, based around firewalls. It promises all data on both the Internet and intranet will be free of viruses, malicious code, unauthorized data and applications that could corrupt, destroy or compromise information assets. It also promises to limit damage to user files, system files or the operating system from internal security risks, which currently pose a greater problem than the outside hacker. The solution reportedly requires no changes to any server or client software. All the popular Web browsers and Gopher services are supported and the WAIS daemon can be hosted to provide indexed query access to publicly available information. Internet ports can be configured to support anonymous ftp. The pair claim systems administration and data access policies need not be as cumbersome as with standard firewalls of B1-level systems. The scheme supports a number of user identification/authentication procedures including randomly generated passwords, smart cards, hardware and software tokens, public and private key authentication systems, digital signatures, biometrics and challenge/response systems. All are transparent to the client/server software in use. Encryption can be combined with identification/authentication procedures to protect data in transit. Encryption is provided for dial-up, LANs and WANs by a suite of hardware- and software-based products including IRE's Safenet products for PCs and Unix workstations, PGP and STU-IIIs. Identification and authentication is provided by the Fortezza card for PCs, Bellcore's S-Key and Racal's Watchword.

STRATUS EYES ELECTRONIC COMMERCE WITH LOW-END FT

Whilst rivals such Tandem Computers Inc are driving their fault-tolerant technologies up into the stratosphere, Stratus Computers Inc is closing in on the low-end of the market, repackaging its Continuum server into a new entry-level Series 400 line which uses PCI bus I/O (UX No 574). Stratus achieves fault-tolerance by duplicating processing elements and each of the four models in the so-called "Polo" line comes with dual suitcase-style processing nodes (complete with handles) which plug into a base system pedestal. Like the dual-processor, six-slot Series 600 and 12-slot Series 1200 quad, the 400s use Hewlett-Packard Co's PA-7100 RISC. Each 412 node comes with a single 96MHz CPU, 512Kb board-level cache, 128Mb RAM and is priced from \$66,000. A usable system configured with disk and Ethernet will cost \$69,100. All 400 models incorporate 14 PCI slots - two for disk. "We need to get out of the proprietary I/O market," the company acknowledges, promising all-new PCI models by year-end using the forthcoming 64-bit PA-8000 and hinting at a PCI makeover for existing Continuums. The Model 415 comes with a single CPU and 2Mb board-level cache. The two-way 422 comes with 512Kb cache; the 425 has 2Mb cache. The Series 400 models, which lack the integrated uninterruptible power supply and expandability of their 600 and 1200 cousins, run Stratus' FTX Unix - the proprietary VOS from early next year. Polo's packaging is around one third of the other Continuum's "refrigerator" size. Although the new models may encroach on the space occupied by its Radio high-availability PC servers, Stratus says Radio is primarily an NT platform. It's also eyeing the market for Internet-based commerce with a bundle of software for Continuums called Electronic Commerce server, which includes Open Market Inc's Secure WebServer, OM-Transaction and OM-Access products. Also available are the EDI and communications gateway software from Stratus' S2 Systems Inc subsidiary plus Isocor Inc's email gateways, X.500 directory and X.400 services. The \$35,000 to \$500,000 bundles are available for FTX initially but will go up on Radio/NT in six to nine months. Although 80% of Stratus' claimed installed base of 8,000 systems - spread across 68020, 68030, i860 and PA-RISC architectures - use the VOS operating system, it says FTX sales now account for some 30% of revenue. It'll use Santa Cruz Operation Inc's 3DA OEM offering as the basis of future Unix requirement.

FUJITSU READIES ULTRASPARG MPP SERVER

Fujitsu Ltd's announced a new version of its AP series supercomputer using Sun Microsystems Inc UltraSparcs. The Japanese company caught most of its European and US units somewhat on the hop with the announcement of the monster AP3000 distributed memory parallel server. It will supposedly accommodate up to 1,024 Ultra 1 server and is due in December priced from \$267,000. Although it starts life as a highly technical compute engine, the company's already talking about adding parallel databases, warehousing solutions and applications that'll make it attractive to ISVs and to the US market. The AP3000 is effectively a makeover of the three-year-old SuperSparc-based AP1000, a scientific engine never sold in the US. The AP-Net (Advanced Parallel System Network) interconnect runs at 200Mbps in the AP3000, compared to 25Mbps in the AP1000. The AP3000 will house from four to 1,024 U140, U170 or U170E Ultra 1 server nodes in any combination, each with 32Mb to 512Mb RAM, 2Gb to 4Gb disk, a message controller and Solaris 2.5. It expects to sell 300 AP3000s over three years. It claims 30 AP1000 installations. ICL-owned Fujitsu Systems Europe Ltd will sell AP3000 in Europe and although it's potentially competition to ICL's own Goldrush MPP system, ICL notes AP3000 doesn't support a parallel database initially.

BULL'S 'MAINFRAME-CLASS' SAGISTER UNIX BOXES

Compagnie des Machines Bull SA's unveiled its promised "mainframe-class" Unix boxes as Sagister. The systems - previously referred to as Madison (UX No 544) - comprise up to four AIX-based PowerPC 604 Escalas, each with up to eight CPUs, clustered using Bull's FDDI PowerCluster interconnect. Key difference from the Escala line is said to be support for GCOS and MVS mainframe integration; production enablers which manage transaction processing and database support; operations facilities, which provide multi-server systems management, security and automation; and vertical and horizontal applications, including Oracle Parallel Server Option and SAP R/3. The Sagisters come in three configurations. M1 is the entry-level system with up to eight processors, 510Mb of RAM and up to 2Tb of disk. It can support up to 200 simultaneous users and is priced at from £475,000. The M2 houses up to 16 processors, supporting up to 1Gb RAM and 4Tb disk. It will cost from £670,000. The high-end M3 model can accommodate the four eight-way nodes with up to 8.2Gb RAM and 8Tb disk. Bull says it will support 3,000 active users and costs from £1.4m. Early versions are available now - volumes are expected in June. The company says it needs a couple of months to sort out US pricing and packaging. Bull's 2Gbps ISL Interserial Link for clustering up to 16 Escalas with a total of 128 processors will follow PowerCluster.

CLARIFY ADDS VB-LIKE DEVELOPMENT TOOLS, BROADENS LOGISTICS OFFERINGS...

Although Web and three-tier application development technologies are hogging the software development spotlight, customer support technology continues to be one of the hottest software properties around. Recently-quoted San Jose, California-based Clarify Corp claims its installed base roughly doubled over the last 12 months to 26,000 users at 120 customer sites. It's now offering new Microsoft Corp Visual Basic-alike ClearBasic module in its ClearCustomise tools line it says will allow in-house developers and systems integrators to customise applications with new modules and functions (UX No 579). ClearBasic provides access to the Clarify application infrastructure which means developers don't have to write external programs or launch stored procedures, the company claims. It can query and display information from multiple databases and is expected to result in shorter application development cycles and reduced maintenance time and costs. ClearBasic includes a Visual Basic-like scripting language, a platform-independent interpreter and a customisation environment which is accessed through the ClearCustomise user interface editor. Clarify says ClearBasic code can request and manipulate whole objects such customer cases or product configurations, where other solutions require users to write low-level SQL scripts to interact with each table that comprises those objects. Other ClearCustomise tools include the user interface editor and data dictionary editor. A ClearBasic toolkit will be priced from \$10,000 per concurrent user licence in May. The user interface editor which provides the ClearBasic customisation environment costs from \$5,000. The company is also moving deeper into the logistics market with new Order Operations and Spares Manager modules for tracking orders and managing service inventory in its ClearLogistics line which includes Field Operations for managing field service engineers, their schedules and costs. It expects to compete head-on with logistics products from companies such as Metrix and Pacific Data. Order Operations is from \$17,500 on the server - \$2,000 for each concurrent licence. Spares Manager is from \$67,500 on the server, \$6,250 for each concurrent user licence. The company says the ClearHelpDesk internal help desk product it recently carved out of its core ClearSupport software now accounts for around 30% of its business (UX No 553). It's looking to add new European and Asian outlets.

...AS VANTIVE OFFERS THIRD PARTY MANAGEMENT OPTIONS

Meantime, Vantive Corp, Mountain View, California, has brought its HelpDesk customer service software up to release 5.0, adding support for Austin, Texas-based BSG Corp's change management technology; problem management software from Inference Corp, El Segundo, California, and ServiceWare Inc; and for IBM Corp and Tivoli Systems Inc network and systems management suites. A management information application for tracking staffing, product and service changes within support environments has been developed in conjunction with BSG's Alliance/IT Inc unit. It includes change administration and scheduling tools and is integrated with the HelpDesk data model, workflow engine and user interface. HelpDesk 5.0's Research Agent can now perform text searches against ServiceWare's on-line Knowledge-Paks of problem resolution techniques. As well as support for IBM NetView 6000, Vantive is creating an interface to the Tivoli/Plus API which allows help desk, job scheduling, backup and security tasks to be managed from the Tivoli Management Environment. HelpDesk 5.0 costs from \$30,000 per Unix or NT application server supporting Motif, Windows and Mac clients, plus \$2,500 per concurrent user. Vantive will also begin reselling Palo Alto, California-based Decisive Technology Corp's Internet survey software.

FORESIGHT GOES CLIENT/SERVER

At last week's Support Services Conference & Expo in Reno, Nevada, Foresight Software Inc, Atlanta, Georgia, introduced a new client/server version of its customer service software, the Service Management System (SMS), integrated with version 8.0 of Progress Software Corp's application development environment and database. Currently it runs only on Unix server and clients. First components will be available from next month priced from \$5,000 to \$8,000 per concurrent user on HP and IBM Unix and NT servers and Windows clients. It supports Oracle and Sybase now, with a Microsoft SQL Server connection due. A Progress licence is required. Other SMS modules will follow. Foresight is owned by Marcam Corp and until last December traded as its MXP Business Group. With a new management team and "restart" strategy in place, the unit expects to grow from \$17.5m to \$20m this year and from 90 staff to 120. It counts total service providers such as Astea and Metrix as its competition rather than help desk providers such as Clarify and Vantive. It claims better functionality, a single application development environment and a more service-oriented approach. It says Progress wants to licence back some of the tools it's developed but as Astea uses a Powersoft/Progress solution it's unwilling to see its value-add go to its competition. Metrix apparently uses Unify for development. Foresight claims 75 customers - all on Unix right now. It's got a Web product line in the pipe.

SCO SETS PLANS FOR JAPANESE OPERATION

Management from Santa Cruz Operation Inc was on hand in Tokyo last week to explain to the press and Unix distributors about their strategies for the companies in Japan and the revamped Santa Cruz product line. Geoff Seabrook, newly appointed senior vice-president for Asia-Pacific Operations, outlined his plans for Santa Cruz to increase its market share for both the traditional Santa Cruz Unix (OpenServer) line and the newly acquired UnixWare products. In the past in Japan, personal computer Unix did not sell well: in particular the Santa Cruz brand of personal computer Unix, which was initially handled through partner NEC Corp, sold mainly into research labs rather than to the traditional small and medium business market which was Santa Cruz's fief in other countries. Seabrook comes from the European sphere of operations of Santa Cruz, and having played a role in the Unix acquisition, he will continue his Janus-like responsibilities looking after both Europe and Asia. Asia Pacific includes China, Australasia, Korea, Singapore and other East Asian countries. Two key areas will be emphasised: improving the support available for technology partners and beefing up the channel partner infrastructure. To this end Santa Cruz will run with a two-prong strategy, handled by separate companies which nonetheless share office space. Both companies will report to Seabrook directly. A new company, Nippon Santa Cruz Ltd, has been established with the technical team of 10 people which Santa Cruz inherited from Novell Inc and has been together since the days of Unix System Labs Pacific.

Expanding the market

The company is headed by Jiro Monden. This company will focus on expanding the market for Unix-based personal computer servers, on working with Hewlett-Packard Co on Unix technology functional requirements for 64-bit Unix and on the Unix System V.4 source code licensing business which carries over from AT&T Corp days. To approach the enterprise space for systems costing under \$950,000, a partnership has been formed with Compaq Computer Corp and Oracle Corp to sell UnixWare and Oracle 7 on high-end personal computer servers, the price for which systems, Monden promised, would be more than competitive with Windows NT-based systems, as well as offering extremely high performance. Other systems integrators such as Enicom (the systems integration division of Nippon Steel Corp) are also key partners, along with a new Accell/SQL group and Le Clone PULSE group of five systems integrator companies. Novell had made little progress in developing the sales channels for UnixWare, according to Seabrook. Once Japanisation of the OpenServer product is complete, Nippon Santa Cruz will also provide second line support for it as well. The second pillar of the Santa Cruz business in Japan is the joint venture company with trading company Tomen. This company is (confusingly) called Santa Cruz KK (CI No 2,867) and is headed by general manager Andy Suzuki. It has been in existence for two years, its main activity being the sale of Santa Cruz and ex-IXI products such as XVision personal computer XServer product and Premier Motif for Solaris, through Tomen subsidiary Tomen Electronics, to integrators and resellers. Turnover last year was around \$10m. Geoff Seabrook is pleased with the achievements of the joint venture; "we couldn't have done it ourselves" he said. Name users of applications written for Santa Cruz Unix in the last few years include Bridgestone Japan, Meiji Life Insurance and the Post Office insurance system. Asked about a possible merger between Nippon Santa Cruz and Santa Cruz KK sometime in the future, Seabrook did not rule it out, but he said the structure echoed a similar technical-marketing split in Europe, and since the two shared offices anyway, there would be lots of information sharing.

SAIC'S KONA FRAMEWORK FOR CREATING ELECTRONIC COMMERCE JAVA APPLETS

Science Applications International Corp's applied Internet technology group in Annapolis, Maryland, has developed a software package for creating intelligent Java agents that can be used to carry or retrieve information across electronic commerce systems. Although it had the bright idea of calling its technology Kona well before news of Sun Microsystems Inc's Java operating system of the same name began - excuse the pun - to filter out, it isn't about to start a storm in a coffee cup and will revert to calling the software "an autonomous agent framework for distillation and discovery," until it comes up with another name. The software is being designed primarily for use internally and by SAIC clients, including some in the government sector. The group claims the framework already provides true distribution of objects and has already proved its usefulness in sending software updates across large numbers of nodes. Before it learned of Sun's Joe Java object request broker, SAIC had already developed a protocol to pass Java objects to a proxy and then to a Corba API. Indeed it's prototyped other technologies including a database gateway and work on persistent storage, quite independently of Sun's own JDBC and Java persistent storage developments. SAIC believes its framework will provide a rapid development environment for building electronic commerce agents that will take advantage of precisely the type of Java client/server solutions Sun's expected to unveil shortly, plus the bevy of proposed low-cost Internet access terminals. It's waiting for the Sun people to add robust encryption to propel Java into electronic commerce uses. SAIC says it hasn't decided to commercialise its framework yet.

CHORUS OFFERS COOL ORB FOR DISTRIBUTED OO EMBEDDED APPLICATIONS

Chorus Systemes SA has worked its Chorus Object Oriented Layer of APIs into a Corba-compliant object request broker it's calling Chorus Cool (UX No 509). Chorus says the ORB will allow developers to create distributed real-time object applications for call switching, network management, database access, groupware, multimedia, internet services, distributed processing environments and process control. As well as offering Cool on its Chorus microkernel the French company is porting the ORB to SCO, Sun, Windows and NT in the hope that users will get turned on to its microkernel; it's not seeking a place at the general purpose ORB vendor table. Designed to run on Chorus' Classix and Fusion microkernels, Cool supports IDL-to-C++ mapping with C language mapping to be added in future. As well as the IDL APIs, runtime libraries and compiler it's calling Chic, Cool provides naming, synchronisation, group invocation, node and domain services. The invocation service allows a client to invoke an operation on one or several servers transparently. Cool was designed in conjunction with France Telecom, SEPT, and the European Union's Esprit Projects Commandos (No 2071), ISA (No 2267) and Ouverture (No 6603). Chorus hopes to attract the telcos, especially its partners in the EU's Stream Open Microprocessor Initiative, including Alcatel, Ericsson, Philips, Siemens and GEC Alsthom. Chorus is preparing to detail a "Componentised OS" strategy at the Embedded Systems show in Boston at the beginning of April. It'll emphasise the creation of re-usable application components using the microkernel. An evaluation version of Cool is available from Chorus' Web site. The \$10m company has 75 staff - 50 in Europe, a dozen or so in the US and a handful in Asia/Pacific. It claims its had several profitable quarters.

OMG ENDORSES OPENDOC

The Object Management Group has chosen OpenDoc API's for use as its distributed document component facility on PCs and Macs (UX No 509). OpenDoc presentation and data interchange - which supports OLE - becomes an OMG standard, supporting OMG IDL (UX No 507), and uses Corba and Object Services. OMG now boasts Corba, 15 object services and a document component facility using OMG IDL. "Now we begin to define Domain-based business objects and we really have the whole enchilada," it says. All it's got to do now is to convince IBM Corp and others to ship it and give it away.

CONVEX ADDS MID-LIFE SPP 1600 KICKER

Hewlett-Packard Co's Convex Technology Center is adding a Model 1600 mid-life kicker to its Series 1000 Exemplar Scalable Parallel Processors (SPP). The one-to-64-way 1600 uses the same 120MHz PA-7200 RISCs as the 1200 but comes with up to four times as much (four-stage) cache plus new support for PCI bus, delivering a claimed 60% increase in SPECint performance and 50% better Linpack 1000 results. An SPP1600/CD compact configuration houses up to 16 CPUs with 4Gb RAM, delivering 3.8 GFLOPS peak performance. The SPP1600/XA comes with up to 64 processors, 16Gb RAM, delivering up to 15 GFLOPS. Each HyperNode (which accommodates up to 16 CPUs) has eight slots, of which four can be PCI instead of the existing Sbus. Convex has also stripped the hierarchical storage management solutions from its fading C series superminis and is offering the hardware/software combinations for use with SPPs or with HP's K-Class technical server lines. A two-way SPP1600/CD starts at \$106,000 - an eight-way SPP1600/XA goes from \$349,500. A K-Class storage server begins at \$285,000; the SPP1600 version is from \$600,000. Although all software will move transparently to the forthcoming 64-bit PA-8000-based SPP2000 (UX No 579), the company says it's not yet clear which parts of users' existing hardware configurations can be salvaged. The company expects to jump from the current SPP-UX operating system which is built upon a re-written OSF Mach AD microkernel plus an HP-UX personality for running HP binaries, to the HP/SCO 3DA Summit kernel, in 12 to 15 months.

PYRAMID TIES SMP AND MPP TO "BLUR" OLTP-DSS DISTINCTION

The key enabling technology for Pyramid Technology Corp's RM1000 Cluster Server configuration is a new board which allows the CPU bus in Nile SMP or clustered nodes to plug directly into the MPP Reliant RM1000 mesh interconnect (UX No 580). Previously, nodes had to be attached over SCSI cabling. In conjunction with Pyramid's 'virtual disk' technology, it dispenses with the requirement for discrete I/O subsystems and allows Nile systems to send messages through the 320Mbps mesh in parallel without CPU intervention, from the sender's to the receiver's memory. Nodes can be wired up to 80ft apart now; Pyramid's talking with two companies about adding fiber links to support greater distances. The overall effect appears very similar to Tandem Computers Inc's ServerNet technology and from a high-level perspective it is, though there "are fundamental differences at the low-level," Pyramid advises. Parent Siemens Nixdorf Informationssysteme AG is working on an add-in board due later this year that'll allow its RM6000 SMP servers to tie into the RM1000. New Nile and RM600s will come pre-configured - existing systems will use a backplane slot to house the \$25,000 board. Another key advantage of the RM1000 Cluster Server offering is that Pyramid will bundle its Oracle lock manager free of charge in with the merged Reliant Unix operating system, previously an additional \$20,000 item. Furthermore the company's Very Large Cache mechanism now allows users to allocate large amounts of cache to particular query tasks. It's actually cheaper to build clusters using RM1000 than creating shared SCSI Nile nodes, the company claims. The RM1000 can theoretically house up to 36 cells, where each cell can support six processor nodes, 24 disk nodes, cooling systems, four internal and four external SCSI buses and six Ethernet interfaces. Each processor node is either a single Reliant RM1000 processor node or a Nile SMP node. Each single Reliant RM1000 node supports one R4400, 1Mb or 4Mb cache, up to 512Mb RAM, two SCSI buses, and an interface to redundant mesh networks, Ethernet and cooling fans. Each Nile node has from two to 16 R4400s, 4Mb L2 cache, 4Gb RAM, an interface to redundant mesh networks, power and cooling. Each disk module has 2Gb or 4Gb capacity. Although the design will support more, Pyramid says that 16-way clustering is as high as it'll go for now, believing that will outpace most of the competition. The rationale for RM1000 Cluster Server is that it maintains the SMP programming model on Nile nodes, but at the same time allows parallel queries to be conducted across MPP and SMP nodes for data warehouse and decision support-type applications, alongside OLTP application which require fast and repeated access to smaller amounts of data. MPP vendors have tended to shy from OLTP configurations because of the poor resilience of SCSI cabling.

News in Brief

Hewlett-Packard Co's offering a Developer's Station hardware/software bundle incorporating an entry-level Model 712/60 Gecko workstation with 1Gb disk, 32Mb RAM, 17" colour screen, pre-loaded HP-UX, ~~SoftBench 5.0, C compiler and performance and analysis kit priced from~~ \$5,000. Upgrades to C++ SoftBench are from \$2,000 and to the entire suite start at \$2,700.

French PC-to-Unix house **Esker SA** is adding a 32-bit version of its Tun Plus TCP/IP and emulation package for accessing Unix applications from personal computers running Windows 95. A 32-bit version of its TunMail email system will ship in the third quarter.

FTP Software Inc's licensed Sunnyvale, California-based Cylink Corp's net-based security technologies (Hellman-Merkle and Diffie-Hellman) for inclusion in its OnNet TCP/IP stack products.

Interleaf Inc, Waltham, Massachusetts, will add a new \$25,000 BusinessWeb module to its Intellecte document management suite in April, allowing users to view documents across the Web in their original form rather than having them converted to HTML, posted and then constantly updated. Interleaf sees corporate Intranet users as key customers for the module. Users can access and view documents in any word processing package, Adobe Acrobat, PowerPoint, spreadsheets, PostScript, ASCII and any graphics format. Intellecte and BusinessWeb are built upon Interleaf's Liason API framework and is claimed to be compatible with the forthcoming Document Management Alliance specification.

HP's added some Internet performance and analysis tools for use with its PerfView and MeasureWare network performance management modules. A \$5,000 HP NetMetrix/UX Web Reporter can act as a service tool for troubleshooting network problems and as a planning and optimising tool. NetMetrix/UX Internetwork Response Agent and Response Manager are \$500 and \$4,000 respectively.

Pilot Software Inc has tapped ex-executive VP worldwide sales at Gupta Corp, Nicholas Birtles, as its executive VP worldwide sales. He reports to Eric Kim, Pilot president and CEO.

Systems integrator **Acropolis Systems Inc**, Milpitas, California will offer OEM versions of HP's AutoRaid storage called ASI-1200 DynamicRaid for use with Axil Computer Inc's AxilServer S/420 from March.

Integrated Micro Products Plc, the Nasdaq-quoted company making fault-tolerant Unix machines in Consett, County Durham, has won a £1m grant from the UK Department of Trade & Industry against a commitment to create 114 new jobs in the one-time steel town. The company, whose US base is in Dallas, will use the grant to move to new manufacturing facilities in Annfield Plain. Integrated Micro also plans additional offices and manufacturing facilities in the US over the next two years.

Peter Preuss, founder of **The Preuss Foundation Inc**, has stepped into the chair at **Network Computing Devices Inc**; former incumbent Ed Stiano has given up the post because of "time demands related to his increased responsibilities" as a Motorola Inc executive VP. He remains on the board.

Palo Alto-based **Legato Systems Inc** reports that **Apple Computer Inc** will bundle its Data Backup Utility for Unix (AIX version) with every network server Apple ships: customers will be able to back up one Apple network server to one attached tape drive, the company declared.

Java development engineers Kim Polese and Arthur van Hoff will speak at **Integrated Computer Solutions Inc's** IntraNet show at New York's Millennium Hotel between April 8 and 10.

Despite **Microsoft Corp's** objections, APIW, the ersatz Windows API concocted by its enemies has now been published and set on the fast track of the International Standards Organization to become exactly that - an international standard. ISO acceptance, unless Microsoft can unseat it at the country level, is expected in about nine months. The European Computer Manufacturers Association (ECMA), which has already declared APIW a standard itself and controls the ISO fast-track kickoff, anticipates having an extended second edition of APIW or ECMA-234 by December since what it has now is not the whole Windows.

Ron Smith, VP and general manager of **Intel Corp's** PCI Components Division is to replace Rob Reed as the company's senior VP and general manager, Semiconductor Products Group, who retires in May.

Five-year-old **Forte Software Inc's** red herring (IPO statement) shows the company made its first quarterly profit in the fourth quarter of calendar 1995 and has an accumulated debt of \$23.7m. It's offering 1,850,000 shares, looking at an offering price of between \$11 and \$13. It claims 100 customers of its three-tier application development environment.

Silicon Graphics Inc has a colour management component for its Cosmo Web development tools from **Sonnetech Ltd**, San Francisco, California, it says allows Web servers to capture the colour settings of a user's terminal and deliver colour data to that user.

General Automation Inc already has its Mentor database up on the system 3000 line and has now signed a four-year OEM agreement to carry the full NCR Corp Unix SMP line.

Tenon Intersystems Inc, Santa Barbara, California, is offering a PowerPC version of its MachTen BSD 4.4-for-Macintosh implementation.

BMC Software Inc's supporting an additional 16 applications in its Patrol management software (UX No 576), including SAP R/3, PeopleSoft, DCE, Dun & Bradstreet, Tuxedo, Microsoft SQL Server, Adabas, Progress, Red Brick, UniKix, Unify, ObjectStore, Encina and Essbase.

Softlab GmbH is now shipping version 2.2 of its Maestro II legacy application redevelopment environment and has installed former OLAP house Pilot Software CTO John Kopcke as its new CTO in Munich, Germany.

Sun Microsystems Inc's SunExpress unit has named VP of operations and chief quality officer Gerrold Walker as VP and general manager of SunExpress Europe.

Rational Software Corp, Santa Clara, California has added Visual Basic 4.0 to its Rational Rose family of software engineering tools. Rational Rose/Visual Basic supports round trip engineering with code generation, reverse engineering of OLE components, design differencing, the Booch'93 method and the Object Modeling Technique. Available in March, prices go from \$2,400.

Illustra Information Technologies Inc and **Verity Inc** have created an Illustra DataBlade module for Verity's Topic text retrieval engine that's available for Illustra Server.

Unison Software Inc's offering version 4.5 of its Maestro job scheduling package with a new extended agent for launching and monitoring jobs on MVS, OS/2, OSF/1 and NT platforms. Agents are priced from \$1,500 - the console from \$15,000.

As expected (UX No 564), **Gradient Technologies Inc** is shipping its DCE SysV software for Sequent Unix.

Sun Microsystems Inc will begin recommending Praxis International Inc's OmniReplicator bi-directional for use as data replication tool in its Decision Warehouse data warehouse programme.

Meantime, **Marinbridge Corp**, Ottawa, Canada, is to distribute Praxis International Inc's OmniReplicator bi-directional data replication software.

Baan NV says it is integrating some of its applications with **IBM Corp's** RS/6000s extending its long-standing partnership with the US computer company.

Manufacturing software shop **Avalon Software Inc**, Tucson, Arizona, has appointed ex-Marcam Software executive Louis Leuzzi as VP North American, Platinum Software's Peter West as VP marketing and Colin Phillips, formerly of Trinzic, as VP European operations.

Topsfield, Massachusetts-based **Software Partners/32 Inc** is offering a StorageCenter storage management suite for Unix in enterprise (\$6,250), workgroup (\$1,875) and personal versions with backup, restore, media management, archiving and administration modules. Up on HP-UX, AIX and Digital Unix.

HP CREATES SUN SERVER TRADE-IN PROGRAMME AS SUNBURST

Hewlett-Packard Co's adding a fourth competitive hardware trade-in programme, this time going for the big Unix one, offering Sun Microsystems Inc customer discounts of up to 20% when they turn in their servers for any HP 9000 model, including the Web Servers. The Sunburst programme will run through the end of HP's financial year in October, when the discount terms will be re-examined. HP's also tossing in five days of HP-UX 10.0 system administrator training per server, a claimed \$2,250 value. It's got other porting guides and HP-UX/Sun interoperability cookbooks in hand. HP says it's chosen to move against Sun now because its user base is doubly vulnerable; the remaining swathe of SunOS users will be Sunburst's low-hanging fruit whilst SparcServer 1000 and SparcCenter 2000 users looking at box-swaps to UltraSparc are its main focus. It also reckons "Sun has taken its eye off core business with its Java/Internet focus." It might be observed that the same reasoning could equally apply to HP. Its users are facing multiple Unix and chip-changes what with HP-UX kernel-level threads, the 64-bit 3DA Summit HP/SCO Unix (see back page), 64-bit PA-8000 and Merced, although the company claims all of its D-, K- and T-Call servers are already PA-8000-ready. It reckons Sunburst could bring it an incremental 5% revenue. (By the way, it says the Internet newsletter of the same name which periodically describes Sun products and technologies can only benefit from the publicity). HP's using Aberdeen Group numbers to claim a 49% (\$7bn) share of the \$14.3bn 1995 worldwide commercial RISC/Unix market, ahead of IBM with 19%, Sun 9%, SNI 6%, DG 4%, DEC 3%, ICL and Tandem 2% and others 4%. HP's other trade-in programmes are the mainframe alternative, which has been running for five years; the three-year-old DEC Attack campaign to win VAX users and the more recent AS400 Assault venture now claimed to have turned 3,000 AS/400 users to HP 9000s. HP says 16 of the top 20 AS/400 ISVs now have their applications on HP-UX.

TANDEM DESCRIBES LICENSING PLAN

Tandem Computers Inc is taking the model pressed upon Apple Computer Inc by those with 20:20 hindsight of licensing its technology up into the mid-range and high-end systems market, new chief executive Roel Pieper formally announced yesterday. As we've said previously, Tandem, which has already licensed its ServerNet interconnect technology to NEC Corp and Compaq Computer Corp, will extract the best technology from its database, networking and communications offerings to create products compatible with Windows NT and Unix. It acknowledges that this will mean that Tandem will find itself in competition with licensees offering its own technology, but says this will mean the technology will be used more widely on more computer systems. The wider use of the technology would mean that Tandem's Himalaya NonStop fault-tolerant systems and NT and Unix machines would be able to run the same applications using the same databases, Pieper said. Tandem will define its licensing strategy by April or May, he said. Former president of Bell Atlantic's Network Integration unit, John Losier is now senior VP worldwide sales and services, reporting to Pieper. Losier's predecessor Jerry Peterson has moved over to head the recently created ServerNet Business and Technology unit as the senior VP responsible for making ServerNet an industry standard and finding OEMs. William Heil is now senior vice president of marketing, Jeffrey Tonkel is VP product marketing and product management, Phil Johnson is VP president of human resources and Peter Selda is VP and general manager, strategic business partners.

INTEL RETREATS FROM SUPERCOMPUTERS

Intel Corp will stop taking orders for its i860 RISC-based Paragon supercomputer at the end of September, reports *HPCwire*. It'll continue to service and support users through 2001. The company will make smaller versions of the Paragon-based TeraFLOPS system it's building for the US Department of Energy available through third-party vendors. Intel started in the supercomputer business in 1984 with a group called iSC (Intel Scientific Computers). The systems used 80286 and 80386 processors. The iPSC/860 supercomputer came in 1990 and the MIMD Paragon system at the end of 1992. From its experience in the supercomputer world Intel was able to construct the Pentium-based Scalable Parallel Processor technology which it now offers to commercial MPP vendors. We're reminded of Intel boss Andy Groves words "nothing in this business lasts forever."

INTEL'S PENTIUM PRO TRIBUTARIES

Intel Corp, according to the *Microprocessor Report*, has resorted to the western US river system for its code names. Merced (P7), the 64-bit result of the Tahoe architecture that Intel and Hewlett-Packard Co are building, is already famous and now the *Microprocessor Report* has come up with two new ones: Klamath and Deschutes. It says Klamath is a cost-reduced P6 meant to put it into the mainstream early next year. Klamath is described as the P6 core with MMX multimedia extensions, improved to handle 16-bit Windows applications better than the Pentium Pro can now. The *Microprocessor Report* thinks it'll be a single chip, not two like currently, and probably have larger primary caches, maybe 32Kb each with an interface to special high-speed external SRAMs. The newsletter is looking for clock speeds of 233MHz, perhaps 266MHz, using a 0.28-micron CMOS process. (The Pentium Pro is built on a 0.35 BiCMOS process.) It appears that Deschutes is a 0.25-micron shrink offering the Pentium Pro a small sizer than it has now or than Klamath can offer, again paving the way to higher volume, lower cost. The *Microprocessor Report* is expecting 300MHz, probably 333MHz by the end of next year and premium price points. But it will be the mainstream product of 1998-99 and succeed the P55c in high-end notebooks. Deschutes' follow-on, expected in late 1997, is a widget the *Microprocessor Report* knows only as the P68 that might outperform Klamath by 50% and represent the high end through 1998. Merced comes in on top of that in late 1998. HP, the book says, is also working on what would have been the P8.

UNIPLEX RAMPS DOCUMENT MANAGEMENT CAMPAIGN

Now headquartered in San Mateo, California, Uniplex Software Inc is introducing version 2.0 of its OnGo Document Management System (DMS), claiming the software is functionally more sophisticated than other Unix solutions from Documentum Inc and Saros Corp, providing active information management in the areas of information state notification, intelligent information filtering and dynamic information collation by interest threads. Version 1.0 of the product has been out at a limited number of (non-US) OnGo Office sites for about a year. DMS is written in C++ and supports Microsoft OLE - it's also an OLE automation server - and the Open Document Management API. It's based upon technology from its acquisition of Boss Logic and few years ago, though substantially re-written. It uses HP OpenMail or any extended Microsoft Messaging Application Interface (MAPI), and includes a Windows95 Explorer-style Visual Library Navigator. DMS 2.0 is integrated with the company's OnGo Office server-based directory services, email, calendar and task management workgroup software. Prices start at \$650 per user on IBM, Data General, HP, Sun and SCO Unix and NT; with support for Windows and NT clients over TCP/IP. A DMS toolkit is available for developers. The company says technologies such as OpenDoc simply aren't of interest to its users yet. The CP Software Group-owned company is currently readying a Web/Internet strategy. A 2.1 maintenance release of OnGo Office is now available with an enhanced Windows front-end. Tom Fredricks is now on board as Uniplex president and COO from Recognition Systems.

AMDAHL CEO ZEMKE QUILTS

In a move which caught Amdahl Corp staffers by surprise, president and CEO Joseph Zemke resigned late Thursday night, sending an internal email quitting his positions and citing personal reasons for his sudden departure. As we went to press Amdahl issued a statement saying that he had resigned to "pursue other interests." Zemke joined Amdahl in 1985 as COO, became president and board member in 1987 and CEO in 1992. Amdahl veteran and chairman of the board Jack Lewis, credited with building up the huge cash reserves that Amdahl's got sorted away in its coffers (UX No 545) takes on the role of acting CEO until a replacement is found. Lewis was Amdahl CEO from 1983 until Zemke took over in '92. Sources we spoke to confirmed the "personal reasons" side of the story holds water. However, sources also say that there was an internal financial review, which suggested that the next quarters results are expected to be every bit as bad as the fourth quarter '95. It made a fourth quarter net loss of \$38.3m, including pre-tax write-offs of \$53.3m. The way we heard it, Amdahl's ECL (Emitter Coupled Logic) mainframe - a, hot temperature and expensive technology - remains Amdahl's main money earner, but since IBM Corp released its new cheaper but slower CMOS-based mainframes, Amdahl's mainframe margins have been squeezed. Amdahl's CMOS based mainframes are not due until July. The Sunnyvale, California-based company relies on its mainframe business to prop up its slowly improving, open systems servers and software, consultancy and applications development software business.

ICL INITIATES NEW ROOT-AND-BRANCH RESTRUCTURING

After five years of continuous restructuring, ICL Plc finds itself pretty much back where it started when it was acquired by Fujitsu Ltd in 1990, and has announced that it will start the process all over again - but this time going further and faster than ever before in its six years as a Fujitsu group company (UX No 580). Under the new plan, the volume products business-96 fiscal year to take account of the losses at ICL. It has its forecast of group current profit for the year to March 31 to the equivalent of \$1,520m from \$1,620m, and group net forecast to \$619m from \$857m.

Hands

Things did not really go to plan for ICL Plc last year. The UK systems and services company, 84%-owned by Fujitsu Ltd, thought the large restructuring effort it had been engaged in for the past three years was largely over. The previous chief executive Sir Peter Bonfield said as much a year ago. He also said that he would be able to name a date for flotation, but it was not to be. Sir Peter left for British Telecommunications Plc and his successor, Keith Todd appears to have shelved plans to even name a date for coming to the Stock Exchange. Fujitsu will not accede to a flotation until it is certain that the shares will be stable at least the 225 pence each it paid for them back in 1990. The company took a £152m restructuring hit last year, which, combined with an operating loss of £31m helped push pre-tax losses to £188m, against profits of £28m last time. Revenues were up 17% to £3,100m. The £152m breaks down into £48m to cover the cost of excess buildings, £25m for an inventory write-down and £79m other rationalisation costs, most of which is for redundancies. ICL is planning a £200m rights issue in June, completely underwritten by Fujitsu. Regarding the other shareholder, Northern Telecom Ltd, Todd said "convention would say they wouldn't participate," and the company is likely to sit on its hands. It is understood to be waiting to get shot of its existing stake when, or if, ICL makes it back to the stock market.

Plan

The plan to get back in the black is five-fold. Firstly, ICL will focus totally on systems and services. To this end, the volume products business, which sells personal computers and iAPX-86 and Unix servers will be set up as a separate joint venture with Fujitsu, with ICL retaining less than 20% of the venture. This will mean ICL will not have to consolidate its losses in the accounts, but will be able to take its share of any profits. The third move is to spin out D2D, the contract manufacturing business "in due course." Fourthly, ICL intends to build a global software business on the back of TeamWare, the company's answer to IBM Corp's Notes. It will be in the form of a partnership with Fujitsu, with joint development, promotion and sales. There are around 500,000 licences worldwide, with 200,000 of them in Japan, at the moment. Lastly, ICL is establishing an Interactive Services business, focussing on the design, content management and subscription management, and concentrating on the publishing, education and media sectors. The slimmed-down ICL will therefore concentrate on systems integration in the global retail market and European financial market; more general systems integration in commercial and government sectors; multi-vendor services and facilities management in Europe and multi-vendor distribution in the UK.

DEC's LARGEST ALLY PASSED \$30m TURNOVER MARK IN 1995

Digital Equipment Corp's largest Russian partner Ankey says its 1995 turnover was at \$30m. Among Ankey's other hardware partners are Tandem Computers Inc, Eicon Technology Corp, Lannet Data Communications Ltd, Cylink Corp, Oracle Corp, Informix Software Inc and Citicorp Information Technology Industries Ltd. Ankey was a major partner in DEC's contracts with the Central Bank of Russia and has now worked with the Central Bank in Moscow, Ryasanskaya, Vladimirskaia, Ivanovskaya and other regions of Russia. The Central Bank was Ankey's largest customer in 1995: it accounted for 40% of its turnover.

ORACLE ENHANCES OLAP LINE

Oracle Corp has added Express Objects to its on-line analytical processing (OLAP) Express toolset. It's also revamped its Express Analyzer data analysis tool. Express Objects uses Cambridge, Massachusetts-based Mystic River Software's Visual Basic-like Softbridge Basic scripting language (also used by Attachmate, Borland International, Cognos and Hummingbird) for OLAP application development and ships next month, priced at \$4,000 per developer. The Express Analyzer is \$600 per user. The Express family, bought for \$100m in cash from Information Resources Inc (UX No 543), now includes the multi-dimensional data modeling and calculation engine Express Server/Personal Express (formerly Express MDB); application development tools such as Express Objects and Express Analyzer (formerly ExpressView) and other applications including Financial Analyzer (FMS Planner) and Sales Analyzer (DataServer Analyzer). Oracle hopes to win a 50% share of the OLAP market in the long-term and claims to be distancing itself from the multi-dimensional OLAP versus relational OLAP squabble over whether OLAP tools should be based on a specialised multidimensional OLAP (MOLAP) database engines supported by the likes of Arbor Software and Planning Sciences, or whether multidimensional views can be added to standard relational databases (ROLAP) as with Informix's recently acquired Stanford Technology Group MetaCube. Oracle's Dave Menninger, director of product marketing for Express Technology, says the company takes the view that an either/or scenario is not the right approach. "It's generally accepted that MOLAP is much better at analysis and performance, he says, whereas ROLAP can deal with larger data sets.... most ROLAP vendors sell to IS departments rather than end-users. They don't acknowledge there is a market for analysis." At present, he claims, the Express computational engine enables SQL queries to be generated on the fly with data from the relational database not available in the multi-dimensional array being transformed and the cube filled dynamically. In Oracle's estimation it goes some way to crossing the MOLAP/ROLAP divide.

POWERPC ESCALAS IN \$50m BULL RUSSIAN TAX POLICE PACT

Compagnie des Machines Bull SA says it's won a \$50m contract with the Russian Federal Tax Police. The deal is the largest ever won by Bull in Russia and ranks as the largest computer contract signed by any computer company in Russia in 1995. The deal calls for a huge federal-wide system which will exchange data between tax offices across Russia. It will be used to verify the tax declarations filed by companies. The system includes all 89 Federal Tax Police administrative offices in the largest Russian cities. The Federal Tax Police is one of biggest administrative organisations in the Federal government, employing over 100,000 people. "This contract will be an important reference for Bull in other Eastern European and world-wide markets," says Manuel Plaza-Rodrigo, general manager of Bull Moscow. The deal was signed last year and some of the computers have already been delivered. The contract is scheduled to run for two and a half years. During this time the computers will be delivered in phases, the overall architecture of the system will be refined and the employees of the Federal Tax Police will be trained. Bull managed to line up governmental-level support for this huge contract. It is partly funded under the Russian-French International Protocol of 1992. The company says a group of French banks headed by Bank Credit Industriel et Commercial SA and the Russian bank Vneshtorgbank were also involved in the funding process. Though Bull will use sub-contractors in this project, the company says under the terms of its agreement, it cannot name them. The system has three tiers and includes 100 Bull Escala PowerPC-based multiprocessor servers running AIX, 600 Zenith Pentium-based Z-servers and 3,000 networked Z-Station personal computers. The database will be Oracle. The contract also calls for an integrated systems management facility and Bull will be supplying its Integrated System Management product. Bull also has extensive plans for training Federal Tax Police staff under the contract.

OSF ADDS DCE 1.2.2

As expected (UX No 579), the Open Group's Open Software Foundation group is offering version 1.2.1 of its Distributed Computing Environment, including support for C++ programming, enhancements to the DCE 1.1 implementation of NFS, additional NetWare file-sharing support and DCE Control Program extensions. In addition, some DCE prices have been reduced. Full re-distribution source upgrades to DCE 1.2.1 from 1.1 cost \$50,000. Limited distribution source licences have been reduced by \$5,000 to \$25,000. Client pricing remains \$2 per copy or \$100,00 for an annual buyout.

IBM HATCHES SEVEN MIDDLEWARE SERVER PACKAGES FOR AIX AND OS/2, SOME NT

The seven packaged software servers IBM Corp will hatch in its Eagle announcement next week will be delivered as 4.0 product releases which boil some 70 middleware offerings down to 16, available on CD-ROM or tape. IBM says the eaglets will provide for easier purchasing, pricing, installation, administration and support. Pricing for the Communications, Database, Directory and Security, Internet Connection, Systems Management, Transaction and Lotus Notes servers will be announced on March 26 or 27. All seven servers are available on AIX 4.1.4. ~~Everything but the System View-based Systems Management server will be up on OS/2 Version 4. Database, Internet and Lotus~~ are on NT. Transaction Server for AIX Version 4 includes the CICS for AIX V2.1.1 (CICS/6000) September maintenance release, new 1.1 versions of CICS Clients for OS/2, DOS, Windows and Macintosh, plus CICS Clients for AIX and Solaris. CICS Systems Manager for AIX (V1.1.0) is a new product for managing distributed and parallel CICS for AIX implementations - and those Encina functions that CICS for AIX incorporates - from a single point. It includes manager, agent, enterprise information base and GUI components which conform to the System View framework. IBM says it allows CICS for AIX 2.1.1 sites to be grouped together logically, so that they can be viewed, and actions taken on them, as though they are a single entity and that single system image is available for configuration, installation, and operations. It also includes a Corba-compliant programming interface to allow customers to integrate CICS with other object environments. A new CICS Internet Gateway for AIX (V1.1.0) will make it possible to access and run existing and new CICS 3270 applications using Web browsers without changing the application itself, IBM says. Also included is a CICS gateway for Lotus Notes (via an OS/2 client), its Transarc Corp subsidiary's Encina for AIX (V2.2.0) and a new 32-bit version of CICS for OS/2, plus CICS OS/2 clients for OS/2, DOS, Windows, DOS and Mac, CICS for OS/2 gateways for Notes and Internet. It runs on OS/2 V2.1 or later. Transaction Server for AIX Version 4 ships on CD-ROM or tape from May 3, the components cannot be ordered separately but users pay for what they use. CICS for AIX pricing's expected to remain close to the current \$3,500 for 10 users and \$350 thereafter. An NT Transaction Server eaglet is due by year-end. Other platforms, but not AS/400, are expected in future. Transarc will continue to offer Encina on other platforms. A

ESKER WINS VC BACKING TO RAMP US CAMPAIGN

With exports accounting for up to 70% of its 1995 sales, French PC-to-Unix house Esker SA has secured an undisclosed amount of VC funding from London, UK, and Menlo Park, California-based Thompson Clive Venture Capital to expand its US presence. It's currently up to eighty staff worldwide of whom twenty are in the US. It will add another twenty in the US this year. Esker claims pole position in the European Windows TCP/IP and Internet connectivity software market but has a bevy of competition from the likes of NetManage Inc, Cupertino, California with its Chamaleon/X software (UX No 566). Lyon-based Esker will retain its headquarters and research and development operations in France, CEO Benoit Borrit will relocate to US headquarters in San Francisco. Meantime the company says it will rev its Tun Plus TCP/IP and emulation package for accessing network Unix applications from PCs in September, and add other middleware and network management tools. It's looking towards an IPO, maybe as soon as next year.

DAZEL SDK FOR PRINT MANAGEMENT

Dazel Corp, the print management software house which has just won itself \$9.5m in third round VC funding (UX No 580), is shipping a Dazel SDK for Windows and Unix, allowing ISVs to integrate their applications with version 2.4 of the Dazel Output Management System, and Dazel Express client (UX No 565). The SDK can be used in conjunction with development tools from Powerbuilder and Dynasty, as well as production applications including SAP and Oracle. Dazel Output Server runs on SunOS, Solaris, HP-UX, and AIX. The Output Management System comprises the Output Server Unix core; Dazel Express client and Dazel Gateway for mainframe, NetWare and VAX connectivity. Dazel Express has been enhanced to include support for Windows 95 and NT. Dazel SDK for Windows starts at \$200 per developer, SDKs for Sun, HP and AIX are from \$500.

AMDAHL TURNS TO BULL FOR OPEN SYSTEMS MANAGEMENT

Amdahl Corp has inked a five-year licence for Compagnie des Machines Bull SA's ISM/OpenMaster systems management software. Amdahl gets rights to current and future versions of ISM software, and will put it through its 130-employee Enterprise Systems Management unit, targeting the IBM Corp MVS mainframe-compatible systems market, as part of a larger systems management strategy. ISM/OpenMaster will run on AIX, HP-UX and Solaris with agents accessing its MVS compatible systems. It already sells local area management products from Network Intelligence and modeling tools from SES Inc. It says it will add management services over time. ISM/OpenMaster is described as system-independent software for managing, controlling and maintaining personal computers, workgroups, Unix systems, mainframes, data and telephony networks, enterprise-wide security, and database management systems.

Transaction Server roadmap includes five stages of integration IBM hopes to achieve over the next five years. First is any-to-any client and server configuration, stage two will add C++ foundation classes, SOM and Corba API support. Stage three will provide advanced networking over TCP/IP, DCE directory/security support and interoperation via TRPC (X/Open Co Ltd's transaction Remote Procedure Call standard). Stage four will provide support for advanced transaction models, such as loosely-coupled arrangements and object request brokers (many of the functions already supported by MQ Series messaging). Stage five will move the server to support network-wide operation with relocation of objects and network-wide load balancing. Later this year IBM will add the ability for a Encina TRPC calls to invoke CICS transactions and vice versa.

- The Communications Server is designed to allow AIX and OS/2 workstations to communicate with S/390 and AS/400 hosts through a multiprotocol gateway for SNA and TCP/IP networks. It also provides Advanced Peer-to-Peer Networking (APPN) network node and end node support. Communications Server for AIX, Version 4 includes the existing SNA Server for AIX Version 3.1 product, plus common installation, single session 3270 host connection emulation, AnyNet APPC over TCP/IP Gateway and an APPC Non-Blocking API. It's due May 3 at from \$850.

- The Database Server consolidates DB2 Server, DB2 World Wide Web Connection and the DB2 Software Developer's Kit on each platform, in a single offering. Database Server is ready for OS/2 and AIX on March 15, with the NT version on June 28 at \$1,000.

- Directory and Security Server for AIX includes DCE 1.1 Base, Security, Directory Services and Tools and is due March 29. The OS/2 version will include DCE 1.1, and enhanced version of OS/2 LAN Server and new file and print sharing services. It's due March 29 at from \$4,700.

- Lotus Notes 4 shipped last December.

- Internet Connection Server is available now for AIX, on March 29 at from \$100; for OS/2 and on NT on May 3.

Betas

SystemView Server for AIX Version 4 is what was previously called SystemView for AIX Version 1 release 2 and is available March 29. It's the first of what IBM promises will be a series of Systems Management Servers. New features include SNA Manager/6000 (1.1), printing system manager and Info Gateway (a sub-feature of Trouble Ticket). Also now available are CICS Systems Manager, Nways Campus Manager Remote Monitor for AIX and Advance for AIX application manager for SAP R/3 and SystemView Agent (1.1) for AIX. There are betas of new performance monitoring modules for SNA networks applications and application agents. IBM's Tivoli Systems Inc products will be added as Systems Management Servers.

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Questionable whether this is a good idea - it encourages people to think the thing isn't worth anything: **Software AG** has done a deal with **Motorola Inc** under which the Tempe, Arizona-based Motorola Computer Group will bundle the Adabas D relational database management system at no additional charge with every PowerStack Series E server and desktop system it sells - the bundled version, for Windows NT or AIX, includes a five-user licence to create up to a 100Mb database.

This new-fangled **Open Group** is still without a boss although the headhunters came up with a reported 230 names and three serious candidates in their first swing through and are now said to have accumulated another hundred names. A successful candidate has to survive a challenging gauntlet of interviews to get the job, trekking around the country to see everybody who wants to have a say in the hiring. Even CEOs like **Hewlett-Packard Co's** Lew Platt and **Sun Microsystems Inc's** Scott McNealy are said to be involved not to speak of folks like **Open Software Foundation's** Ira Goldstein. Meanwhile, Open Group seems to have successfully staged its first joint meeting in San Francisco last week, with things settling down nicely and the mood optimistic. The OSF and X/Open Co Ltd boards are currently deliberating who's going to sit on the five-person Open Group board and will be doing so for at least the next few weeks.

Digital Equipment Corp's server group won 11 of Aim Technology's Hot Iron Awards - only 20 are given - in Aim's most recent competition. DEC says that's the most won by one company in the history of the awards.

Oracle Corp's third quarter edged over the \$1bn mark at \$1,020m, up 41% on the \$722 it did in the same quarter last year. Profit was \$146m against \$106m last time. The Americas market grew 46%, Europe, Middle East and Africa 31% and Asia Pacific 54%. It's splitting its stock three-for-two.

Mercury Interactive Corp says it'll take a one-time hit \$2.5m for its current fiscal quarter to account for the settlements it's had to reach with **Pure Software Inc's** Perfromix Software unit which sued it for copyright infringement, and with Mercury Communications Ltd.

Unisys Corp's hybrid mainframe-class server family - named Clearpath - that runs both CMOS and Intel chips plus legacy operating systems, Unix or NT is slated for an early April release (UX No 564). Unisys says we should understand Clearpath as allowing pieces of applications to be re-engineered and run on different and separate environments.

Hitachi Ltd apparently plans Java products in the third quarter.

Sun Microsystems Inc is demonstrating a prototype of its much hyped Network Computer on Monday in London.

Toronto, Canada **Platform Computing Corp** is shipping Version 2.2 of its Load Sharing Facility software for sharing workloads across network resources. Version 2.2 includes load distribution across wide area networks, job failover, dynamic server selection and added support for Cray Unicos, Linux.

IBM Corp says it's been trying to get some idea of how many real Unix sites there are with over 1,000 users. It says it's only been able to find five so far.

Inference Corp's trumpeting the fact that six help desk software vendors are embedding its CBR2 problem resolution products into their products; Bendata Inc, McAfee, Scopus Technology, Utopia Partners Inc, Vantive Corp and Workgroup Systems.

Informix Software Inc has a technology up and running internally it's calling Web 4GL that's said to dynamically build web pages. It includes graphical HTML editors and tag extensions for SQL queries and variable definitions plus support for Java, and soon VBscript, for use where tags can't be implemented.

The company's also supposed to have Web-based development technology ready to fly in a September release of its NewEra 3.0 graphical development environment which should be on a 3.x rev by then (UX No 579).

A Personal Universal Server (or Personal UDS) version of the Informix-Illustra Universal Server for Windows 95 is being readied.

China's apparently claims to have successfully tested its first mini-supercomputer, demonstrating that its computer technology has now reached top international standards. The story was reported in the official government newspaper *Liberation Daily*. The article noted that the computer, called an MSC mini supercomputer system, successfully passed a series of acceptance tests in Shanghai. Technical details, including speed and memory capacity, were not provided.

Hewlett-Packard Co says it is now shipping workstations configured with PA-8000 to key ISVs; it's not planning new desktop products until later in the year.

Hong Kong company **Pacific Technology Group** is creating a Business Objects Greater China subsidiary to peddle Business Objects technologies in the People's Republic of China as soon as Chinese language versions of the BusinessObjects front-end decision support tools are created. Business Objects SA has no stakeholding in the unit

Object Design Inc's now offering its promised OpenAccess tool which provides SQL access to data stored in its ObjectStore database. Queries delivered through OpenAccess return ObjectStore data as relational tables via a schema mapper that specifies correspondence between object and relational models. The administrator uses the schema mapper to code relational views of object data. OpenAccess also comes with an ISQL Tool for submitting SQL queries and an ODBC driver to for accessing ObjectStore through ODBC tools and applications. Prices start at \$10,000.

More than 2700 people have registered for Sun's Java cup. It is accepting submissions until March 31 and expects to receive the bulk of the submissions during the last week.

Cray Research Inc is to resell **The Portland Group Inc's** pghpf high performance Fortran compiler on its T3D and T3E Alpha-based MPP systems. Portland Group will also develop and support a programming model which merges Cray's Craft parallel development environment into pghpf. The development model will be available across all of Cray's systems and to Portland customers later this year. The two companies had already announced a plan to put PGI's Fortran product on Cray systems.

New York city-based **Magna Software Corp's** now offering its Magna X CICS Cobol generator for CICS/6000 (CICS for AIX), allowing developers to create the server side of three-tier applications for AIX and mainframes from RS/6000 server. Prices start at \$53,000 for a development server and five workstation licences - mainframe code generation costs from \$50,000.

DEC's Hubwatch SNMP interface for managing DEC networking hardware now supports HP-UX and Solaris (with an AIX version due in 60 days). DEC says it'll allow HP OpenView, SunNet Manager and NetView AIX users to more easily DEC networking kit into their network management environments. prices go from \$2,750.

Sun's Scott McNealy has reportedly been urging telecommunications executives to build Java into telephones and to provide high bandwidth for video conferencing over the Internet. "[The telecommunications companies] have core competencies in server rooms and in billing gazillions of transactions every day, and I want them to apply that strength to data networks," he told an Arthur Andersen gathering in Scottsdale, Arizona. "The telephone should have an IP address." McNealy said the industry should also be able provide what he called "data-tone" access from central switches over ISDN and asynchronous transfer mode data lines to PC and workstation clients, much the same way they provide dial-tone access to telephone customers today.

Sun's JavaSoft group has published its JDBC API spec for public review. The spec describes a standard SQL database access interface designed to provide Java programmers with a common interface to relational databases. JavaSoft expects JDBC will provide a common base to build higher level tools and interfaces. A revised spec should be frozen around mid-June. It's also readying a reference implementation of JDBC on the Microsoft Corp ODBC interface in June that'll allow JDBC applications to run using ODBC drivers.

SunSoft Inc says its Joe Java object request broker will be available two months from now. Its full-featured 'Crescendo' OpenStep implementation of the NextStep user environment on top of its NEO object environment is now expected in July.

America Online Inc has licenced Java from Sun Microsystems Inc. The two companies are to examine further cross-licensing and development agreements and AOL says as a result it may work with Sun to build tools which allow its developers to write Java applets that can be included in AOL services for animation and calculation purposes.

In response to those Rent-a-Cops that **Hewlett-Packard Co** made its new development arm in Florham Park, New Jersey to protect itself from security breaches by the **Santa Cruz Operation Inc** and **Novell Inc** units that inhabit the same building (UX No 579), the SCO unit has set out a life-sized paper cutout complete with hat and badge that it's dubbed the "SCO Sheriff."

Help! The information deluge has now swelled to a roaring flood and it's not just the press who are drowning. Everyone from CEOs on down are feeling it and floundering. Human beings can't cope with being constantly on "Internet time" and it's seriously impeding real productivity let alone constructive thought. So cool it.

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SUN AIMS FAIRLY CHEAP JAVASTATION 1 AT CORPORATE INTRANETS

Sun Microsystems Inc last week promised the world's first prototype of a network computer, but the network it was referring to was the Intranet, and the machine is not the cheap Internet access device that had been expected. Priced at anything from \$750 but more like \$1,500, the JavaStation 1, as it is known at the moment, will be out in around eight months with a microSparc II processor at its heart, until the UltraJava processors are available next year. It will have between 8Mb and 64Mb of RAM, 1Mb of Video RAM, a 15" or 17" colour monitor and a keyboard and mouse as standard. The Java Virtual Machine operating system - code-named Kona, and written from scratch in Java - is currently downloaded from the server, but the intention is to put it in Flash ROM in the production version. Sun predictably enough included its HotJava offering. The follow-up JavaStation 1+ will probably have a new box design, possibly including a disk drive. Sun UK Network Business Division director Martyn Lambert said a floppy drive was the main security risk inherent in a personal computer, but added that JavaStation customers could have a floppy drive if they wanted one. The next version will also have built-in loudspeakers, a higher performance Java processor and the Java server will likely be a Netra variant, Sun said.

UNIXWARE-ON-SPARC CANCELLED DUE TO LACK OF INTEREST

ICL Plc has abandoned its long gestating UnixWare-on-Sparc implementation and will instead continue to market its own Unix SVR4.2 MP-based NXV7 operating system on its RISC servers. Other Sparc compatible vendors - including Sun Microsystems Inc itself - showed no interest in the UnixWare-on-Sparc port, ISVs looked the other way and ICL's own SuperServer and DRS user base balked at the prospect of moving to the environment. Some argued that if they were going to have to move to UnixWare they might as well go the whole hog and jump to the Intel Corp platform. ICL has already completed the port and was supposed to introduce it at the end of last year. Undaunted, UnixWare owner Santa Cruz Operation Inc says it wins either way - ICL is a binary licensee of its UnixWare-on-Intel product and remains committed to a future merged SCO OpenServer/UnixWare OEM offering. Moreover SCO claims Unisoft Ltd has a demonstrable UnixWare-on-PowerPC port and is still looking for ISVs, even though the London-based company has previously said the project was effectively dead (UX No 565). Meantime the first of ICL's promised Ross Technology HyperSparc-based SuperServers will ship in the third quarter, replacing existing two- and four-way SuperSparc servers (UX No 534). The SuperServer Js will use 142MHz bin-end HyperSparcs, parts Ross couldn't get up to 150MHz. They come with 1Mb cache, double that of the 150MHz implementation, to which Sun has exclusive rights. ICL says it'll offer one-to-four way 200MHz HyperSparc units from the first quarter of next year, although it's not yet clear whether Sun will take up its first refusal of exclusivity on that part too. ICL claims to have shipped 2,300 Sparc-based servers in 1995.

X/OPEN CREATES SOFTWARE REGISTRY TO MATCH APPLICATION "PLUGS" WITH SPECIFICATION "SOCKETS"

X/Open Co Ltd's taking another run at trying to ease users' procurement decisions by creating a Software Registry of application "plugs" that work with architectural "sockets" conforming to its common application environment specifications, including Spec 1170 and the Common Desktop Environment. The Registry is the latest in a series of false starts for X/Open which has had little joy encouraging users or ISVs to test software against its specs. X/Open will make the Registry's information repository freely available to all users and is designing the thing to answer fundamental questions such as "what works with what?". The Registry will record details of what applications run on which X/Open-compliant platforms as well as which pieces of application code are dependent on other pieces and/or specific platform implementation, plus which APIs are called. X/Open hopes use of the Registry as part of users' procurement processes will encourage ISVs to test their applications against its specifications - using tools from companies such as MKS, Abraxus, Parasoft and Knowledge Software - and submit the results of testing to the Registry. A beta programme runs through June using a "Lite" version of MKS' Code Integrity API tester, which is a productised version of the TenDRA compiler technology developed by the UK's Defence Research Agency. The standards body - now subsumed under the Open group umbrella - believes the Registry process will help ISVs create a single version of an application that will run across multiple implementations of X/Open or other standard group's specifications. The hope is that with each new specification a standards body - X/Open, OMG or any other - will deliver an API database which can be made available to the Software Registry. One proposal is to include APIW - the ersatz Windows API concocted by the anti-Redmond brigade - once it's ratified by ISO. The next part of the jigsaw is to bring plug and socket testing into line. X/Open's already using Sun Labs' Assertion Definition Language (ADL) to generate API test suite documents for OMG's Corba 2 "socket," its first large-scale use of ADL. Although TenDRA's Ptech notation is currently incompatible with ADL's C-like syntax (UX No 561), X/Open says it won't take too much work to bring them together in a future rev of ADL supporting TenDRA and other test tool syntaxes. However there isn't much point in trying to match plugs to socket specifications that don't yet exist, it observes.

SUN GETS INTO FT: WILL PAY \$96m FOR IMP

Deciding it wants to add the UK company's fault-tolerant Unix niche to its product panoply, Sun Microsystems Inc has found its way to Medomsley Road, Consett and won a definitive agreement to acquire "substantially all" of the assets and liabilities of Integrated Micro Products Plc for \$96.1m cash. The County Durham company's \$50,000-to-\$200,000 ft-Sparc and Series-FT Motorola 680x0 and 88000 machines are currently sold almost exclusively to switch companies such as Fujitsu, DSC and Ericsson, as well as to Motorola, its largest customer. Sun said one of the reasons it was persuaded to acquire the company is that potential customers were unwilling to buy Sparc systems from a concern as small as IMP. Development of IMP's one-to-four way SuperSparc II system started at the end of 1993, it beta'd at the end of 1994 and shipped at the beginning of 1995. Sun made its approach at the end of last year. Following completion of the sale, IMP will liquidate as a legal entity, making a series of payments to shareholders expected to amount to about \$20.55 per share. It expects to take a hit of no more than \$0.15 against earnings. IMP floated on Nasdaq in 1993 and reported a loss on turnover of \$11.5m for the year to September 30th. Its first quarter revenue was \$5.1m of which Sparc system ships accounted for 44%; the rest were Motorola sales. The company plans no further Motorola-based designs. It expects to do \$25m this year. It will now operate as a business unit within SMCC's Enterprise Server & Storage Group. The company will retain its identity but the final trading name has yet to be decided. CEO Mark l'Anson will become vice-president and general manager of the new business unit. All 180 staff will be transferred to the new organisation, and the company will retain its Consett and Dallas locations. Under terms of its £1m grant against a promise to create 114 more jobs in Consett, the UK Department of Trade & Industry has to approve the takeover. IMP achieves fault-tolerance by hardware replication and software patented in the areas of failed modules and locking clock signals. It's currently working on an UltraSparc unit. As well as offering vanilla IMP boxes Sun's expected to build the fault-tolerant technology into other servers to target more aggressively the telecommunications market which is already worth \$1bn to it. It says Unix rivals such as HP and IBM have nothing that can compete with it and it'll also be going hard after Stratus and Tandem. It'll exploit the technology in its financial and Internet markets. By combining manufacturing technologies at its Scotland, Lillithgow facility with IMP's Consett plant, Sun will also leverage IMP's valuable Network Equipment Building Standard capability for other Sun products. One of IMP's key advantages is the processor-independent virtual machine layer it created to move to the Sparc architecture. Sun wouldn't say whether it'll offer the technology on other instruction sets as it's done with Solaris.

THE RUNNERS AND RIDERS IN THE GREAT VRML RACE - WHAT'S IT ALL ABOUT, VERMUL?

By Chris Rose

VRML, as it stands is pretty useless. The original Virtual Reality Modelling Language is only good for modelling realities where nothing changes, nothing can be touched, or moved. They are static, sterile worlds, useful for fly-throughs, and little else. The standard's progenitors were well aware of the limitations from the start and always planned to remove them. "VRML 1.0 was our way of trying to capture everyone's attention... VRML 2 is the real deal" says Rikk Carey, one of the fathers of VRML and Silicon Graphics Inc's director of VRML engineering. VRML 2.0 aims to be this fix, opening the way to multi-user worlds of movement, interaction and sound. Its fans also claim it has potential application away from the Internet, as a way for games designers or compact disk authors to define and build interactive three-dimensional worlds on stand-alone machines.

Hanging about

So is VRML 2 ready yet? Well no; in fact the specification process didn't get under way until the informal VRML Architecture Group's Request for Proposals closed on February 2. There are in fact six different proposals vying for the attention of the VRML community, or at least there were; late last week Apple Computer Inc announced that it would throw its weight behind the front-running proposal Moving Worlds. To introduce a measure of democracy, the VRML Architecture Group has set up a Web page on which the VRML community can vote for their favourite proposal. The polls closed on March 18 and on March 27 the Group intends to make its formal proposal for a VRML 2.0 draft. The group expects the whole thing to be finalised by July 14. They don't believe in hanging about. To call Moving Worlds the front runner is to do an injustice to its position. It is so far out in front that you need a telescope to see it. At the last count, Moving Worlds was in the lead with 74% of the vote. The proposal has the backing of 57 organisations, including Silicon Graphics, Netscape Communications Corp and Sony Corp - in addition, many of the luminaries in the VRML architecture committee itself are intimately involved in Moving Worlds' construction. As Wolfgang Broll, one of the architects behind the competing German 'Dynamic Worlds' proposal puts it "VAG and Moving Worlds are almost the same people." Broll is not terribly optimistic that many of his ideas will be included in the finished VRML 2 specification. In a nutshell, the differences between the proposals can be oversimplified into three areas. One: whether VRML 2 should be an evolution of the original standard, or whether it should begin again with something new and different. Two: Ascii or binary file structure? Three: how to cope with multi-user worlds? VRML files today are presented as ASCII text and can be written by a user with a text editor. The syntax is replete with descriptions of polygons, cylinders and cubes. Some proposals such as Sun Microsystems Inc's HoloWeb suggested junking this approach and giving VRML 2.0 a more "RISC-based" feel, where all complex objects are built from a few very simple objects - lines, three-dimensional dots and triangles. The resulting files would be easier for programs to parse, though virtually impossible to create manually.

Distant mountains

Sun and others further proposed that the format be saved in a more compressed binary format, rather than spacey, wasteful Ascii - it was a cry taken up by other proposals, and in particular Apple's, whose 3DMF Three-Dimensional MetaFormat binary file structure has now been adopted by Moving Worlds. When it comes to how the standard should support multi-user interactivity, there is another split. Some of the proposals suggested that multi-user behaviour should be integral to VRML 2. The Moving Worlds team strongly disagrees: "We believe that the multi-user aspects do not belong in VRML" said Silicon Graphics's Carey. He and his colleagues believe that external programming and separate multi-user communications protocols should be used to attain group interactivity so as "not to muddy the waters." Carey says that there are a number of initiatives already running in the labs which show how VRML2 can cope with many people. A thing called VRML+ is one such approach. Though there are many other arcane differences between the proposals, the important thing is that the debate about VRML's future is being conducted swiftly and in a very civilised manner. The VRML Group sees it as a collaborative rather than a competitive process - and says it intends that the best parts of everyone's work are bought together. Since Apple has now folded its work in Moving Worlds, its Three-Dimensional MetaFormat binary file standard will be sucked in. It is likely to be joined by aspects of Sun's HoloWeb work into geometry compres-

sion and scaling. Assuming for the moment that VRML 2 will end up looking rather like Moving Worlds (and Rikk Carey has to keep correcting himself when he pre-emptively calls it VRML 2), it's worth looking at what it offers developers. As with VRML 1, Moving Worlds defines its worlds in terms of "nodes." A node can represent anything - it could be a thing, like a sphere, it could be a piece of script describes a certain piece of behaviour (such as a rotation, or a switch node). Moving Worlds basically adds several new types of node to VRML. Starting with basic graphics, it is now possible to create ground-and-sky backdrops to scenes, add distant mountains and clouds, and dim distant objects with fog. Currently VRML worlds stand on flat, quiet cyberspace plains, but Moving Worlds adds sound generation nodes and irregular terrain. Moving on to interaction, new "sensor nodes" set off events when the user moves in given areas of a world, clicks on an objects or drags it about.

Light switch

Another kind of sensor keeps track of the passage of time, providing a basis for everything from alarm clocks to repetitive animations. New collision detection properties ensure users no longer walk through walls, while terrain-following enables them to travel up and down steps or ramps. Animation itself is accomplished by new "script nodes" which can be used to give objects or creatures the semblance of intelligence. A script takes input from sensor nodes and then makes changes to other nodes as required. So, if you click on a little light switch, that click will be registered by a sensor node, which will send the event to a script node, which will send a message to the node that looks like a light bulb, changing its colour. It may even go further, triggering other script nodes that will result in the virtual dog waking up and barking. In summary, the authors believe the language is rich enough to describe anything you will need to find in an interactive, immersive three-dimensional world.

SOFTWARE AG GETS OBJECT-RELATIONAL ENGINE FROM O2

O2 Technology Inc is porting its ODMG-compliant O2 object engine layer on to Software AG's Adabas D relational storage manager to create an Object Relational system which Software AG will market. The work is being done as one part of the OCBA Esprit projects with Inc conjunction with CAP Sesa Telecom (which is using the technology for a 49Gb phone directory) and Mannesmann as well as Software AG. A new Adabase D API will allow O2 objects to be stored in the Software AG database. The project is similar to the work O2 is doing with Unidata Inc to integrate the O2 engine with Unidata's nested relational database form (UX No 537). O2 expects to get improved OLTP and high availability support from the project, plus it'll be able to support native SQL queries.

NEXT SPURNS NETSCAPE FOR MICROSOFT

NeXT Software Inc's Steve Jobs isn't saying exactly why he walked away from Netscape Communications Corp, seen as NeXT's natural ally in an anti-Microsoft Corp front, and turned up at Redmond's ActiveX rollout to declare he has the best tools to develop ActiveX applications, but he made it pretty clear last that there's bad blood between them. Admitting that NeXT tried to cut a deal with Netscape and failed, he sounded bitter when he said, "Netscape is treating us exactly the way you might expected Microsoft to treat us." Then he spelled it out: Microsoft is supposed to be the giant ready to crush anyone in its way, and Netscape is supposed to be the hot wheeler-dealer start-up on its way up the ladder and allying wherever it can, but instead he found things exactly the reverse.

X/OPEN CEO RESIGNS, AS OPEN GROUP CHOOSES ITS INDIANS, BUT STILL NO CHIEF

Having seen the organisation through to its merger with Open Software Foundation, Geoff Morris, president and chief executive of X/Open Co Ltd since its inception in 1984, is resigning from the end of next month to pursue other business interests. Morris says he wants to "get back into the for-profit world and into the software products industry." He expects to surface at a Web/net-based company. He'll continue to act as a consultant to the organisation. "X/Open was created around operating system environments, is focused on interoperability and now faces the challenge of integrating with the Web and the net," Morris says. OSF acting president and CEO Jim Bell, currently on loan from Hewlett-Packard Co, becomes interim CEO of the Open Group as well as president and CEO of X/Open until a permanent replacement is chosen from one of three contenders now expected to be appointed within two months. Bell says the group extended its six month recruitment search by two months because of an additional 130 nominations its received in the past six weeks, bringing the number of candidates put forward for the job to 330. Whoever is finally chosen will work with a board whose composition isn't yet decided. A management team selected to report to Open Group headquarters in Cambridge, Massachusetts includes X/Open's Allen Brown, who will manage business operations and the group's European site (ie X/Open); OSF's Norma Clarke, who'll oversee finance and administration; OSF's Ira Goldstein, now responsible for the re-named Open Group Research Institute; X/Open's Mike Lambert, responsible for specifications, architecture and standards development; OSF's David Lounsbury, responsible for collaborative technology development (PSTs and other); and OSF's Peter Shaw, who leads a single worldwide marketing and sales organisation. X/Open's Jeff Hansen assumes responsibility for worldwide corporate communications and brand marketing. Bell says Open Group hopes to retain all OSF and X/Open staff though he himself expects to return to HP once a full-time CEO is installed. Meantime, although we were told by folks on one side of the house that the OSF and X/Open names would probably be phased out long-term, Bell says that's not the case (UX No 478). The organisations remain as separate legal entities under the Open Group for the foreseeable future in any case.

Inbound marketing

Open Group's forthcoming projects include the X/Open Security Branding programme (UX No 576), and an OSF DCE certification programme, both expected in May. Longer-term initiatives include a requirements analysis programme, or "inbound marketing," a common documentation project, the formation of a European executive inner circle of CIOs, expansion of ties with other organisations, including the World Wide Web consortium and the formal standards bodies, expanded technical development, and expansion into vertical market programmes such as specification and technology development for the financial services industry. Users' requirement list includes security - which will be addressed in May - and definition of a common architectural framework. Open Group says it has adopted the US Department of Defense Technical Architecture Framework for Information Management (TAFIM) already endorsed by X/Open (UX No 548). Interoperability will be addressed through a common testing programme run by X/Open's James de Raeve. Other projects include development of an open client interface for clustering PCs and servers, development of X/Open's Vision 2000 Internet and Web programme, and distributed systems management offerings based upon X/Open's long-gestating definition work; apparently "it's still trying to decide what's going on in the area."

NCR RESTARTS DATA WAREHOUSE CAMPAIGN

Once again allowed to refer to itself "the Teradata company," NCR, the granddaddy of data warehousing, this week becomes the latest vendor to unwrap a strategy it claims will put it "back in data warehousing in a big way." NCR, currently de-merging from AT&T Co, says it will begin targeting the huge percentage of potential data warehouse customers for whom its famed high-end, multi-million dollar, terabyte-size MPP solutions are not an immediate option with a Scaleable Data Warehouse programme. Up to 80% of potential warehousing customers, it believes, are medium sized businesses or individual departments in large organisations currently exploring warehouse strategies. A further 15% are organisations that have already decided to implement warehousing but expect to prove the solution beginning in one specific area of their business. Only around 5% of the market is ready to launch itself headlong into large-scale warehousing solutions. Indeed, Meta Group has found that 88% of companies making an initial investment in data warehousing have databases under 100Gb.

Prototype

A 15-day First Step sales programme is targeted at the 80% of potential users. It's designed to show organisations the benefits of data warehousing, using their own data, without building an actual system. NCR will provide evaluation hardware (a 4100 server), software (relational database and MicroStrategy query/analysis tools) and training for prototyping a solution. Prices go from \$30,000 to \$50,000. A RightStart program, targeted at the 15%, is a departmental - or data mart - solution designed to allow users to "take the plunge" on a limited scale. Implementation is guaranteed within 90 days. RightStart includes NCR's data warehouse discovery, design, solution readiness, implementation and support and enhancement services. Hardware includes a Unix-based 5100s SMP server with Teradata, Informix or Oracle databases plus data transformation and information access tools. Prices go from the low-\$100,000s to \$1m. The Custom Engagement is NCR's full-scale data warehouse solution programme.

Second-tier

NCR's signed a slew of third party ISVs for the programme, including Andyne, Apertus, Business Objects, Carleton, ETI, Holistics, Informix, Kenan, Microsoft, MicroStrategy, Oracle, Powersoft, Prism Solutions, Red Brick, Software AG and Sybase. It's got a shopping list of others it wants on board. NCR says it's abandoned its previous strategy of doing extensive warehouse interoperability and testing work with one or two partners for a higher-level scatter gun approach. It's found that potential programme customers are more concerned with breadth of choice than having one or two specialist options to hand. NCR, which describes the data warehouse as a "process not a product," believes that only IBM and Tandem have solutions which compete with Teradata at the high-end of the \$2bn data warehouse market. It describes the HPs and SNI/Pyramids of the world as second-tier players. It says it has shipped 400 data warehouse systems, 50% of them with databases over 100Gb. It's currently trying to figure out how Windows NT will play in its data warehouse offerings - which Unix-only now - expecting its first use will be for data marts. NCR recently outgunned IBM's TPC-D (decision support) results, recording 216.9 TPC-D power (QppD) and 170.1 TPC-D throughput (QthD) at a price/performance mark of \$28,272 (per QphD) running a 100Gb Teradata V2R1.1 database on a five-node, eight-way (40 processor) 5100m Unix MP-RAS 3.0.0 server. IBM recorded 207.01 performance and 85.58 throughput at \$33,640 per QphD on a 32-way SP-302 running AIX 3.2.5 and DB2 PE 1.1.

HP TO DUMP ADOBE POSTSCRIPT FOR CLONE FROM 1997

Adobe Systems Inc dropped a bombshell into its first quarter financial report last week, disclosing that Hewlett-Packard Co will cease to incorporate its PostScript printer command language on some future LaserJet printers beginning in the second half of 1997. Instead HP will licence one of the PostScript clone implementations, which insiders say will allow HP to build much cheaper printers. At between \$300 and \$600, PostScript is considered an expensive add-on item for printers now in the \$1,000 range that HP markets primarily on price, even if toner, paper and other service costs mean the eventual ownership cost are much as ten times the purchase price. The market is also expected to heat up considerably when, as reported elsewhere, IBM introduces its own desktop printers later this year. IBM Corp's former Lexmark International Inc business uses a PostScript-compatible technology in its printer family. HP's decision could wipe out as much as 5% of Adobe's business in one fell swoop. Adobe says its LaserJet products accounted for \$38.1m of its \$762m 1995 revenue. Observers say the move is also a big win for Microsoft Corp whose TrueType family of fonts currently compete with Adobe's font technology. HP entered the PostScript printer market to win market share from the number two supplier, Apple Computer Inc, with printers designated with an "M" for Macintosh, such as the latest 5MP. Most applications running on the Macintosh operating system use PostScript, considered to be a superior method of putting dots on a page than HP's own PCL printer command language. Adobe reported first quarter net profits down 6.9% at \$33.7m, on revenue that rose 2.5% to \$193.6m. Net earnings per share were \$0.44.

NOVELL-EX JAN NEWMAN FORMS KEYLABS TESTING LABORATORY

Jan Newman, formerly the executive vice-president at Novell Inc's NetWare Systems Group, has formed a new company in Provo, Utah, KeyLabs Inc. The aim of the new company is to provide professional testing services for Internet, client-server and network multimedia computing environments with the goal of establishing itself as the industry's premier network test organisation by delivering a broad set of services in conjunction with an advanced, flexible testing facility. KeyLabs reckons it is the only independent lab focused exclusively on testing heterogeneous network systems; it is populated with "hundreds" of workstations capable of thousands of connections to a variety of industry-standard servers. There is also network equipment supporting all the standard protocols and topologies.

HYPERMATION JOINS THE RUSH TO LOW-COST INTERNET ACCESS DEVICES

Atlanta, Georgia-based Hypermation Inc has announced net.TV, an Internet access device that will join the growing ranks of the television set-top box brigade. The device is connected to a television set and a standard telephone line to provide cheap and easy access via the World Wide Web using HTTP and HyperText Mark-up Language. It measures 11" by 8.5" by 2.7", will use a 25MHz iAPX-86 processor from Intel Corp - the embedded 80386EX, presumably - and has 4Mb of memory, with an optional 120Mb hard disk drive. The device will provide additional services bundled alongside the Internet access, such as news, address book and diary facilities and electronic mail. It will be operated from an infra-red remote control mouse, or an optional remote control keyboard. Upgrade features include telephone answering machine and facsimile capabilities. A parental control module will enable information from both the Web and Hypermation's news service, Usenet News, to be censored from within the home. Ravi Periasamy, vice-president of development, said the company is looking into other applications, including putting Sun Microsystems Inc's Java language up on it. Hypermation will unveil the system later this month, and hopes to begin beta tests soon after. Expected retail price is \$400.

EIDOS SHARES JUMP ON VIDEO CODEC DEAL WITH ORACLE

Shares in Eidos Plc soared last week on news that it has won a non-exclusive technology licensing agreement from Oracle Corp, which has bought a licence to Eidos's Software Codec video compression technology and gets the right to incorporate the technology "in a wide range of products." The agreement does not preclude Eidos from licensing the technology to other companies on an OEM or value-added reseller basis. The company declined to comment on the value of the deal. Eidos claims that it is reaching the point where an entire movie can be compressed so that it fits onto today's CD-ROMs, and can be played back at about VHS quality.

IBM APPOINTS SYSTEMS SOLUTIONS CHIEF PALMISANO TO RUN PC CO

Samuel Palmisano, head of IBM Corp's services subsidiary has been named general manager of the PC Company. The position was vacated by Bruce Claflin who went off to run DEC's PC business some months ago. Senior VP and group executive Robert Stephenson, to whom Palmisano reports, has had primary responsibility for the unit since then. Palmisano was president and CEO of IBM's successful Integrated Systems Solutions Corp and is replaced by Douglas Elix, formerly general manager of IBM Australia/New Zealand. Elix reports to Dennie Welsh, general manager of IBM's \$20bn Global Services operation. The PC Co suffered an estimated \$1 billion loss in 1994, though under Richard Thoman - now IBM CFO - and Stephenson, the unit has clawed its way back to break-even or better.

NOW IBM UK BUYS ISL INTEGRATED SERVICES

IBM UK Ltd has snapped up another computer services company, albeit one considerably smaller than Data Sciences Plc (UX No 580). It is ISL Integrated Services Ltd, a small maintenance company with £4.3m turnover last year; terms were not disclosed. Hatton Cross, Middlesex-based ISL does maintenance on IBM and other mainframes and will be subsumed quickly into IBM Global Services. It employs 41 in the UK and 11 at its Nordic Integrated Services AB, Stockholm, Sweden.

APPLE FORMS DEDICATED INTERNET UNIT

Apple Computer Inc has formed a new organization dedicated to Internet products and strategies and has appointed its chief scientist Larry Tesler to run it as VP of Internet platforms, reporting to David Nagel, senior VP worldwide research. Tesler, who remains chief scientist, will oversee an Internet products and business development unit which forges alliances with other Internet companies; an Internet engineering operation which develops Internet-specific products; and an Internet program office which will coordinate Internet-related technology projects. Apple has also joined the World Wide Web Consortium. It's already announced its intention to contribute specifications for its type technology (in conjunction with Adobe and Netscape). It is also considering submitting its 3DMF file format for three-dimensional graphics. The company wouldn't comment on a report in the *San Francisco Chronicle* suggesting it has bagged one of the top PC makers to build a stripped down version of the Macintosh using Intel Corp parts that might retail for half the price of a PowerPC model, perhaps as little as \$1,000. The Mac Licensing Design is a cut-down version of the PowerPC Platform which will support Unix and NT in addition to Mac.

NOVELL LICENSES SUN'S JAVA FOR NETWARE

Novell Inc of Provo, Utah has closed a deal to license Sun Microsystems Inc's Java programming language which it will embed into its Netware network operating system by end 1996 enabling software developers to develop Java applications. The agreement also allows Novell to offer users complete access to Java technology, including the Java Virtual Machine. A Sun spokesperson said the deal was a "reminder that Java isn't just for the Internet and applies to other networks too". Also yesterday, Novell said it had licensed technology from Open Market Inc, which develops electronic commerce solutions for the Internet and Intranet.

NCR PUTS TOP END UP UNDER MVS

IBM Corp has been sowing versions of its CICS mainframe transaction processing monitor like wild oats among a string of Unix and desktop operating systems, and now NCR Corp is returning the doubtful complement by putting its Top End transaction monitor - strangely dubbed client-server middleware - up under IBM's MVS operating system. The aim is to "help customers to simplify the development and administration of applications across their mainframe and distributed systems." NCR's Top End Remote Server for MVS is designed to enable transparent access between Unix and Windows NT systems and applications and services on the MVS mainframe. Top End Remote Server for MVS enables transactions originating on the mainframe to be shared with NCR WorldMark systems, and servers from Hewlett-Packard Co, IBM Corp, Sun Microsystems Inc and others that support Top End. Available next quarter, Top End Remote Server for MVS is being piloted by "a large Swiss-based financial institution as a framework for integrating their MVS-based transactional payment processing system with their Unix environment." The company did not give any prices for it.

INTERNET MARKET WILL GROW TO OVER \$200 BILLION BY 2000

The worldwide Internet market will show a 76% growth rate over the next five years, according to Input, an IT market research and consulting firm based in Mountain View, California. In a market sometimes characterized by Web site skepticism, the expectation of Internet users is that over \$200 billion will be spent on Internet hardware, software and services. The largest contribution to the Internet market will come from services, rather than software and hardware. Services & systems integration represents the largest Internet opportunity and is expected to grow at a CAGR of 78% to \$54 billion in 2000. Worldwide Internet Market, 1995-2000 focuses on all of the Internet markets and breaks them down into systems software, applications software, turnkey systems, professional services & systems integration, network services, processing services, outsourcing, hardware, and maintenance & support services.

ELLISON, MILKEN FORM EDUCATIONAL TECHNOLOGY

Oracle Corp chairman Larry Ellison has teamed up with notorious one-time investment banker - and by all accounts a reformed character - Michael Milken to form a company to apply technology and entertainment to making education easy. The new Educational Technology Inc bought a stake of less than 5% in Hasbro Co with a view to designing software around Hasbro toys, and may write software for Oracle's Network Computer. Promoting friendlier access to educational materials "is a passion with me," Milken told the *Associated Press*.

SYBASE OFFERS OBJECT ACCESS TO RDBMS

Sybase Inc's offering ObjectConnect for C++ and ObjectConnect for OLE gateways to provide read and write access to data stored in its database from C++ and OLE object-oriented applications. ObjectConnect is a vanilla implementation of Persistence Software Inc's object-to-relational mapping and code generation technology (UX No 573). Persistence promises a new version of its software which implements ODMG C++ access APIs in the third quarter. It also plans to support the Java JDBC, though a mooted Smalltalk version has been left on the floor. A Sybase-centric version is underway which the company says will make its key data caching technique look like Sybase's caching mechanism. Indeed Persistence claims the data caching technology will lead it into the emerging transaction application server market ahead of rivals and will be the leaping off point for an eventual IPO. The company says it's not looking for a buyer, claiming to have rejected bids from four suitors last year and three this year already. It's got other Web and Internet enhancements in hand. Both ObjectConnect products - the OLE version is Sybase's own work - include an Object Builder which maps relational data to object classes during the development process and an Object Service runtime environment allowing the applications to run once deployed. The objects are compiled and linked into a C++ application or accessed via an OLE Automation Server provided in ObjectConnect for OLE. ObjectConnect for C++ will cost \$8,000 for Unix developers, \$6,000 for Windows, and \$10,000 for the server, on HP, IBM and Sun Unixes and NT. ObjectConnect for OLE is due in the third quarter priced from \$2,500 for Windows developers - \$1,500 for server access.

ROGUE WAVE REVS TOOLS ENVIRONMENT TO SUPPORT STANDARD C++

Rogue Wave Software Inc has a new version of its Tools.h++ C++ development environment which offers an interface to support the new ANSI/ISO Standard C++ Library, plus additional Standard-compatible collection classes. Rogue Wave says Tools.h++ 7.0 determines whether the Standard C++ Library can run in the developer's environment and - depending on its availability - uses either the Standard C++ Library or a Tools.h++ implementation. 7.0 will be shipped by the major compiler vendors that support the Standard C++ Library. HP, Sun, SGI, SNI and others have licensed 7.0 and Rogue Wave's Standard C++ Library implementation. 7.0 also includes five new collection classes extending Standard C++ Library; persistent template classes, non-intrusive persistence (allowing developers to make their own classes persistent without having to inherit from a Rogue Wave root class), support for Posix-compliant and variable length expressions, new template classes, and an endian stream binary format for exchanging data among DOS, NT, Windows 95, Unix, OS/2 and Mac environments. 7.0 is priced from \$400. Maintenance is \$200. Rogue Wave's Standard C++ Library is \$200 - maintenance is \$200. A bundle of the two is \$700 through to May 31.

SGI REVAMPS PACKAGED INTERNET OFFERINGS

Silicon Graphics Inc's re-launching its existing WebForce Internet workstation and server bundles as pre-packaged hardware/software engines for Intranet-in-a-box development (UX No 523). Software includes an Intranet Junction Web site builder, the Cosmo content management and visualisation tool (UX No 569), the Netscape Suitespot Web server series, plus WebMagic, and VRML WebSpace Author development tools. SGI already counts BBN Planet, Claremont technology group and EDS as Intranet integration partners. WebForce is available in three packaged bundles using Indy desktops and Challenge servers starting at \$13,000 for a workgroup solution and at \$20,000 for an enterprise package.

UNIKIX SUPPORTS DESKTOP DEVELOPMENT ENVIRONMENTS

From July, Windows desktop developers will be able to create applications for use with Bull HN Information Systems Inc's UniKix Technologies CICS emulator using a new ECI/EPI (External Call Interface/External Presentation Interface) client. The client supports Windows, NT and Unix clients. Applications developed with Powerbuilder, Visual Basic and other desktop development tools can be used against UniKix OLTP applications running on any of UniKix's 16 Unix ports. The client uses IBM CICS interfaces, allowing IBM CICS clients to interface with UniKix application servers. The company says the EPI interface allows graphical client software to interface with existing 3270 data stream UniKix applications with the need to change existing applications.

NETSCAPE BUYS INTO ITS VOICE COMPRESSION SUPPLIER

Netscape Communications Corp has taken an undisclosed stake in Skillman, New Jersey-based voice-processing software development company Voxware Inc. Netscape is already building Voxware's digital voice technology, including the RT24 voice compressor/decompressor and ToolVox for the Web, into its LiveMedia audio/video framework, with the aim of providing low-bandwidth speech transmission from within Netscape Navigator. ToolVox for the Web allows users to embed, and listen to voice on the Web. The company has already announced a TeleVox duplex Internet telephone and a ToolVox for Multimedia digital voice tool kit for multimedia developers.

CLARIFY ACQUIRES SALES PROCESS MANAGEMENT COMPANY METROPOLIS IN \$13.2m SHARE-SWAP

Customer support companies are diversifying rapidly into related industries and last week San Jose, California-based Clarify Inc announced that it is to acquire sales force automation software company Metropolis Software Inc in a share swap deal which values the Palo Alto, California-based company at \$13.2m. It's partly a catch-up play by Clarify, which doesn't currently have a field sales process application like rivals Vantive Corp and Scopus Technology Inc. Clarify executives told us it canned an internal development project it was working on in the area in favour of the Metropolis software. Recently-quoted Clarify will report a one-time charge of \$1.5m to \$2.0m for the acquisition of Metropolis - which made a loss on revenues of \$3.5m last year - in its second 1996 financial quarter, which is being accounted for as a pooling of interests. The share swap increases the number of outstanding Clarify shares by 4%. Its re-stated 1995 results will show net profits of \$950,000 on revenues of \$24m. Earnings per share will fall to \$0.11 from \$0.19 and the company expects its first and second quarter earnings to be around three cents lower than original estimates, recovering in its third and fourth quarters. It says its 1997 revenue and profit plans could increase by up to 15% as a result of the acquisition. Metropolis' 40 staff will be relocated to San Jose and Craig Jorasch, Metropolis co-founder and CEO becomes Clarify's VP business development. The Metropolis Sales suite of sales process management applications is being renamed ClearSales. ClearSales is being integrated with Clarify's ClearHelpdesk, ClearSupport and ClearQuality modules though it's expected to take between three and six months to get it working off a common Clarify database. Metropolis also brings its laptop real estate management software which Clarify will use to enhance its mobile offerings. Although it's playing catch-up in field sales automation, Clarify says its new logistics and Internet-based product offerings put it ahead of the customer support pack overall. It counts Microsoft Corp as one of its big customer wins. The hot topic in customer support systems this year will be Internet/Intranet support and proactive customer management utilities, it believes.

SUN OFFERS NEW RELEASES OF SHOWME TV, SHOWME TRANSMITTER

Sun Microsystems Inc's Sun Microsystems Computer Co last week came out with a new version of its ShowMe TV and ShowMe Transmitter software designed to improve video broadcast for university and education, employee training programmes "and professionals needing up-to-the-minute news broadcasts." ShowMe TV 1.1 provides full-motion video playback of MPEG-1 files on Sun workstations, enabling users to view live or pre-recorded programmes in a revisable window from sources including local or remote hard disk, CD-ROM, Sun MediaCenter Servers, or ShowMe Transmitter 1.1; MPEG-1, RLE, JPEG and CellB compression are all supported. When used with new Sun MediaCenter Servers, it is claimed to provide video cassette recorder-like functionality when viewing MPEG-1 videos, Sun says. It is aimed at companies seeking to use video technology to reduce costs in areas such as employee training, and can be used to help employees stay updated on internal and external developments via applications such as interactive kiosks. ShowMe Transmitter 1.1 supports the new Real-time Transport Protocol for efficient transmission of audio and video across a network. It can broadcast video and audio from a standard video source such as a tuner or camera connected to a SunVideo board or audio-video file, to any Sun workstation on the network. With the new RTPv2 broadcasting protocol support included in ShowMe Transmitter 1.1, videos can be efficiently transmitted over the network to an individual or multiple users, the company promises. ShowMe TV 1.1 is available now at \$200 for an individual user licence; multiple user licences are also available. ShowMe Transmitter 1.1 is also available now, and the price for it is \$2,200 with one right-to-use licence for ShowMe TV 1.1.

EUROPORT DEMONSTRATES THAT PARALLELISATION IS AN ANSWER; IF SOMEONE ELSE IS PAYING

By Joanne Wallen

The European Commission is convinced that, in this age of cost-conscious, time-conscious, customer-focused business, the use of high performance parallel computing will bring huge benefits and a competitive edge to European business. But in order to convince people that this is the case, a Catch 22 situation has to be addressed. While parallel computer hardware is available, there is very little software to exploit its potential. Application developers argue that there is no end-user market for parallel code, and end users feel there are no applications to run on parallel architecture. So to break this stalemate, the European Commission established Europort, an initiative to produce commercially usable parallel code, and "to demonstrate the benefits of parallel computer technology for industry." Europort, which is nearing the end of its two year life span, is part of the Community's Esprit III research programme. Its goal was to take 38 real world industrial applications, and to parallelise them in a portable way, enabling them to run on anything from a cluster of workstations to a massively parallel system.

Head-on crash

Each project within Europort involved the code owners, parallel software experts and end users. The aim was to produce robust, portable, parallel applications with immediately obvious industrial advantage, and to benchmark the resultant software on at least two different parallel systems. The project was split into Europort 1, which deals with fluid dynamics and structural mechanics, and Europort 2, managed by Smith System Engineering Ltd, which includes 24 code sets from a range of applications including computational chemistry, databases, oil and gas, electromagnetics, radiotherapy, animation and drug design. With the two-year project nearing completion, participants have been reporting the results of their experiences and benchmark tests, and most of those reporting seem to agree that the effort involved in parallelising code is worth it. The CAMAS-Link consortium's code owner is Engineering Systems International Ltd, author of PAM-CRASH car crash simulation software. German car makers Volkswagen Audi and BMW were the project's end users. Electronic Systems' project manager Guy Lonsdale said the car industry is demanding ever more complex crash simulations, to be used in the design stage of new models. Typical simulations include a head-on crash at 20 miles per hour, and a 40% offset crash at 10 and 30 miles per hour. The PAM-CRASH code was migrated to distributed-memory computers using portable message-passing libraries, to make it completely machine independent. The goal was to see whether parallel computing could provide significant cost-performance advantage over both mainframe sequential supercomputers and symmetric multiprocessing systems. The Europort mission was not to compare different manufacturers' computers, but to show the benefits of writing software that truly exploits the power of parallel computing. CAMAS-Link ran each of the crash simulation models on a Cray Research Inc Y-MP single processor supercomputer, and either a Meiko Scientific Ltd CS2 parallel computer, a Parsytec GmbH GC PowerPlus, or an IBM Corp SP2. The 30-mile per hour offset crash ran with an elapsed time of 96,930 seconds on the Cray single processor, 39,380 seconds on a 16-processor IBM RS/6000 SP2 and 31,730 seconds on an SP2 with 24 processors.

Talk to each other

These results are before systems are optimised for the parallel code, and the consortium was very impressed with the results. Another consortium delighted with the results of parallelisation is the Paramation consortium, which parallelised the Animo animation software from UK company Cambridge Animation Systems Ltd. Animo provides paint and trace and rendering capability, tasks which traditionally take thousands of hours to do by hand, and which when computerised are still highly processor-intensive. Cambridge Animation used its existing network of personal computers running NeXTstep, and converted Animo to run in parallel mode using a modified version of Parallel Virtual Machine message passing, to enable rendering software to run in parallel on a cluster of workstations. The consortium also benchmarked its software on Silicon Graphics Inc workstations running Irix, and a Digital Equipment Corp Alpha machine with four nodes. Animo ran between 2.8 and four times faster in parallel than on single processors. Cambridge Animation project consultant Peter Stansfield said since it parallelised the software, sales have greatly increased, and the company has an order for 200 licences from Time Warner Inc's Warner Feature Films, and 100+ licences from Stephen Spielberg's Dreamworks SKG studio. He says that parallel rendering is a feature with enormous benefits to animators, bringing lead times down from months to weeks. This, in turn, he says, will enable animation studios to turn out far more topical content than has previously been possible. It is perhaps little surprise that such industrial applications involving heavy, mathematical computation, benefit from running in parallel. The type of application involved in Europort typically lends itself to being split into discreet tasks, which have minimal need to talk to each other while processing. However, even the Camas project ran into difficulties when attempting to calculate contact impact, or which part of the car will impact with which other parts during a crash. The parts of the car were split across different processors. In order to calculate which parts would impact with each

other, the system initiates a global search, which can cause load imbalances on the processors and a communications bottleneck. While parallel processing may well suit certain types of applications, it is not necessarily the right answer for everyone. In the massively parallel versus symmetric multiprocessing debate, most people seem to agree that it is another case of horses for courses. Even the vendors of such systems admit that massively parallel working is suited to many scientific and industrial applications, but that day-to-day commercial so-called 'mission critical' applications such as accounting systems, order processing, financial and banking systems are not as well suited. Since most transaction-based systems run processes that need to interact with others, they do not lend themselves as easily to being split up into discreet tasks that will run in parallel on multiple processors.

People are expensive

In addition, how many commercial companies would be prepared to invest the time and money needed to parallelise their existing code? Sequent Computer Systems Inc says the answer is very few. "It is cheaper to build a massively parallel machine than a symmetric multiprocessor" says Sequent's UK product marketing manager Steve Wanless, "but today, hardware is relatively cheap, people are expensive". He says that few firms can justify the cost of the human resources involved in writing parallel code, or in converting existing code to run in parallel. For this reason, both Sequent and Data General Corp have developed NUMA-based systems, Non-Uniform Memory Access, which enables some degree of distributed memory to run on symmetric multiprocessing systems. NUMA, the companies claim, will address the fact that symmetric multiprocessing systems do not scale up in the way massively parallel systems do, and may well bridge the gap between the two, without any changes to existing application code. Since the European Commission partially funded the Europort companies to convert their code, it is perhaps understandable that most companies were very pleased with the results. There seems to be little doubt that high performance parallel computing can provide significant performance benefits to computational chemistry, fluid dynamics calculations, structural mechanics applications and the like. But whether companies not funded by the European Commission will think that the benefits outweigh the costs of writing parallel code remains to be seen.

UUNET WITHDRAWS SECONDARY SHARE OFFERING

"Extreme market conditions" have forced Internet service provider UUNET Technologies Inc to withdraw its secondary public offering of new shares announced on February 7. UUNET's share price has tumbled by more than a third since AT&T and MCI announced their own consumer-oriented Internet offerings. Other Internet-related stocks have also been hit hard. A UUNET spokesperson told our sister publication *Computergram* that a depressed market had dragged its shares down from a high of \$40.75 on February 7 to \$24.50 yesterday, but that the market had failed to differentiate between companies which provide Internet services to the consumer, and companies like UUNET, which specialise in internet access for businesses. It says it still leads in that market; indeed AT&T rents its dial-up Internet business network lines from UUNET. The company said it does not "compete with the consumer offerings of AT&T or MCI and believes it will not be affected significantly by those offerings." The company is still going ahead with plans to acquire extra fiber optic cable capacity to the tune of \$150 million, the amount it was initially hoping to raise from the offering. UUNET filed to go public on May 25 last year.

SUN, HUGHES VIE FOR LION'S SHARE OF \$956m

Sun Microsystems Inc and Hughes Electronics Inc have to slug it out over which gets the lion's share of a \$956m computer contract for the US Air Force. The order is for workstations, software and peripherals to support command and control and scientific, engineering, logistics and other applications for worldwide use by America's armed forces. Total work on the contract is expected to be completed by March of 2003.

CGI DROPS PAC/CS DEVELOPMENT TOOL FOR VISUAL AGE...

IBM Corp software house Compagnie General d'Informatique SA (GGI) has canned future development of its object-oriented application development tool PAC/CS, and will instead link its PACBase ~~client/server development environment to its parent's VisualAge toolset.~~ The company said continued development of its own graphical tools is unnecessary given the expansion of IBM's object tool programme. IBM will migrate the PAC/CS information model and some connectivity techniques to VisualAge; it's set to integrate VisualAge with the Visual-Gen class libraries this summer. PAC/CS was introduced last September (UX No 554) as the final element in CGI's client/server development programme and includes a PAC/Repository for re-using object components. It's currently working to allow IBM TeamConnection and PACbase developers to share data, objects and code, between PAC/Repository and the TeamConnection repository as a prelude to migrating users off PAC/Repository in the long term. IBM bought CGI in 1993 for \$333m.

...DELIVERS BIRD OBJECT METHODOLOGY

Meantime CGI has released the French version of its Bird object-oriented programming methodology; and an English language version is expected in May (UX No 569). The Bird framework organised into domains for configuring the upper levels of project management, building descriptions of technical concepts and techniques for qualifying, reviewing, verifying and validating the deliverables. Key components are Business Process Re-engineering, Information System Urbanism - the physical distribution of data and services, Application Development and Software Product Implementation. It borrows heavily from the methods and techniques of OMT (Rumbaugh), OOSE (Jacobson), CRC (Booch) and OOD (Wirfs-Breck) to deal with real world implementation and interaction with graphical and data storage objects. It's designed to support paper-based modeling or OMT CASE tools including its own PACDesign. A meta-model of Bird is implemented in PACDesign which authorises the use of icons belonging to a specific sub-schema, verifies the validity of links between icons, identifies inconsistencies within the metamodel and between the graphical description of the model and the repository, and automatically modifies model descriptions. Bird-based objects are available in VisualAge SmallTalk and Bird-based projects have been completed using PowerBuilder and NatSystems Inc's NatStar development environment (formerly NS-DK). NatPAC/Design is up on most Unixes, OS/2 and NT. Prices start at £5,000. It's currently working on making Bird available in a 'Methods Notes' form, using a customisable Notes Framework. Bird goes from £27,500. CGI says it has 850 customers worldwide.

DOCUMENTUM REVS ENTERPRISE MANAGMENT SYSTEM

Document management outfit Documentum Inc, which is looking to raise close to \$21m from its initial public offering (UX No 575), has released Version 3 of its Documentum Enterprise Document Management System (DEDM). DEDM 3.0 is based on Oracle 7.1 and 7.2 databases - with support for Sybase System 11 in the pipe - and is used for managing very large, complex and line-of-business documents as they move through an organisation. DEDM is targeted at enterprise document management and brings together several data types that use reusable object-based document components and store business and process rules. Version 3.0 includes process-controlled replication of enterprise information, access control lists with context driven security, a cross platform programming language called Docbasic and an enhanced user interface. The Pleasanton, California-based company describes its product as rather like a virtual document management system rather than just a document management system. Born as a subsidiary of Xerox Corp, Documentum is headed up by former Cadence Design president Geoffrey Miller, and is targeting vertical markets. It claims it's got over half of the top forty pharmaceutical companies using its products. It says the document management market is divided into three sectors; the ad-hoc, unstructured and administrative business covered by the Lotus Notes market; transaction processing systems occupied by the likes of FileNet and IBM's Imageplus with software built around image processing systems and the large numbers of seats for complex, high margin software, in which Documentum places itself. Release 3.0 clients are up on Sun, HP, Mac and Windows, server on Sun, HP and NT. AIX will follow. Prices range from \$500 to \$1,500 per seat.

OBJECT DATABASES: ALL ABOARD THE NET

As if a starting pistol had been fired, the object database companies are roaring onto the Internet track, offering solutions for object-based Web serving, creation and storage. A couple of weeks ago O2 Technology debuted a Web server based upon its object database (UX No 576). Last week Object Design Inc, Burlington, Massachusetts, unveiled anticipated products that allow its ObjectStore database to be used for Web application development and storage, albeit as a form-driven engine (UX No 574). ObjectForms is a development tool for generating HTML pages from objects stored in the ObjectStore database, or for creating ObjectStore objects from HTML pages. It's claimed to connect ObjectStore with all HTTP Web servers and offer compatibility with all HTML editors. ObjectForms includes HTML tags that extend HTML files; it reads the tags and determines how to query or update ObjectStore. An Extended Object management suite includes Object Manager modules supporting text, audio, video, image, HTML data and Java applets, said to allow developers to store, query, manipulate and reuse extended data types, eliminating the need to build libraries of objects. The image Object Manager includes San Diego, California-based Virage Inc's query-by-content engine, allowing a user to target an image and then search for all similar images. The Text Object Manager includes Verity Inc's Topic text retrieval engine for automatic indexing. ObjectForms and the Extended Object Management Suite are up on NT now, Solaris from next month. ObjectForms is priced at from \$3,500 for one development licence, including licences for ObjectStore clients and servers. Object managers cost from \$400 to \$2,700 each.

Internet Adapter

Meantime, Versant Object Technology Corp is building an Internet Adapter for Web servers that'll provide access to data stored in its object database, also allowing it to be used as a distributed repository. The adapter will be free of charge to existing Versant users on Sun platforms from April 1. NT and HP implementations will follow. Versant will support Java alongside C++ and Smalltalk as one of its first-tier languages, and is creating a Java language binding that'll also debut in April. The company's also struck a slew of new partnerships deals. Art Technology Group Inc provides a high-end, object-oriented Web site development system called Dynamo. BMC Software Inc supplies application and data management tools. Expertsoft Corp and PostModern Computing Inc are ORB vendors.

BRISTOL COMPLETES OLE-TO-UNIX PORT...

Bristol Technology Inc has finished its port of OLE to Unix with a point release of Wind/U that fills in the holes that were left in the initial release. An initial version was released in September. Wind/U 3.1 adds full object linking and embedding, support for Microsoft Foundation Class Library 4.1 and Rich Edit Control. It also adds AIX 4.0 and HP/UX 10 to the OSes supported. Wind/U makes it possible to build Windows NT/95, Unix and OpenVMS apps from a single source code base. The Ridgefield, Connecticut company charges \$5,000-\$9,950 for Wind/U depending on volume. Meanwhile, Bristol is going to support Template Graphics Software's 3D extensions to the Microsoft Foundation Classes in Wind/U. That means apps written with TGS' Interactive Visual Framework, included in its version of Open Inventor (licensed from Silicon Graphics) for NT/95, will now also play on DEC, HP, IBM, SGI and Sun Unix workstations. Got that... Bristol licenses Win32 from Redmond to make Windows apps run on Unix. TGS licenses Open Inventor from SGI to make Unix-type graphics run on Windows. Now the two get together so that graphics written for Windows, using the Unix program ported to Windows, can run on Unix.

...OFFERS HTML HELP SYSTEM AUTHORIZING

Bristol Technology Inc, Ridgefield, Connecticut is offering version 5.1 of its HyperHelp 5.1 help system development environment for Unix and OpenVMS applications. It includes an HTML compiler, expanded support for FrameMaker 5.0 Maker Interchange Format and Microsoft Corp Windows Rich Text Format. It supports the same RTF files, project files, and graphic files as Windows 3.1, Windows NT, and Windows 95 Help. It also supports Word, WordPerfect, Lotus WordPro, Interleaf, FrameMaker, and Standard Generalized Markup Language and ASCII text editor authoring tools. HyperHelp 5.1 starts at \$5,500.

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Lee Reiswig, moved to be general manager of technology and strategy for the **IBM Corp** Software Group after a decade of intimate involvement with OS/2, has finally had enough and will leave the company in June, according to an internal company memo. Sources told *US PC Week* that a successor to Reiswig had not been named, which suggests he is quitting because he found he'd been moved into a non-job.

Oracle Corp says it will split its shares three-for-two on April 16.

Netscape Communications Corp says Intranets in Europe are going up around 25% faster than commercial Internet services, and that it will focus on this sector: it will push hard to beat **Microsoft Corp** in Europe; half the company's fourth quarter 1995 \$40.6m turnover was generated in Europe, where it has 27 distributors in 15 countries.

Hewlett-Packard Co has not actually stuck HP on the front of the name of those new Convex Exemplar SPP parallel machines (UX No 581), but they have been stripped of their Convex moniker, and the Convex Computer Corp name lives on only in the Convex Technology Center.

Microsoft Corp's Internet division chief SVP Brad Silverberg claimed that the recent deal with **America OnLine** was sewed up three or four weeks ago and purposely held back until **Netscape Communications Corp** made its move in order to make its loss more dramatic. Once Netscape went public, Microsoft and AOL officially signed their cross-license Monday night and announced it the next day.

Two men fell to reminiscing. Since one of them was Rod Canion, co-founder of **Compaq Computer Corp**, the other figured it was the ideal time to find out the real story behind the old ACE initiative whose reverberations, if you really think about it, are still being felt today. According to the account Canion gave, Compaq was the prime mover and ACE was meant as a wake-up call for **Intel Corp** which Compaq diagnosed, pre-Ace, as resting on its 80486 laurels and frittering its time away on its 1960 RISC chip. Compaq of course was more interested in the P5 but Intel only had second stringers on the project and no one at all on the P6. All the best developers were working on the 960. Canion called Bill Gates. Gates and Canion went to see Intel chiefs Andy Grove and Gordon Moore who stonewalled. Canion and Gates cooked up ACE. Six months later Intel had its A team on the P5, P6 was underway and 960's resources were drying up.

Sun's JavaSoft unit is trying to pull together a Java Developer Conference called JavaOne set for May 29-31 at - you guessed it - the Moscone Center in San Francisco, same as Microsoft and Netscape.

Our sister publication *Client Server News'* own private spook network claims **Compaq** will have Alpha machines by the first quarter of 1997.

The Gartner Group has advised its clients to short list **Netscape Communication Corp's** SuiteSpot servers for review, but cautioned them not to implement it in any wide-scale way because of bugs.

Microsoft big shot Paul Maritz predicts 1996 will be the year of the crossover, with more copies of NT Server sold than all the flavours of Unix combined.

Visix Software Inc's revamped its Galaxy application development environment to support Windows 95 and OLE claiming version 2.6 allows developers to create software that operates across Unix, NT, Windows, Mac, OS/2 and OpenVMS.

As expected (UX No 581), the **Object Management Group** has adopted OpenDoc as its distributed document compound facility. **IBM Corp's** OpenDoc betas for Windows 95 and NT aren't now expected until June, with production versions by year-end. It claims 600 alpha toolkits are with developers. OpenDoc for AIX is due in the third quarter. Japan's **Justsystem Corp** is porting its office automation software to OpenDoc for Windows.

TriTeal Corp's won \$4m in a second round of VC funding.

Amdahl Corp's supposedly done \$150m on Sparc products in two years.

We hear there's a distinct climate of paranoia over at **DEC**, where executives are having to sign weighty NDAs before meetings.

DEC claims it's turned away companies seeking a license to its 5 microsecond latency Encore Computer Corp-derived Memory Channel interconnect because they play in the TurboLaser server space. It says it's now sold 1,200 TurboLasers since last May. It claims it'll be achieving between 16,000 and 20,000 tpmC by year-end.

DEC told us it expects to spend \$80m upgrading its new \$500m Fab 6 plant in Hudson, Massachusetts - which currently builds CMOS6 process chips - to CMOS7, and a further \$100m to get it to CMOS8 over the next 10 years.

Iona Technologies Ltd and **BellSouth** have put the Dublin-based company's Orbix object request broker up on **IBM Corp** MVS Open Edition - an MVS 5.1 version will follow, plus support for IMS databases and CICS transactions. Iona hasn't rewritten Orbix in Cobol but has re-worked some parts to provide access to Cobol code. Betas are due second quarter, production ships in the third quarter.

Meantime, **Iona's** had problems maintaining its online support service because a JCB digger cut through the line to its Internet provider.

The folks at **C:NET: The Computer Network** came up with the bright idea of searching the Internet to find out how many ways there are to search the Internet. The San Francisco company's turned its findings into a product of its own, a free Web site at <http://www.search.com> that combines the talents of the roughly 250 different search engines it found in the Web's nooks and crannies. C:NET figures to get paid for the site, which is running on a trio of Sun Sparc 20 servers and Netscape's Communications Server, with advertising revenue.

Tuoc Luong, head of **Borland's** Delphi development group has gone off to customer information software house **Aurum Software Inc**, Santa Clara, California, as VP engineering where he'll be responsible for tying the company's Internet technology to its Customer Asset Management software and overseeing an international language product development programme.

JavaSoft's patched the security hole in Java found by Princeton University students with a 1.0.1 release of the Java Developer's Kit. The students proved they could break into Java-based systems using Domain Name Service spoofing (pretending to be another computer).

NeXT Software Inc's Enterprise Objects Framework development software now supports Informix; EOF 1.2 ships next quarter.

IBM Corp's installed its 1000th SP2 at the \$1bn Pasteur Merieux Connaught Co in France. The AIX division says its 1995 parallel business grew by 140% over 1994 and claims 31 of the Fortune 100 companies have at least one SP2 installed.

Prism Solutions Inc got its IPO away at \$17 per share compared to the \$8 to \$10 it was hoping for (UX No 576).

French object technology consultant **Valtech SA** is to distribute **Persistence Software Inc's** object-relational application development environment in Italy, Switzerland, Spain and Portugal in addition to France. It's also creating Valtech Ltd in London to service UK, Ireland, Scandinavia and Benelux customers.

Siemens Nixdorf Informationssysteme AG is leaping aboard the Web wagon, creating an emerging technologies division as part of its open enterprise computing business that peddle Internet/Intranet solutions and sign partners. SNI says it will partner with the leading Web technology providers to deliver turnkey solutions, provide its own Web servers and vertical industry solutions plus project management and Web hosting.

DEC's AltaVista net search engine is supposedly clocking over five million accesses per day. It's running on two AlphaServer 8400's.

Open Software Foundation is readying its second tranche of Distributed Computing Environment 1.2 technologies, including public key encryption security, for introduction in the fourth quarter as 1.2.2. Both DCE 1.2.1 (UX No 581) and 1.2.2 releases are being created by OSF's Pre Structured Technology processes. Further out, OSF is currently looking at using a stripped-down version of the DCE Remote Procedure Call as a core messaging service "because typically X.400 isn't being used." It's also examining queuing mechanisms, including DEC's MessageQ. Other OSF work on Java and object technology is expected to find its way into DCE over time.

The fight for mind-share and market share for browsers "may be the fastest-moving ever seen in the computer industry," suggests *Associated Press*, noting that it has so shaken **Microsoft Corp** chairman Bill Gates that he had to confess last week to waking up every morning thinking about browser market share.

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RED OCTOBER SAID TO CUT THE MUSTARD

Compagnie des Machines Bull SA began receiving its first 200MHz "Red October" PowerPC 620 parts a couple of weeks before the March 24 due date. It fired them up and found three major bugs, at least one in the area of reset behaviour, which it says is a normal expectation for a 1.0 cut. Because the bugs are large and observable, fixes have already been hardwired by Somerset and a 1.1 tape out should see the next spin of the chip delivered by Motorola Inc in April, ahead of the June schedule. Bull's going to attach the 1.0 RISCs to boards and run its cut-down, operating system-alike debug environment on them even before it gets 1.1 parts. We understand Somerset and the rest of the PowerPC club has breathed a collective sigh of relief that Red October has met or exceeded first silicon expectations. IBM Microelectronics is reportedly defining a more aggressive and strategic role for 64-bit work in a plan it's working up that'll describe the technologies the company will use up to the year 2000, a plan in which 64-bit architectures would otherwise have been afforded a more general purpose role had Red October crashed and burned.

SUN DEBUTS ULTRASPARC NETRAS, NEW INTRANET SOFTWARE

Sun Microsystems Inc has unveiled its much-ballyhooed hardware, software, tools and services for developing, deploying and managing corporate Intranets which it believes is where the real money is, and will drive adoption of the Internet as a business tool. Details on page three.

SUN'S CACHE-ONLY MEMORY SEEN AS NEXT STOP FOR NUMA

They tried to auction off the assets of failed massively parallel house Kendall Square Research Corp and the way they set it up you couldn't play unless you were willing to bid \$3m+ for the whole magilla. As a result, nobody bid. So then they decided to try and sell it off piecemeal and Sun Microsystems Inc reportedly wound up with the patented technologies covering Kendall's ill-named Cache Only Memory Architecture, COMA. If true, that gives Sun veto power over the way NUMA (Non Uniform Memory Architecture) develops and how its Intel Corp-based adherents (Sequent Computer Systems Inc and Data General Corp so far) play their cards. Kendall's patents can't touch pure NUMA but the way it develops, so a wise man tells us, and the way it's jiggled for performance and sophistication it'll probably run into stuff covered by COMA. Dolphin Interconnect Solutions Inc has non-exclusive rights to patented Kendall technology (UX No 564), which it acquired, the story goes, from Sun. Dolphin also picked up Kendall staff and other intellectual property.

EMBEDDED MICROSPARC IIe BECOMES IIep

Sun Microelectronics this week unveils the first, or maybe the second, member of its microSparc-e embedded RISC family (UX No 555). Early customers reportedly balked at the original microSparc IIe configuration with on-board Sbus and support for a PCI bridge-chip ASICs. So Sun ditched that arrangement and hurriedly reworked the thing, losing the Sbus interface and adding an on-board gate array for a PCI bridge. It still won't say who's manufacturing the thing. It will also detail new operating system support for the part - including the Chorus Systemes SA microkernel.

WEB COMMERCE HOUSE ACTIVE SOFTWARE BREAKS COVER

1995 Mountain View, California start-up Active Software Inc didn't actually want to come out of hiding for another couple of months, but the deal which sees its user interface builder picked up by SunSoft Inc in its Java Workshop as Visual Java GUI last week - see page 3 - forced it to break cover. Even so it's not giving much away, apart from the fact it's readying a distributed environment it says will allow companies to extend their ability to do business over the Web beyond the home page metaphor. It says the multiplatform products are designed for commercial customers and OEMs developing Web and Intranet applications. It's doing client software and tools; single- and two-tier server architectures; and connections to corporate databases and legacy systems. It's thought to be working on non-HTML transaction handling. Active Software co-founders are chairman Jim Green, former SunSoft DOE director and leader of the team that wrote OMG's Common Object Request Broker Architecture, and chief technology officer Rafael Bracho, previously lead architect for SunSoft's distributed computing, windowing system and software development products. It's got around a dozen staff and is bankrolled by Enterprise Partners, Kleiner Perkins and Sierra Ventures though Green says money's not the issue, it's whether the company can actually build the stuff to fulfill its mission. Green says competitors which have characterised its Java Workshop deal as just a quick fix SunSoft required to plug a hole are far from the mark and that the two have been working together for some time even if their deal - which is also an on-going technology exchange - wasn't finalised until late. "It's not a fix. It is the Java GUI builder for SunSoft for now and forever," says Green. The interface builder is just one component of Active Software's product plan. A key advantage according to Green is that it's a development tool on the web for the web written in Java.

CHORUS UNVEILS PLAN FOR COMPONENTISED BINARIES

Chorus Systemes SA unveils a binary makeover of its product line as Componentised OS at Embedded Systems Conference East this week, a set of microkernel operating system components for real-time embedded systems applications it says existing customers have asked for. The company's worked with Alcatel, Ericsson, GEC-Alsthom, Philips and Siemens - its partners in the European Union's Stream (Scaleable Technology for the Real-time Embedded Application Marketplace) project - to break the baseline Chorus/OS microkernel apart into offerings for the low-end, mid-range and high-end of the market. It's targeting everything from fault-tolerant server vendors, PBXs, ATM and other switching platforms, interactive TV servers, set-top boxes, portable phones and embedded controllers. Chorus/Micro is designed for dedicated application environments such as line cards, portable phone and hand-held devices with a footprint of around 10Kb. It'll be available on Motorola Inc 68000 and Intel Corp iAPX-86 instruction sets from the first quarter of next year. Chorus/ClassiX is designed for single system environments that have multiple boards or distributed configurations. Each system is supposed to be capable of running multiple real-time applications and supporting different operating system APIs. ClassiX r2B is an enhanced binary version of the original ClassiX (UX No 509), and runs on iAPX-86, 68000 and Sparc now. A PowerPC version is due in June. It's also going up on UltraSparc and the microSparc IIep from the fourth quarter (see opposite). ClassiX r3 will be up on iAPX-86 in the fourth quarter with PowerPC and Sparc ports following three to six months later. Prices go from \$9,400 to \$25,000. Runtimes are \$25 to \$163 for 1,000-up depending on functionality included. The multi-system Chorus/Fusion also supports Unix applications and has been available since mid-1995 on iAPX-86. A new release based upon the MK2 project underway with Santa Cruz Operation Inc is due by mid-1997. Chorus' Cool object request broker development system costs from \$1,000 to \$4,500. Runtimes will go from \$5 to \$95 depending on quantity. Chorus is also publishing the Unix, Posix, real-time profile, distributed object, legacy operating system and simple executive APIs resulting from the \$11m Stream project, claiming they'll allow telcos and real-time outfits to integrate off-the-shelf software. Stream is project 8305 of the EU's Esprit Open Microprocessor Initiative. System programming interfaces and the hardware abstraction layer will be published when Stream concludes its work in June.

MEMCO DEFENDS THE INNER CIRCLE

A year after debuting its B1 secure access control extensions for Unix in the area of superuser management, Tel Aviv-based Memco Software Ltd has enhanced the Security for Open Systems software it calls SeOS with a range of new features including the ability to monitor, update and configure security policies from a central location. Policy updates are now replicated to other subscribing servers locally and remotely. A consolidated audit log combines audit trails to a central location. The company says a new SeOS Wizard allows even novice administrators to implement elementary security policies via a GUI which walks them through setting up simple security policies. The Wizard includes baseline security with degrees of permission and is integrated with SeOS Access Control to implement the policies while shielding the administrator from the underlying technology. SeOS 1.4 is integrated with CyberSafe's Challenger network security system and New Dimension Software's Platform Control-SA, as well as the Tivoli TME and Platinum Technology Poems systems management environments. Platinum bought a chunk of Memco last April and has first right of refusal on the rest of its business (UX No 535). SeOS 1.4 also protects any system process (daemons) to maintain database and application access. The SeOS software is designed to prevent abuse of Unix superuser privileges by shifting authority and responsibility to individuals. Memco says its software is designed to defend the 'inner circle,' putting what it calls light firewalls around a company's internal servers, as around 80% of security breaches are reckoned to originate within companies, not from the Internet or other external networks. SeOS 1.4 Access Control is up on HP-UX, AIX and Solaris at \$1,000 per machine, the Security Administration software starts at \$5,000. It's also creating a version for Auspex Systems Inc's Solaris file server implementation and says it's a few months away from disclosing its NT arrangements. Memco, which is owned by Israel's largest bank, Bank Hapoalim and some private Swiss and Israeli investors as well as Platinum, claims it did \$11m last year. Its New York city unit says it's got 25 US customers on its books with a further 75 coming on stream. It's got other users in Australia and in Europe where it's buying out its Paris-based distributor Irel Informatique to create Memco Europe. It's also building a business development organisation to attract OEMs, VARs and other channels.

DOLPHIN SECRETLY BUILDING NT SMC CLUSTERING SCHEME

Dolphin Interconnect Solutions Inc is in the early stages of building a Shared Memory Clustering (SMC) scheme for UnixWare. Dolphin has gotten some notoriety lately because it's supplying its Scalable Coherent Interface (SCI) technology to Data General Corp to cluster its Unix boxes using a Cache Coherent-Non Uniform Memory Architecture (CC-NUMA). CC-NUMA, despised in some quarters, however, requires a monolithic operating system and isn't feasible for a commodity product like Windows NT. So Dolphin is taking an SMC approach to NT and will pair its interconnects with middleware and a driver that's being written for it by refugees from the spoiled massively parallel house Kendall Square Research Corp. Dolphin recently acquired some Kendall assets and intellectual property - see front page. There is also a similar project underway for UnixWare, scheduled to come to market first since the Kendall boys still feel more comfortable with Unix and besides there are reportedly OEM customers waiting. The NT stuff should be ready next year.

ILOG TO BUILD JAVA VIEWS WITH TWIN PEAKS

Ilog SA says the TwinPeaks C++-to-Java bridge it's providing for SunSoft Inc's Java workshop - see page 3 - is derived from its existing Ilog Talk interface software. In addition to exposing Java developers to Ilog C++ tools and libraries, the company says it's readying a Java-enabled version of its Views C++ library and GUI builder using the same technology, claiming most of its users have enquired about Java support. It says TwinPeaks is aimed primarily at applet developers rather than higher-level application components and plug-ins that would be created for use with the Joe Java object request broker. It says a TwinPeaks developer could access Joe services but would have to write its own IDL code.

NOW TATUNG OFFERS SPARC WEB SERVERS

Axil Workstations Inc is already out of the Internet gate (UX No 580), and now Sparc-compatible builder Tatung Science and Technology Inc is following suit with Web server versions of its recently-introduced UltraSparc workstations (UX No 572). The U140-i, which costs from \$16,000 compared to the \$15,450 U140, and U170-i priced from \$18,750, compared with the \$18,000 U170, are pre-installed with SunSoft Inc's Solaris 2.5 and Internet Gateway Software 1.0 and Netscape FastTrack Server. Other Netscape and firewall software is optional.

VXTREME OFFERS HIGH PERFORMANCE VIDEO CODEC IN SOFTWARE

As part of Sun's Internet roll-out - see page 3 - Palo Alto, California-based start-up Vxtreme Inc was demonstrating new software-only video streaming compression and synchronisation technology for all popular formats, including MPEG-1, called LiveScreen on the Netra. The software allows video to participate as a "first class citizen" on browsers and to drive and be synchronised with other on-screen applications. It demo'd a presenter in a video window talking whilst related text slides were displayed in the browser, with Java applets highlighting key points in the text as they are discussed. The LiveScreen software maintains the synchronisation between the applications - video, browser and applets (Java in this case). Users can also control the applications separately so that the video can be paused whilst reading text in the browser. The software automatically sizes the video window to provide the best resolution for the available bandwidth. Companies that make add-in cards for video take note. The company claims it can deliver 15 frames a second of 320x240 video at 128Kbps for applications such as Internet-based sales training. For video conferencing it says it can deliver 160x120 video at 28.8Kbps - or five frames a second at 11Kbps (for 14.4Kbps modems). It can encode 320x240 video at 30 frames per second on a 133MHz Pentium. An uncompressed hour-long video - some 100Gb - would take 320 days to download over a 28.8Kbps modem at 640x480 resolution at 30 frames per second, 22 hours over 10Mbps Ethernet.

Other codecs

The company claims other codecs, including MPEG-1, MPEG-2, H.261, Intel Video Interactive, VDONet's VDOWave, Xing's MPEG, Precept's intra-H.261, Radius' CinePak and Horizon's TrueMotion-S can't touch it. Discrete cosine transform (DCT) and motion estimation techniques (MPEG and H.261) require hardware support for encoding, don't offer embedded scalability and are expensive. Wavelet technology - Intel Indeo and VDONet VDOWave are scalable but offer less compression and require more CPU clocks. Instead of requiring a separate add-in board for each video stream, LiveScreen can decompress as many stream as the CPU can drive - up to 16 on Sun's Netra (the screen's limit, the CPU was working at 50% capacity). In addition, by using nine decompression and one compression streams it can provide 10-way video conferencing. Vxtreme - a company put together just for this purpose - says it's delivering now what the industry had previously thought was 18 months or two years out. It's three technologies are compression, network delivery and LiveScreen. It will create products next quarter for Unix, Mac and Microsoft. It's in discussions now about how those products will get to market but has inked no deals, even with Sun. Viewers could be downloadable or supplied in browsers and net applications. Vxtreme CEO Diane Greene was formerly manager of database, video and multimedia projects at Silicon Graphics Inc.

IDE ADDS SUPPORT FOR UNIFIED OBJECT METHOD; JAVA AND IDL GENERATION/REVERSE ENGINEERING

Interactive Development Environments, San Francisco, California, has demonstrated what it claims is the first complete support environment for V0.8 of the unified OMT and Booch object modeling methods, in its Software through pictures/OMT-Booch toolset. It also now supports both generation and reverse engineering of Java code to analyse the impact of code modifications. The company has also demo'd Ada 95 code generation and generation of code for the Forte Software Inc application development environment and reverse engineering of Corba Interface Definition Language code for distributed object applications. StP/OMT and StP/Booch 3.1 with Ada 95 and Forte code generation are up on Solaris and HP-UX from \$12,000. The combined StP/OMT-Booch costs \$15,000. StP/OMT and StP/Booch 3.2 with Java code generation and reverse engineering support and IDL reverse engineering is due in May at the same price.

IBM EAGLE SOFTWARE SERVER PRICING

IBM Corp duly unveiled its seven software server products last week. Partners and customers said the new one CD-ROM packaging will make their lives easier but there's little change in the end product. The communication server is \$850 for the server \$70 per client. Database server is \$1,000, \$150 clients. Internet server is \$100 (free from Web without documentation). Lotus Notes is \$500 per server, \$70 on clients. Lotus Notes MP is \$2,300 on the server, \$70 per client. Transaction server is \$3,000, clients are \$300. Directory/Security server is between \$4,700 and \$17,400 per server. Systems management server pricing isn't available. All prices are for AIX.

SUN DEBUTS ULTRASPARC NETRAS NEW INTRANET SOFTWARE

Sun Microsystems Inc has unveiled its much-ballyhooed hardware, software, tools and services for developing, deploying and managing corporate Intranets which it believes is where the real money is, and will drive adoption of the Internet as a business tool. At the client end, Java WorkShop 1.0 is a Java development environment, written in Java, with its own Web browser interface, aimed at professional developers to design, test and deploy Java applications. As such the company says it's different to Symantec Corp's Cafe or Borland International Inc's Latte Java development environments. In beta test now, available over the Web in April and on CD-ROM from May, 1.0 supports Solaris for Sparc and x86, Windows 95 and NT and costs \$300. Reportedly work is underway to expand the virtual machine API in Netscape Navigator and HotJava to support all Java Workshop applets. Some components work with existing browsers now, others, including security and the debugger require additional development. A June release will support Macintosh. A future release of the workshop will also include a Visual Java GUI builder for laying out user interface objects OEMed from Active Software Inc, which allows pre-built Sun abstract windowing toolkit or third-party widgets to be used by developers in their applets - see page 1. Also scheduled for inclusion is a just-in-time Java compiler claimed to outperform byte code interpreters by 10 to 20 times, a WYSIWYG HTML editor for publication of applets, and a Java-to-C++ gateway called TwinPeaks acquired from Ilog SA which allows existing C++ components to be recognised and used in Java applets through an automatically generated interface. The TwinPeaks gateway project is staffed by Ilog engineers and some SunSoft developers and marketeers. The TwinPeaks bridge will read and analyse C++ header files and produce a Java interface file and Java/C++ bridge code which translates API calls and data formats between Java and the object code of the existing component or class. Ilog says a developer or component vendor will only have to make a few declarations to the bridge and a Java-ready component will be produced. Java developers will also be able to use original C++ documentation in their development, plus a set of translation rules describing how C++ constructs are mapped. JavaScript - the joint Sun/Netscape scripting language - will be supported by the Workshop when it's done, though that might not be this year. Sun is also working with Open Software Foundation's Research Institute which is creating Java virtual machines for some of its member's operating systems.

Joe

The Internet WorkShop is a client-server development environment comprising Java WorkShop, Visual WorkShop for C++ and OpenStep-derived NEO development tools - presumably Workshop NEO (due by mid-year) and NeoWorks (UX No 557) - and will be out around August; no price yet. Joe - the name comes from American slang for coffee - is the company's Java Object Request Broker (ORB) and IDL compiler that will connect applications residing upon the OpenStep-based NEO object-oriented server environment with Java applications via Common Object Request Broker Architecture (UX No 578), bypassing HTML and CGI scripts. Java applets with Joe do not re-load entire Web pages but send updated information as necessary. Joe is written in Java and supports an early version of remote Java communication using the Corba Environment Specific Inter-ORB Protocol for connecting with Sun NEO servers. Eventually Joe will be able to communicate with objects on non-NEO platforms via support for other vendor's ORBs through the Corba 2.0 Internet Inter-ORB Protocol will follow. A beta programme begins in April, a beta release of Joe will be downloadable in June.

Asynchronous messaging

SunSoft claims Solstice Internet Mail will be the first Internet Message Access Protocol version 4-based mail server on the market (Netscape is moving from IMAP2 to IMAP4). The Solaris server software supports Solaris, Windows and NT clients (with Mac to follow). IMAP4 allows users to search and filter mail headers and attachments, leave bandwidth-intensive processing on the server and work in email without having to connect to a network. Solstice Internet Mail supports other IMAP mail systems although they cannot take advantage of its functionality. IMAP4 is the emerging standard for Internet messaging and will be used to support other asynchronous messaging applications in addition to email. The mail server is due in June priced at \$1,000. A beta version of the software plus reference email client implementations are downloadable free of charge now. SunScreen SPF-100G is an intranet security system that can be deployed across the network, now available for the first time outside the US. It's priced at from \$22,000. A SunScreen Administration Station G is from \$8,000.

Breaches

Solstice FireWall-First is a cut-down version of Checkpoint Software Technologies Ltd's FireWall-1 2.0 TCP/IP firewall that's being bundled in the Netra package. It lacks some of the more advanced encryption features that are available in the native FireWall-1 2.0 products which cost from \$5,000 for the basic technology with one

internal or external gateway and support for up to 50 nodes and from \$8,000 for the base licence plus encryption. Sun reckons 80% of security breaches come from inside, within Intranets, rather than from the Internet. SunIntegration Internet Practice is a suite of consulting and integration services.

Three new Netras

The new hardware includes three UltraSparc-based Netra i servers derived from the existing Ultra 1 units, plus one of the forthcoming 'SunFire' commercial UltraSparc servers fitted as an enterprise-level Internet server. Each includes FireWall-First, Netscape LiveWire site management, Enterprise Server and Navigator Gold Web, new versions of Sun's Web server and HTML administration software, an IPX gateway and new email and domain name server support. The Netra i 1/140 desktop uses the 143MHz UltraSparc with 10Mbps SCSI, and comes with 64Mb RAM, 2Gb disk, TurboGX graphics and 17" screen. It's claimed to perform 188 HTTP connections per second. The 167MHz Netra i 150 is a new tower configuration with 20Mbps SCSI and 64Mb RAM supporting from 25Gb to 350Gb disk and two 64-bit Sbus slots. A screen and graphics are optional. It's supposed to perform 216 HTTP operations per second. A desktop Netra i 1/170E version of the Ultra 1 Model 170E has from 2Gb to 32Gb disk, 20Mbps SCSI, two 64-bit Sbus and the UltraSparc Port Architecture slot, Creator graphics and 17" screen. It also performs 216 HTTP operations per second. All three come in above the 110MHz microSparc II-based Netra i 4 and Netra i 5 which are priced from \$7,500 and perform 86 HTTP connections per second. Sun compares them with SGI's \$10,000 Challenge S server at 66 connections per second and the \$10,380 HP D200 at 66 connections per second. Sun couldn't give prices for any of the new systems except \$24,400, and we don't know what that buys - see back page.

HP'S PA-RISC PLANS HIT SNAG

Both the *Microprocessor Report* and industry analyst Terry Shannon concur that HP is having trouble with its PA-8000 chip. The *Microprocessor Report* thinks there are yield problems due to its big die, a snag the Mips R10000 ran into, and that it could take three months or more to cure, giving DEC a chance to get its 400MHz 21164 out. Shannon says he's heard it's circuit etch difficulties. The chip was to ship in Q1. HP's apparently getting limited quantities of PA-8000 systems out to key ISV's.

VERITAS PATS \$5.5m FOR ADVANCED COMPUTING'S STORAGE MANAGEMENT

Santa Clara, California-based Unix storage management and file system company Veritas Software Corp is paying \$5.5m cash for storage management company Advanced Computing Systems Corp whose Network Removable Media Library is designed to provide administrators with system-wide access to all data storage systems. The Library is claimed to offer APIs that will work with all data subsystems theoretically allowing vendors of backup and hierarchical storage management products to offer shared access and management of data without having to create individual storage device handlers. The Library runs on Unix - HP and IBM are existing licencees.

- **Red Hat Software Inc**, Westport, Connecticut, is touting version 3.0.3 (Picasso) of its Red Hat Linux implementation, which now includes multiple thread support for libc (5.2.18), as an ideal Java development platform. It's priced at \$50.

- **DEC** will supply Alpha workstations to **Hughes Aircraft's** Data Systems division for its share of that \$956m US Air Force contract which Hughes is splitting with **Sun Microsystems Inc** (UX No 582).

PROGRESS ENHANCES TRANSLATION MANAGER

Progress Software Corp, Bedford, Massachusetts has enhanced Progress Translation Manager, the visual deployment tool said to provide application development and language translation for multi-lingual software applications. Translation Manager is part of the company's Progress 8 application development environment, released at the end of last year (UX No 564). It allows a single application to be deployed in multiple languages and comes with a custom-built glossary of reusable text translations and Microsoft language glossaries for Windows applications. A Visual Manager is separate. Translation Manager 2.0 starts at \$5,000. Visual Translator costs from \$1,000.

TVML SETS CHALLENGE TO VISUAL BASIC, VRML AND JAVASCRIPT

A Cable & Wireless spin-off poses a challenge to the new favourites VRML and Java, according to our sister paper *Multimedia Futures*, and already has financial backing from games and cybermall firms. TVML, the TeleVisual Markup Language, is the product of the multimedia division of Cable and Wireless telecommunications subsidiary, Mercury Communications Ltd. Set up as a separate company in a management buy-out by new managing director David Wainwright, it will launch the language alongside his company, TVML Ltd, in the next week or so. TVML is an Internet language and authoring system that enables publishers to create real-time on-line applications. The TVML browser and demonstrations are freely available at www.tvml.co.uk. Once the browser is downloaded, applications are downloaded as simple mark-up language files with which, for example, an 86kb roller-coaster demo file is interpreted by the browser from a series of geometric shapes instructed by the mark-up language. Users can interactively alter the shape of the roller-coaster by dragging the image around. "We've already built a village," said TVML spokesperson, Ken Butti, who sells the language as a fast on-line platform suitable for games and shopping. "EMI and Virgin have already signed up. Virgin are particularly keen as they have a games site but still no games." Two other, unnamed, "household name" companies have come in with a "blank cheque-book" to create three-dimensional cybermalls using TVML. "At this stage it is just a demonstration of technology," said Butti, and although the company is eagerly peddling its wares around the technology backrooms of the industry, managing director Wainwright expects to either be bought out or incorporated into a major soon.

Shake-up

TVML was jettisoned from Cable and Wireless in the company's shake-up last year. It was developed in conjunction with a number of projects - interactive set-top television, hybrid CD-ROM and on-line consoles, such as the Sega Corp Saturn - but could not be supported as the company felt the pinch. The company was loath to release it completely and now licenses the technology to TVML while retaining full intellectual copyright and providing "positive support". "[Cable and Wireless] had too few outlets for consumer production," said Ian Mecklenburgh, who works at Cable and Wireless' group development for Internet products. "We are supporting it but don't have the projects to use it." What this means is that Cable and Wireless gets to stay at an arm's distance if it fails and scoops it up if it succeeds. Describing the language, samples of which are on the Web site, Butti puts it ahead of Java and VRML - "it's more like a combination of VRML and Java," he said, which is essentially what Moving Worlds is proposing for VRML2 - and in the same camp as Netscape Communications Corp's JavaScript and Microsoft Corp's Visual Basic. The language claims a page layout editor and a scripting language that can create commercial, pay-per-view applications for the Internet, proprietary networks and cable. The software targets a transmission rate of around 3kbps and has been tested on a variety of networks up to full ATM broadband. The language also supports video and audio streams and a demonstration includes a TV screen in the corner. Click on the television and the language will bring in one of the video streaming packages available on the open market. Cable and Wireless may have been overrun by the momentum of the two major standards, Java and VRML, and that was certainly part of the company's decision to take a back seat. In tones approaching Marlon Brando's Terry Malloy in *On The Waterfront*, Mecklenburgh may get the last line. "TVML was good. We could have been a world leader."

IN META GROUP, CXP OF FRANCE FINDS ITS INTERNATIONAL PARTNER AT LAST

The international expansion long awaited by CXP International SA, the French specialist in comparative software products analysis, has finally come about with its partnering this week with Meta Group Inc, one of the fastest growing consulting companies in the US. The two have formed a joint venture company in the US, Meta CXP, with total investment of \$500,000 split 50-50. Meta CXP, in Reston, Virginia, will begin adapting between 20 and 30 of CXP product evaluations a year for the US market, as well as marketing them to US customers. Meta and CXP will work together on adaptation; the two retain exclusive distribution rights in North America and franco-phone countries, respectively. They project revenues of \$1m for the first year, from June, and \$7m in the third year of operation. Both Armand Gambert, chief executive of CXP, and Dale Kutnick, president and research director for Meta Group, pointed out that the ability to advise users on which products will fit their system strategy is and will continue to be an important business over the next few years. Gambert noted that, while the cost of software licences has dropped over the last three years, to 19% of the total system budget, from 24%, costs of installation and adaptation and customisation still take 46%.

Buying the pieces

Kutnick said the two major trends in the software industry - expansion and, paradoxically, consolidation - bode well for Meta-CXP. "We're seeing a dramatic expansion in the number of software companies, due to lowered entry barriers and easier distribution on the Internet; at the same time, you have the old guard who either don't have the intellectual capital or entrepreneurial vitality to do the new products, who are buying the pieces they need." In an aside, he noted that Meta expects IBM Corp to continue in acquisition mode, after Lotus, and Tivoli in particular, "they'll need to buy more pieces to make Tivoli a more complete product. Due to these two factors, the job of the IT professional will increasingly be integrating all of these components," he said. "One of the things I think is powerful about this alliance is that we do in-depth analysis of products and the suppliers, getting a lot of our information from the users, while CXP actually tests products in its detailed analysis to help users make decisions." Gambert noted that, although CXP had negotiated similarly with Gartner Group Inc, the partnership was "more equitable" with Meta, which at \$30m annual sales, is only three times the size of CXP. Kutnick said Meta looked for a company similar to CXP in the US. "It doesn't exist. There are a few small companies who do some product evaluations, but they don't have feature-by-feature analysis or testing. As research director, I was impressed with CXP's methodology," he said.

XIONICS WORKS ON PRINTOS MULTI-FUNCTION PERIPHERALS

Burlington, Massachusetts-based Xionics Document Technologies Inc won't say whether it'll be supplying its PhoenixPage PostScript 'clone' language - derived from its acquisition of Phoenix Technologies Ltd's print technologies - to Hewlett-Packard Co for use when the latter dumps Adobe Systems Inc PostScript on some of its printers in favour of a clone implementation from the second half of next year (UX No 582). It notes that UK's Harlequin Ltd, plus Pipeline Inc and Destiny Technologies Inc in the US also supply PostScript-compatible print command languages. Privately-held Xionics, which began life as a UK concern, has an existing relationship with HP and a joint development agreement with Adobe. However printer market watchers who've recently researched customer attitudes and buying preferences say that the corporates they've spoken to are mandating that printer purchases must use native Adobe PostScript, not clones, which they say are not yet good enough. Meantime, Xionics says it's working on new core hardware and software technologies to meet emerging requirements for Intranet/Internet, information capture and document colour on multi-function peripherals - products that don't just print. An example is its print operating system for intelligent peripherals that can host multiple file formats, including PostScript, as personalities. Print silicon development is based at its Dortmund, Germany-based Xionics GmbH unit, formed from acquisition of HiBRIC Technology GmbH at the end of last year. The operation is responsible for developing Xionics' XipChip microcontroller for multifunction products which implements its proprietary high-speed image processing software on IBM Corp's embedded PowerPC 401. The company's other businesses include printer software, imaging (including PC cards) and scanner control boards. It has other operations in Maidenhead, Berkshire, and Japan. The rapidly expanding 160-person company is run by former Tadpole Technology Plc exec Robert Gilkes. With \$11m venture funding already under its belt the work the company's now doing, the company looks hot for an IPO.

BUSINESS OBJECTS CLAIMS TO BRIDGE OLAP/QUERY DIVIDE...

Claiming to be bringing on-line analytical processing (OLAP) to the general purpose business market, Business Objects SA ships its next generation decision support/EIS project, codenamed Mercury, on May 8th as BusinessObjects 4.0 (UX No 556). Available for Windows and NT initially, a Unix/Motif version will be up on Solaris, HP-UX and AIX in the summer. BusinessObjects 4.0 combines the company's existing query and report ~~environment with slice and dice and drill down analysis. It includes a new OLAP component, BusinessObjects Explorer for relational, OLAP server~~ and flat file/personal data, database and application schemas. There's an enhanced graphical Supervisor module for user and security management, a Document Agent for third-tier server base scheduling, processing and distribution of reports, as well as enhancements to existing query and reporting tools, Reporter and Designer. Support for OLE allows decision support data to be tied into Microsoft applications. Version 4.0 components are wrapped around a dynamic microcube engine which uses and accesses metadata. The microcube is a local multidimensional data structure (or hypercube) which acts as a dynamic, persistent cache, integrating data from one or several sources and storing the structure on the desktop as a cube. It includes compression algorithms to reduce the size of redundant information, and allows the cube to be refreshed or reshaped on the fly. Version 4.0 also has a unified metadata repository containing business intelligence and data dimension information, allowing data to be presented as business rules rather than as a database schema. Hierarchical relationships are integral to the product, the company says.

CLIENT/SERVER LABS TESTS EUROPEANS

Atlanta, Georgia-based Client/Server Labs is bringing its set of test suites for multi-function, mixed-environment client/server performance measurements to Europe (UX No 553). In a joint venture with London-based Unisoft Ltd, it's setting up a lab, also in London, to test systems against the RMark95 and RPM/dbs suites which will open in the summer and service Europe. German and French labs will follow. Pricing starts at \$12,500 for RMark95, which measures the overall performance of client/server systems based on on-line transaction processing (OLTP), decision support (DSS) and file serving/office automation and \$25,000 for RPM/dbs measuring enterprise servers based running OLTP and DSS applications. Meantime CSL will add an Intranet benchmark suite in May testing video, audio, email and Lotus Notes on group servers. Its looking to have six different benchmarks by the end of the year.

SEEK XCELERATES AROUND I/O BOTTLENECK

Kirkland, Washington-based Seek Systems Inc has joined Oracle Corp's Oracle Business Alliance Programme, marrying its storage system technology to the Oracle database. The deal hinges on Seek's Xcelerator caching controller technology, claimed to improve the performance of very large database applications by overcoming I/O bottlenecks, and its Adaptive Raid controller and subsystem. Xcelerator monitors data, storing active data in cache memory and inactive data on magnetic disk, reducing the need for temporary tables, transaction log files and enabling heavily accessed tables and indexes to be stored on a memory based storage subsystem. Cache in Xcelerator is divided into normal and protected spaces. Xcelerator uses protected space and the 'least frequently used' algorithm to avoid cache pollution that occurs when one-hit read and write data replaces repeatedly used data and commands. Xcelerator tracks how frequently data is accessed and moves the most heavily used data from normal to protected space keeping it safe until Xcelerator detects there is data which is more active. By monitoring data activity, Xcelerator keeps most active data in cache, optimising the use of expensive solid state memory or SRAM. Seek claims Xcelerator can configure up to 1Gb of cache and is suited to OLTP markets where it lowers response time and batch processing. Xcelerator prices go from \$15,000. Adaptive Raid, released next month, dynamically manages the block size of disks, enabling DBA's to avoid the need to reconfigure block size each time they need to add disk capacity. Privately-owned Seek is looking for distributors in the UK, Europe and the Far East and has twenty five employees.

METADATA SPEC DELAYED

Turns out the Metadata Coalition interchange specification didn't get voted on at Database Client Server World last Thursday (UX No 576). It's touting June 1 for the spec now. Official explanations included absenteeism and requests for more time from new members. From what we understand, a draft specification due on February 15th, was only released last week. A Coalition meeting has been scheduled for DBExpo in San Francisco on 16-18 April. The spec is supposed to standardise the input and export of flat file data formats so they can be accessed by different tools and across multiple systems. Compliant tools are expected by year-end. Metadata Coalition officials would only say the spec is now due in the summer.

Metadata

Business Objects says Version 4.0 will enable more users access to multidimensional information, such as sales revenue by product or geographical location. Users will work with representations of data, rather than the underlying database schema and with the repository containing dimension information users are able to launch complex queries without assistance, claim the company. It will also allow users to link personal files to the system instead of creating custom data sets.

Loops

The management modules in BusinessObjects 3.1 have been split into Designer and Supervisor offerings. Supervisor is an object-based security model controlling access and system resources supporting multiple administrators, as well as set-up and repository management. Prices start at \$2,000. The Designer module comes as a graphical interface for creating classes and objects and an automated universe creation, including a new Quick Design wizard. It detects loops in database schemas, offers contexts and aliases, aggregates aware objects, workgroup development and includes an API for importing metadata from other tools. Its priced at \$2,000. Reporter for querying and reporting goes for \$600, and the integrated querying and OLAP tool Explorer is \$700. Meantime Business Objects says it has slew of companies lining up to support 4.0, including Arbor Software, DEC, HP, IBM, Informix, NCR and Oracle. Business Objects claims 130,000 users worldwide at 2,600 customer sites. It's just won Shell for 10,000 seats and Dow Chemical for 8,000, it said. It recorded \$60.6m revenue in the year to 31st December 1995 and has more than 300 employees with 70 in R+D.

...BUT BRIO SAYS IT GOT THERE FIRST

Business Objects is not the only query decision tool vendor crossing the OLAP divide. Mountain View, California-based Brio Technology Inc released its desktop OLAP decision support tool BrioQuery Enterprise last month (UX No 577). However Business Objects UK managing director John Powell claims OLAP rival Brio Technology's has missed out key hierarchy metadata. "What I would ask Brio, is how does it capture hierarchy metadata? Brio's solution is a desktop solution aimed at Enterprise Information-type reporting," he said. We did. Brio claims that constructing the Business Object unified metadata repository requires long term consultancy. "What happens when it needs to be changed? There is a lot of reworking involved," it asks. Business Objects repository relies on an OLTP underpinning in Brio's opinion, with a normalised structure requiring categories and business rule limits. Brio claims BrioQuery comes from a "pure" data warehouse environment and provides the option of using business rules or its Open Metadata Interpreter to read metadata from external resources. In short, Business Objects solution requires two sets of metadata, while Brio requires just one, Brio claims. Both sides claim parts of their respective technologies have been copied by each other. BrioQuery Enterprise includes a desktop OLAP engine enabling users to add dimensions, restructure and refresh the desktop hypercube. It claims its solution are easier to set-up and use than Business Objects' technology; "use Business Objects and you'll find they're living with you," said one spokesperson. BrioQuery Enterprise comes in three editions; Navigator for viewing pre-built reports or customised standard queries; Explorer for querying databases and pre-built data models and Designer for defining limits, pre-defined joins, query governors, database help and metadata access. They are up on Solaris, SunOS, AIX, HP-UX, Mac, Windows 3.1, 95 and NT, and available in French, German and Italian. Unix prices start at \$1,800 for Navigator and Explorer, \$5,000 for Designer. Privately-held Brio claims 1500 sites for BrioQuery .

CONCURRENT NOW HAS PACT TO BUY MOST OF HARRIS COMPUTER

Concurrent Computer Corp, Oceanport, New Jersey, and Harris Computer Systems Corp, Fort Lauderdale, Florida now have definitive agreement for Harris to sell its real-time computer unit to Concurrent for shares and debt. Harris Computer will retain its Trusted Computer Systems network security business. The deal is now structured so that Concurrent will swap the Harris real-time computer business and 227,726 Harris Computer shares for 10m new Concurrent shares and \$10m of convertible, exchangeable preferred stock that pays 9%.

TRANSPHONE CREATES INTERNET TERMINAL+PHONE, FAX

Being built around a vintage 80286 processor, it can hardly be called a no-compromises device, but Ottawa, Ontario firm TransPhone LLC can has crammed a remarkable number of functions into its \$350 - \$500 with colour - contender for the Internet terminal stakes. Called the TransPhone, it includes Internet telephony, but is primarily a loss leader for the subscription information and shopping services the company plans to offer. According to *Reuter*, it has developed its own virtual shopping mall, and as well as charging users a monthly subscription, it looks for transaction fees for products bought in its electronic shopping malls. Users would also have access to everything else on the Internet at no further charge. TransPhone says it is in talks with US retail chains and postal agencies about marketing the product as a means of access to those organisations' services. The device, which weighs 6 lbs 8 oz and looks like a small facsimile machine, is driven by a 1Mb 80286 and has a 14.4Kbps modem and two PC Card slots for optional features. It also has a telephone handset, full facsimile machine capabilities and a fold-out, full-size keyboard, and comes with a credit card debit mechanism for on-line impulse buying. The company plans to launch the TransPhone first in Pittsburgh, Pennsylvania in June, with launches in eight other US markets in the plan for 1996 and another 50 cities in 1997. The Ottawan is majority-owned by Koerner Capital Corp, which is the investment vehicle of entrepreneur John Koerner, who last year sold his Barq's Inc root beer company to the Coca-Cola Co.

NOVELL USERS WILL CONNECT INTRANETS WITHOUT TCP/IP

Novell Inc has licensed key technology from Quarterdeck Corp's IWare Connect Internet connectivity suite including an IP/IPX (Internet Packet eXchange) gateway that Netware users will connect to their internal Web servers without installing Transmission Control Protocol/Internet Protocol (TCP/IP) stacks on their desktops. The technology, will be incorporated into an Internet publishing solution Novell is to announce at Internet World at the end of April. Quarterdeck claims that what's more important than the royalty stream Novell will provide is the access it'll get to Novell's customer database into which it hopes to sell its 22 other products.

LOTUS ANNOUNCES INTERNOTES WEB PUBLISHER 4.0

Lotus Development Corp has announced version 4.0 InterNotesWeb Publisher, which allows users to manage their internal Intranet and public web sites using Lotus Notes Release 4. The new version includes leveraging Notes R4 for better Web content design, drag and drop building to Web views and platform support for AIX, Sun Solaris and Windows 95 as well as OS/2 and Windows NT. Requiring a Notes Release 4. Server and any http server with a TCP/IP connection, version 4.0 will be available for download on March 29 from the InterNotes Web Publisher site (www.internotes.lotus.com) and will also be included in the Notes Release 4.0 Server Retail and Maintenance Release scheduled for late April.

WWW CONSORTIUM ANNOUNCES PACT TO CREATE COMMON STYLE SHEET-HYPertext INTEGRATION TECHNIQUE

One of the most potentially harmful obstacles to future interoperability on the Internet has been overcome with the World Wide Web Consortium announcing that its members have agreed to develop a common way of integrating style sheets into hypertext documents. At present, content providers do not have control over colour, text indentation, positioning and other style aspects. The style sheet work will be based on Hakon Lie's Cascading Style Sheets imitative at INRIA Sophia Antipolis. The Cascading Style Sheets mechanism will enable authors and readers to influence the presentation of HyperText Mark-Up Language documents by inserting their preferred style sheets, and will offer better support for printing HyperText Mark-up Language documents.

SUPERSCAPE VR CLAIMS VISNET 3D VIRTUAL REALITY PLUG-IN WEB BROWSER WILL ENHANCE THE EXPERIENCE

Superscape VR Plc is hoping to liven up World Wide Web pages and make navigation more intuitive, with the launch of its VisNet three-dimensional virtual reality Web browser. VisNet is a plug-in to a standard Web browser, which enables users to view three-dimensional Web pages and worlds created with Superscape's VRT authoring tools. It is currently available only for Netscape Communications Corp's Navigator, but Superscape says this is because Netscape is so far the only company to have published its plug-in interface. Superscape says it will plug into Microsoft Corp's Explorer and others as soon as the interfaces are published. VisNet currently views only worlds created using Superscape's VRT, but the company says it plans to support new Internet standards as they evolve, such as VRML 2.0 virtual reality modelling language when it is ready. Superscape is giving Visnet away free, but hopes to make its money from sales of its authoring software. The company is about to announce a raft of deals with companies that are taking VRT to create their own virtual reality Web Pages. Northern Telecom Ltd and Intel Corp already have Superscape virtual worlds up on the Web and Superscape says many other companies have signed up to do the same. With Visnet, users will be able to visit Superscape's Supercity Web site. Ordinary Web page text is displayed on the left of the screen and the Supercity virtual town square appears on the right. Using a navigation tool bar, users can walk through the town square and enter buildings, while associated text on the other side of the screen scrolls up and down. One of the town's buildings is a gallery, in which examples of virtual worlds and applications can be viewed. These include a technical support example, where the user is taken through installing a graphics board into a personal computer. The clock on the town's clock tower displays actual time, and is taken from the user's personal computer clock, as opposed to the main server. Supercity demonstrates many of the features available to VRT Web site authors, including photo-realistic textures, background lighting options, and the ability to drop out into C programming if required. Visnet is available now and can be downloaded from Superscape's home page on the Internet at <http://www.superscape.com>.

IBM LAUNCHES SIX CHIPS FOR MPEG-2 CODING, DECODING

IBM Corp yesterday announced an MPEG-2 video compression chip set and three MPEG-2 decoder chips, but gave precious little real information on them. The parts are aimed at manufacturers of digital video and audio equipment for professional broadcasters and movie makers, multimedia personal computers and workstations, and digital television set-top boxes. The three-chip encoder set is claimed to offer the fewest number of chips to deliver broadcast-quality MPEG-2 encoding at "breakthrough prices" - and the chips can be used on their own or three in parallel. The other three chips are two single-chip MPEG-2 audio-video decoders, and one video-only decoder. The MPEGSE10, MPEGSE20 and MPEGSE30 encoder chips are sampling now at \$2,500 for the set, with general availability in June. The set is \$1,500 in hundreds. The MPEGCD10 video decoder chip is generally available now and the MPEGCD20 and MPEGCD21 audio and video decoder production level chips are sampling now and will ship in volume in October; MPEGCD20 decoders go for \$30 to \$35 in set-top box quantities above 100,000.

SET-TOP BOX, CABLE MODEM FIRM IS FIRST UP FOR PATRIOT SHBOOM RISC

Having now developed its ShBoom 32-bit RISC microprocessor - which will be fabricated for it by National Semiconductor Corp, San Diego-based Patriot Scientific Corp is looking around for people to use the thing. It has now lighted on the Evolve Software subsidiary of television remote controls maker Universal Electronics Inc, and Evolve has agreed to represent the ShBoom to top-tier cable modem, satellite and television set-top box manufacturers around the world. The Patriot ShBoom PSC1000 uses a zero-operand dual-stack architecture with primarily 8-bit instructions for greatly reduced complexity and reduced instruction size. The merged stack-register architecture is claimed to be very efficient for executing stack-oriented environments such as Forth, PostScript and the stack virtual machine internal to Java. The underlying ShBoom architecture is invisible to programmers using Patriot's ANSI C compiler. The assembly language accepts both native and synthetic register architecture-type instructions.

TIVOLI ADDS NET SUPPORT TO TME EN ROUTE TO SHRINK-WRAPPED SYSTEMS MANAGEMENT...

Now also speaking for new parent IBM Corp, Tivoli Systems Inc is extending its systems management enterprise to the Net, claiming a ~~new Tivoli/net Commander module it's adding to the Tivoli Management Environment (TME)~~ is the first mainstream product for managing the deployment and configuration of Intranet applications and services. Although the module can only be used in conjunction with the TME framework at present, Tivoli's long-term plan calls for the creation of shrink-wrapped systems management packages which will use core TME components but shield their complexity from users. As well as general Internet systems management offerings the company's already tailoring a shrink-wrapped offering in the area of client/server development. Other technology or industry-specific offerings will follow. Tivoli says it had its Internet strategy, which it's calling net.TME all ready to roll back in February but waited until its acquisition by IBM had gone through to announce it lest anyone got the wrong message. First product in the strategy is a Tivoli/net.Commander module it says allows TME users to manage the deployment of servers and browsers on a large scale. It's said to include 75 built-in monitors which track the status of Intranet servers and provide automated responses to problems. Events can also be escalated to the Enterprise Console by Tivoli agents. The company's also offering Tivoli/Plus for net.Analysis, which it says allows Cambridge, Massachusetts-based net.Genesis Inc's net.Analysis Web server content usage analysis product to be used with TME's Tivoli/Plus third-party software integration module. The link allows users to drill down into a particular server from within Tivoli/net.Commander for performance monitoring and analysis. It'll be available in the third quarter priced at \$1,500. Tivoli holds a minority stake in net.Genesis. net.Commander costs \$5,000 per Netscape server running on Solaris or SunOS and \$50 per Netscape/Windows client this quarter. Within 30 days it'll add NT support, followed by AIX, HP-UX and Irix in the summer. Lotus Notes and other IBM Internet applications aren't supported until later in the year. A second rev of net.TME now underway include modules for performance optimisation and load balancing; replication; and a table-based interface that consolidates all management and software distribution information from a single console, describing each user's access and application privileges. It'll be migrated to a browser view in time.

...AS TIVOLI TEAMS WITH SUNSOFT ON JAVA-BASED INTERNET MANAGEMENT SPEC

IBM Corp's Tivoli Systems Inc and SunSoft Inc have picked up the Internet management specification ball, saying they'll define an interface for configuring, monitoring and controlling Internet devices and access called the Internet Management Specification (IMS). Rather than trying to embrace each vendor's own Net interface, the two claim Bay Networks, Cisco Systems, Netscape, Spyglass and others have agreed already to support IMS APIs in their products. The two companies say IMS will allow system vendors to develop products which can manage multi-vendor server and network devices and allow users to configure, monitor and control Internet services, such as Netscape's SuiteSpot applications, from a single IMS-compliant management application. That's if they can attract enough industry support. Tivoli and SunSoft are to create a draft specification defining Java classes and OMG Corba Interface Definition Language APIs for managing the Internet. The classes will run on all Java-enabled Internet environments. Tivoli and SunSoft say they've already started working with UK standards body X/Open Co Ltd to which they'll submit the completed specs for consideration.

GENERAL ATOMICS AND UCSD TO END SUPERCOMPUTER ALLIANCE

HPCwire reports that General Atomics and the University of California at San Diego (UCSD) have ended their 11-year corporate partnership at the San Diego Supercomputer Center (SDSC). The two have reportedly disagreed over UCSD's proposal for the Center's future and General Atomics plans to submit, in competition with UCSD, its own proposal to participate in the National Science Foundation's Partnerships for Advanced Computational Infrastructure, slated to begin in fiscal 1998. Under its current agreement with General Atomics, UCSD has no claim for rights to new technologies developed at the Center. SDSC, located at UCSD, was originally developed and then subsequently administered by General Atomics. It was sponsored by the NSF, the University, the State of California, and other agencies and private organizations as well. The Center provides computing resources for the military, universities and government agencies. Under the current partnership, the Center's staff is employed by General Atomics, while the scientists are employed by UCSD. Both UCSD and General Atomics say they will continue to work together until the current NSF program expires in September 1997.

IST SETS ITS JAVA SAILS

Not wanting to turn away customers it says are banging on its door with cheques in their hands, Imperial Software Technology Ltd is accelerating its Java product delivery schedule. It's also concerned lest potential customers put off C++ buying plans if they don't see a Java product on its horizon. Initially IST's added a Java code generation option to its X-Designer GUI builder as XD/Java. ~~X-Designer with XD/Java is priced at \$3,500; upgrades and maintenance are free for one year.~~ IST says it solves the thin client problem for Motif developers who "need not concern themselves with whether they might need to move applications to Java."

Catch

The company's full-blown visual Java application builder, JavaDesigner, is currently slated for a third quarter release, but in view of the accelerating market for Java development environments it's got its engineers imbibing copious quantities of the black brew to get code out of the door sooner. JavaDesigner is said to provide a project view of Java applications, an integrated GUI builder, class browser, C++ bridge and property editors. Solaris, HP-UX and Irix versions are due first, followed by Windows and Mac ports. Pricing won't be announced until nearer the release date as IST believes current consumer market pricing tiers for Java development tools - Symantec Corp's Cafe is \$130 - won't last because the tools are simply not consumer items. Even if Symantec maintains Cafe as a loss leader IST believes the rest of the market will be forced to adopt more conventional tools pricing strategies. It's gonna wait and see what shakes out. However it believes the quality, pricing and availability of Cafe is driving other vendors' product development cycles into higher gears. The anticipated rush to summer shipment schedules has been brought forward a quarter or so. SunSoft Inc's own Java Workshop development environment schedule was brought forward to last week, requiring it to bring in a Java interface builder from start-up Active Software Inc (*see page 3*) rather than wait for its own code to roll off the bench. The two were working on the deal and integration right down to the wire before last Tuesday's introduction. SunSoft resells the existing X-Designer as Visual Workshop for C++; IST hopes the company will pick up its Java offering as a long term solution, although as we went to press it appeared to be still searching for such a deal. IST describes its Java play as dipping its toe in the water like the rest of the C++ development community, including Ilog SA and Rogue Wave Software Inc, but says its core business will remain Motif and X. It says the difference between JavaDesigner and other offerings will be its ability to combine Java applets and other pieces of code into large applications. Indeed it sees no reason why Java shouldn't be used for enterprise development purposes even if SunSoft would have us believe its for front-end and small application development only. SunSoft's concern, IST believes, is the whole Java phenomenon snowballing beyond its control; how can it ensure that all Java applets large or small will be able to work together?

Neil

IST says Java has gone from being precisely none of its consulting business two months ago to 25% now. It's currently building a Java re-mortgaging application in conjunction with SunIntegration for National Westminster Bank plc running against Oracle. It's doing other system and network security modeling for Java with SunSoft. JavaDesigner has been created using the same new interpretive language, Neil, upon which X Designer is built. It's not written in Java. However IST claims Neil is almost indistinguishable from Java and can be similarly interpreted or compiled. It says it even considered doing its own Java competitor back in the summer, but canned the notion once the SunSoft technology began to gather momentum. Indeed byte-interpretive languages have been around for eons, IST observes. It's only a particular alignment of market and technology requirements - to animate the web - plus luck, that has laid Sun its golden egg. It claims its doing more business on X Designer now that SunSoft's also selling the product.

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Sources expect **Compagnie des Machines Bull SA** to announce that **Silicon Graphics Inc** and **Tandem Computers Inc** are going to license its ISM/OpenMaster systems and network management scheme. Amdahl Corp's already thrown in its lot with the French (UX No 581).

Anyone looking for Grover Righter, late of the **Santa Cruz Operation Inc** where he was VP, strategic marketing, will find him at **GeoWorks**, the Alameda, California embedded operating system house, where he's gone as VP marketing.

Integrated Computer Solutions is training **SunSoft's** support people worldwide on Java in an effort to get SunSoft up to speed. ICS is also sponsoring the first Java developers' conference, IntraNet, next week at the Millennium Hotel in New York April 8-10.

SCO World, one of the last remaining Unix books other than yours truly, is thinking about changing its name and broadening its appeal. It's casting about for suggestions. If you've got any ideas what it should call itself, send them to publisher Bob Billhimer at bob@scoworld.com.

Word has it that **SunSoft**, described as quite ubiquitous in bids with the old Sun Net Manager, has lost the recipe with the object-oriented Solstice.

"When I go to a restaurant, I want the chef to prepare my meal, not the guy at the table next to me." - Political pundit Michael Kinsley on the silly notion that the Internet can make a publisher out of everyone and anyone. He might work for **Microsoft Corp** these days but he's still right.

Los Gatos, California-based **BulletProof.com** claims its new Java-derived applications turn Netscape Navigator into an operating system and give Netscape "a true shot at undermining Microsoft's hold" on the PC. It's got a wireless alphanumeric paging service and an interactive finance application. The first, MarketPage, lets users with Java-compatible browsers send pages from Bulletproof's server to a pager or e-mail account. Investors can set up their own stock market alerts via the Web. MarketPage costs \$9.95 a month and works with standard alphanumeric pagers.

Rawhide, the **DEC 21164** quad machine that's supposed to fit between its Sabres and Turbo Lasers, is now expected Monday May 6. The thing runs Unix, NT and VMS and sources say DEC is expecting to get a thousand of them sold and delivered by the end of the June quarter. Rawhide was supposed to debut in April and we imagine it was delayed because the low-end Turbo Laser (8200) people figured their toes would be stepped on. They're not upgrading their boxes to sexier chips until summer.

Intel still seems to be having problems with those four-way P6 SHV boards that soooo many OEMs are depending on for their new high ends. We've heard the bug's in the performance. Something about the data transfer rate between the chips.

Computer Reseller News hears **Sun Microsystems Inc** will unveil plans to enter the cable modem market at Networld+Interop next week, just as **Intel Corp** canned two and a half years work on its own cable modems. CRN says Sun's Interactive Group, which is responsible for the company's Video Media Servers, has signed with Motorola Inc to work on cable modem technology and products.

Network Appliance Inc's enterprise-level F series file server due for introduction at Networld+Interop isn't going to materialise there after all (UX No 573). Its Godzilla Windows NT server should be delivered sometime in the third quarter. NAI released its entry-level NetApp F220 in Europe last week.

Tit for tat: **Sun's** trying to lure **DEC, HP** and **SGI EDA** and **MCAD** customers to UltraSparc, offering trade-in dollars for the residual value of HP, SGI and DEC systems plus discounts on Ultra 1 Model 170E Creator graphics. The offer's in the US only, until June 20.

Now UnixWare's being merged with **SCO OpenServer** - and in future with **HP-UX, UnixWare Technology Group Inc** has changed its name to **UTG Inc; Hitachi Ltd** and **Mitsubishi Electric Corp** have paid more to become sponsor members. UTG now has 16 sponsor organisations.

Sun says the adoption of Intranet technologies has helped it reduce its internal IT spend from 7% to 3.5% of sales revenue and saves some \$4m annually on print and publishing costs.

US reports say **Dun & Bradstreet Software** is to release a Java-based applet that will enable the completion of purchase requisitions electronically in May. The company described the applet as the first in a series of products that will be delivered as part of its SmartStream Web series of Java-based applets, which will allow customers to leverage corporate Intranets. Through the electronic requisition applet, users will have easy access to central databases for on-line corporate and vendor catalogs. Once the user has completed a request, it will be automatically routed for approval and processing using SmartStream's intelligent workflow.

Speaking with his object hat on, **Active Software Inc** chairman and Corba co-author Jim Green believes further convergence in the object world is unlikely with most companies now heavily invested in their approaches and that to have even got down to two implementations - **Corba** and **Microsoft Corp** - should be regarded as a "huge accomplishment."

SunSoft Inc's working up an Ultra NFS version of Solaris specifically for the file server companies such as **Auspex Systems Inc** and **Network Appliance Inc**.

IBM Corp will put some meat on the bones of its Information Warehouse Solution this Tuesday. It's expected to roll out data mining tools, warehousing applications, decision support solutions and services over the next few weeks.

Mortice Kern Systems Inc's adding support for the Perl Web development language to its MKS Toolkit. An early version is of Perl for MKS Toolkit 5.1 for Intel system users is available from MKS' Web site. Production versions for NT and Windows costs \$350. Upgrades are from version 4.4 of the toolkit are from \$100. MKS claims 400,000 users of the Unix utilities toolkit.

The US sources we've spoken to in the past (UX No 578) reckon there are six or seven 167MHz Sunfire Servers due on April 16th in New York. They're supposedly called Ultra Enterprise Server and go to 30-ways. That back plane bus we thought **Sun** was having problems with (UX No 572) apparently delivers 2.5GB/sec.

SunSoft Inc says there will be 5,000 Java applets written by year-end. It's estimating that 2,700 will compete for its Java Cup.

NeXT Software Inc's now shipping production versions of its WebObjects 1.0 Web server development system. It claims 15,000 betas went out from its site, half for NT, the rest for Solaris and NeXTStep.

Sun estimates between 60% and 70% of Fortune 500s have or are implementing Intranets.

Sun chief Scott McNealy delivered a keynote at Gartner Group Inc's Internet & Electronic Commerce Conference and Exposition last Tuesday, the day after the Oscar academy awards. He wondered whether the computer industry would be able to emulate Hollywood's success at delivering a show about itself giving awards to products which are judged by itself. His picks:

Best new feature - DEC's Back - Part 14
Horror movie - When SGI ate Cray
Best costumes and special effects - Microsoft doing demos at any network show
Best supporting act - HP does Bill Gates' Windows
Best short film - IBM's guide to the Internet

How is **Sun** going to make money out of Java? "We don't have to. You can't download a Sparcstation over the Internet," McNealy says.

When will there be one version of Unix? "When we get down to one computer magazine."

Er, what was **Sun** taking last week? It wasn't able to give us or anyone else pricing details for configurations of its new Netra internet servers. Not only did it omit the numbers but anyone who knew was on vacation and couldn't be reached, leaving helpless flaks to field the inquiries of the combined press corps. Sun got **Netscape Communications Corp** all in a tizzy too because it didn't clear details of the Netscape products it was announcing with the company. There was a good deal of fancy footwork over at the Sun Microelectronics camp as well, where it got in a bit of a pickle about what it was telling to who about its hurriedly altered embedded microSparc IIe, err.. microSparc IIep. See front page.

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JAVA ECLIPSES OPENSTEP AS "PRIMARY" OBJECT TARGET...

With all the fuss over Java we've been wondering what happens to all those Neo and OpenStep tools and services that are supposed to form the basis of SunSoft Inc's object product strategy. Although it says it will continue to develop, sell and support all of the promised Neo object technologies derived from the Next Software Inc OpenStep/NextStep environment for now, Java's impact on the market will direct its strategy long-term. Java will be its "primary target" for internet-client/server solutions. It says all other mechanisms should be considered "transitional." All new users of Sun object solutions will be steered towards Java, not OpenStep. Most of the Neo development tools will now be housed alongside Java and C++ in the recently introduced Internet Workshop suite (UX No 583), rather than as standalone environments. They include the WorkShop Neo Objective C-based OpenStep developer due by mid-year; the NeoWorks IDL compiler and graphical application builder and NeoShare network development framework. NeoDesktop, the NextStep/OpenStep-based graphical user interface is still in beta. The OpenStep runtime, Neo Network, Neo ORB and Neo services are included in the Solaris Neo release of Sun's Unix extended to support Neo applications. SunSoft's object request broker (ORB) story is now a three-headed beast with Joe's Java ORB, Java IDL connectivity module and IDL compiler for tying Java applets to Solaris Neo; the NeoNet ORB which connects OpenStep environments to Solaris Neo servers; and Iona Technologies Ltd's Orbix, which provides client-side support for OLE. SunSoft says it will upgrade the Neo-specific ORB protocol it's currently using to use the Object Management Group's Internet Inter-ORB Protocol (IIOP) by the summer, providing interoperability with objects residing in other Corba 2-compatible environments.

...AS JAVASOFT CREATES JAVA-ONLY DISTRIBUTED MECHANISM

Meantime Sun's JavaSoft unit has quietly created a "pure" distributed Java mechanism called Java RMI (remote method invocation) for connecting Java clients with servers that bypasses Corba and the requirement for developers to learn IDL; "we think of Java as a standard," it says. Developers we spoke to said Corba is different enough from Java to make a separate distributed environment necessary if Sun is to realise its Java ambitions. RMI uses what JavaSoft describes as a lightweight TCP/IP-based remote procedure call protocol called Doors ORB for connecting to Java servers. Server programs define remote objects in Java and bind them to universal resource locators (URLs). Client applets resolve the URLs to receive Java client objects. When the applet invokes the client object, the call is transmitted to the Java object on the remote server. Doors ORB is derived from Sun Labs' Spring Doors inter-process communication architecture (UX No 530), but is not the same implementation that features in Solaris 2.5. The Doors ORB is also the initial default ORB for use with the alpha release of Java IDL which will tie Java applets to the Corba 2 world once an IIOP module is added. Java IDL is based upon the Java ORB and SunSoft's Joe suite will connect Java IDL to Neo ORB. JavaSoft is seeking third parties to develop modules to connect Java ORB to other ORBs. Alpha releases of RMI, which runs on any Java development kit (JDK)-compatible virtual machine, and Java IDL, are up on JavaSoft's web site. Client runtimes allowing Java applets to use Java RMI will be bundled with a future release of the JDK. Server side runtimes and development tools will be sold as separate products.

IBM BETS SYSTEMS MANAGEMENT FUTURE ON TIVOLI

IBM Corp is basing the future of its systems management strategy upon the Tivoli Systems Inc Management Framework (TMF) which it acquired in February. The core of a new "end-to-end" TME 10 systems management solution combining the existing IBM SystemView and Tivoli Management Environment 3.0 products will be TMF. Tivoli claims it will offer three times the functionality of TME 3.0 (hence TME 10) and support Unix, NT, MVS, OS/400, OS/2 and PCs. The company says 80% of the combined product set already exists and 31 of the existing 52 SystemView products will find their way into TME 10. TME 10 will comprise 25 IBM/Tivoli and third party applications for managing deployment, availability, security, operations and administration, and applications. Core, or Level 1 applications and services will be based exclusively on the TME 10 framework. Level 2 applications will be provided Tivoli and by third parties. A single product offering will be created over the next month or so in each of these functional areas to eliminate overlap between existing IBM and Tivoli products. Migration paths will be provided where existing products are canned. By year-end the "best features" from TME and SystemView will be provided as a single management application. By the end of the first quarter of 1997 all underlying services will be migrated to a common TMF framework, eliminating overlapping management console interfaces. ISVs and users will be invited to join a 10/Plus Association in June to review progress and through management working groups create management APIs in the areas of applications (already underway as Tivoli's Application Management Spec (AMS) initiative), database (Oracle, Sybase, Informix et al), internet (the Internet Management Specification group announced last week (UX No 583)), networks (formed from the current NetView Association), help desk, scheduling, security, performance and storage. Tivoli will implement the resulting interfaces in TME 10 which will be used to integrate third party applications.

SUN TO TOUT RAS FEATURES OF SUNFIRE SERVERS

Our Sunfire people (UX No 578) tell us that Sun Microsystems Inc will focus on the RAS - reliability, availability and serviceability - features of its forthcoming Ultra Enterprise servers. The departmental and datacenter models - 3000 (six-way), 4000 (14-way), 5000 (14-way) and 6000 (30-way) - are also designed for hot-swapping, though as there's no support for it in Solaris 2.5, it's thought likely to be a statement of direction rather than a deliverable. CPU modules will be interchangeable across the entire range, including the low-end Enterprise 1, 2 (two-way) and 150 models. The company will also tout its 2.5Gbps Gigaplane bus, plus enhanced NFS performance and RAID support.

DEC WORKS ON BETTER, FLATTER NUMA

DEC's understood to be working on a distributed shared memory architecture it says will be "better than NUMA." The company's been looking hard at the current crop of cache coherent Non Uniform Memory Access (NUMA) mechanisms, including Sequent's NUMA-Q, and still has no stomach for some of NUMA's "ugly" properties such as high latency. NUMA system design will arrive when the company manages to squeeze four Alpha modules on a board (up from two now), which will free up slots for additional memory or processing elements. Initially up to four quad-CPU boards will be housed, providing additional memory space for building very very Very Large Memory systems, DEC says. It's preparing a flatter SMP-like programming model it says will eliminate most of database and operating system dicking that other NUMA implementations will require. It plans only minor changes to Digital Unix. A second phase will see the Encore-derived Memory Channel interconnect technology used to cluster the 16-way systems, each with up to 16 PCI slots. The architecture will be extended to support eight four-way nodes. It's thought to be a year off.

COMPUWARE SKIPS TO UNIFACE 7.0

Farmington Hills, Michigan-based Compuware Corp has canned a 6.2 upgrade of its Uniface development environment due this month (UX No 567) saying it'll now jump straight to a major upgrade that'll beta in October. Uniface 7.0 will include the object services and dynamic partitioning of the still-born Uniface 6.2, plus a distributed computing manager with interfaces to TP monitors and support for DCE RPC. It will feature a clutch of Internet/Web capabilities including what it's calling a "no-client" architecture, with a Web browser taking the place of a client. Compuware admits it's closed the Alameda, California Uniface R&D group with the loss of twenty jobs, but says it's moved its Dutch 4GL unit to new offices in Amsterdam adding a further 50 staff for a total of 250.

PLATINUM SYSTEM MANAGEMENT TOOLS TO WORK WITH HP'S OPENVIEW

Platinum Technology Inc has got some its system management tools through Hewlett-Packard Co's OpenView certification process and was showing them off at Networld + Interop in Las Vegas last week (UX No 559). ~~First out of the trap is Platinum's AutoSys scheduling and DBVision~~ performance tools, which have been tied to OpenView's IT/Operations console for addressing problem and operations management. AutoSys is Platinum's batch job control system for distributed Unix and NT processing and includes self-correcting job control, centralised system wide monitoring and programmable error recovery; users just point and click to launch Autosys tasks from within the IT/Operations console, says Platinum. DBVision is its 7x24 database performance monitor, acquired with Plymouth Meeting, Pennsylvania-based Aston Brooke Software (UX No 554). Other Platinum products due to be certified for HP's OpenView IT/Console include Servvision at the end of April for performance monitoring and resource management of distributed Unix servers, Apriori, an automated problem resolution/management system, AutoXfer an electronic software distribution tool, AutoSecure a Unix security product and NetArchive for system file backup and hierarchical storage management. Platinum says all of its system management tools should be certified by the end of June. HP will also market the tools to its network management customers though Platinum's 250-person sales force will take-over system management leads, claiming its people are better versed in that area.

BUSINESS OBJECTS OFFERS MULTIMEDIA DATABASE TOOLS FOR THE NET

Object Design Inc, Burlington, Massachusetts is offering a slew of new Web-based application development tools. ObjectStore ObjectForms is claimed to support dynamic and interactive application creation for the Web, whilst a suite of six Object Managers will provide native support for text, audio, video, image, HTML data and Java applets. Targeted at the creation of Web-based applications which combine imaging, audio, video and textual data, ODI claims it's not just another complex data type engine a la Oracle's Universal Server or Illustra but a pure object-oriented implementation that's better suited to managing extended relationships. European VP Jim Beagle admits Illustra's Web technology is broadly similar to Object Design's but says Oracle and Illustra's information delivery is pulled from separate data stores resulting in comparatively poor performance. With relational structures, tables have to be joined manually, he says. With object databases relationships between the data stores provide better performance. ObjectForms comprises two components, a Web development framework, with dynamic HTML generator and run-time environment and WebConnect, which provides the connectivity to all HTTP servers and a dispatcher module from high volume Web applications. ObjectForms uses template files to automate presentation and processing of data for ObjectStore Web applications and the templates are html files with extended html tags designed for ObjectStore data access and presentation. The tags read template files to determine how to query or update ObjectStore and then dynamically generates HTML to display the results. Then the resulting HTML is sent straight to the Web Server which in turn sends the HTML to the Web browser. Extended HTML tags are the key to controlling the presentation and customisation of the ObjectStore Web application, says ODI. ObjectForms is up on NT, Solaris, HP. Prices start at £3,500.

Replication

The Object Management suite consists of six class libraries for storing, querying, manipulating and reusing extended data types. The Image Object Manager module includes a query-by-content engine developed by Virage Inc, San Diego, California providing a system for retrieving images and video based on the image content rather than keywords. Virage is the company that helped Illustra develop its Visual Intelligence image retrieval system (UX No 533). The Text Object manager comes with Verity Inc's eponymous text retrieval engine - also an Illustra datablade (UX No 581) - providing automatic indexing of all text. Object managers can be customised. Others will be added over time. Prices for individual modules start at £400, rising to £2,700. Meantime the anticipated asynchronous replication technologies for failover with reading and limited writing facilities will appear in a point release of its ObjectStore database this quarter it says. ODI is opening office number eight in Belgium; the others are in the US, UK, France, Germany, Australia and Japan. It has 220 employees, down from 260 since its reorganisation in August (UX No 552). It claims it's had two profitable quarters since.

SYBASE 'BETTING BUSINESS' ON MIDDLEWARE STRATEGY; SAYS REPORT

Sybase Inc is positioning its middleware, desktop and interoperability products other than its database management system (DBMS) as the "key differentiator" to its business according to a report from London-based market consultant, Ovum Ltd. ~~The report - Ovum Evaluates: Middlewares - analyses~~ the leading middleware products, services and support. Published every two months in five instalments the first issue examines database connectivity middleware, in particular the strengths and weaknesses of Sybase Enterprise Connect, Oracle Information Anywhere, Information Builders EDA/SQL, Intersolv's Sequelink and Platinum Technology's InfoHub. Ovum marked Sybase's Enterprise Connect middleware nine out of a possible ten for its communication services, five for its translation layer and three for management. It defines communications between distributed processes, network addressing information, a directory storing information about the physical location of machines, and services ensuring messages are correctly addressed, as the communication layer. Translation layers translate between different software application programming interfaces (APIs) and the management layer manages inter-process communications. By contrast, Ovum says Oracle is almost playing down its 20-odd middleware products in favour of application strategies. It awards Oracle ten for its communication layer of products, four for the translation layer and six for management. Ovum gives Information Builders EDA/SQL version 3.1 eight out of ten for its communication layer, nine out of ten for the translation and four out of ten for the management layer. The report looked at Platinum Technology's InfoHub 1.3 - it has since released 2.0 supporting ODBC and DRDA - which it says relies on Sybase technology for its gateways and network communication. It is likely only to attract Sybase developers, the report suggests. It scores one out of ten for communication, three out of ten for translation and two out of ten for the management. Intersolv's Sequelink scored seven out of ten for its communication layer, three out of ten for translation and two out of ten for its management. The report is £1,500 in Europe, \$2,775 elsewhere. +44 (0)171 255 2670.

CADIS CLAIMS KRAKATOA SEARCH ENGINE IS FIRST LARGE-SCALE JAVA APP

Search and retrieval outfit Cadis Inc claims its Krakatoa Web search engine is the first large scale business applications built using Java (UX No 572). The company says Krakatoa changes the model for search and retrieval of information on the Internet, providing support for all client platforms and doing away with the need to link organisation's parts databases to each new platform by traditional regression testing. The Boulder, Colorado-based company says its existing PMX database and classification system for tracking the design, development, manufacture and management of parts has relied on a classification-tree hierarchy based on part attributes rather than numbers. Krakatoa uses three software components which can be linked to multiple databases; Krakatoa client software is downloaded and used directly from the Web and used with Java-based browsers; Krakatoa server software provides dynamic class management, query functions, logging and local storage of the knowledge base and a set of software-development tools, including a fully documented API used to build classification schema. The search engine uses a three-tier architecture with the Java clients, and HP, Sun, IBM and DEC server software, with file management implemented on Oracle, Sybase, Informix and DB2. Cadis has got National Semiconductor Corp using Krakatoa as an interactive access to information for its 30,000 products from its home page. Its using Krakatoa as the front-end to an Oracle database, with users interacting with the knowledge base via HotJava or Netscape. Users navigate down the parts schema using parameters such as price, package type or temperature range with iterative queries narrowing the search. No prices.

SOFTWAY SHIPS POSIX.2, XPG4 SUITE FOR NT

Softway Systems Inc's now shipping release 1.0 of its OpenNT Commands and Utilities which provides IEEE POSIX.2 and X/Open XPG4 conformance to Microsoft Windows NT user and development environments (UX No 577). A full X/Open Unix 95 compliant environment for NT is due in 1997. POSIX.2 compliance became a requirement for US Government operating systems procurement contracts as stated in FIPS 189 from April 3. Softway says its software will allow Windows NT OEMs, integrators and VARs to bid on federal contracts. OpenNT Commands and Utilities, release 1.0 is available at an introductory price of \$100 until May 31. Softway has signed Computer Marketing Associates Inc, Vienna, Virginia, to help it peddle OpenNT to US federal, state and local governments.

ULTRASPARC-II ALREADY WORKING AT 300MHz

Sun Microsystems Inc's second-generation UltraSparc-II chip, which hit first silicon in mid-February and reportedly worked straight away, is proving to be performing better than forecast, according to the company's chip arm Sun Microelectronics. The part, which was supposed to hit 250MHz-300MHz over the course of its life, is coming in at 300MHz right out of the chute. Engineering VP Anant Agrawal attributes the results, which puts added distance between Sun and the embarrassment it suffered with the SuperSparc programme, to basic changes in design approach and methodology. Sun Microelectronics has been using "construct by correction" practices with the UltraSparc program and integrating every three months. Agrawal says the approach uncovers potential hazards before tape out or silicon where they are difficult to eradicate. He is confident enough to be talking about "mature yield" already. A 300MHz part, although the first to be productised will probably be around 275MHz, and means that Sun's design team has come close to doubling clock speed in about a year. Of course the one visible problem is that it's late. It was originally supposed to be ready at the end of last year. UltraSparc-II will sample this quarter; production availability follows in the third quarter. Sun says the first parts will have a SPECint95 between 8.5 and 11 and a SPECfp95 between 15 and 18 with a 2Mb cache. The SPEC95 ratings of competitive high-end chips that have been let out so far are largely a collection of estimates, projections, peak performance and system numbers so any attempts at comparison are guesstimates. However, if Sun achieves its numbers, it looks like it will be able to hold its head up among the bleeding edge PA-RISC 8000, R10000, Alpha 21164 and promised 300MHz PowerPC 620. Like its predecessor, the UltraSparc-II also features the Visual Instruction Set (VIS) which Sun claims scales and offers New Media processing and system bandwidth at an industry-high of three giga-operations/second and 1.6Gbps.

Benchmarks

Of course there aren't any benchmarks for this kind of stuff yet, but since Intel Corp is putting its comparable MMX multimedia technology in all its future chips, Agrawal says he expects the SPEC council to come up with one in the next six months. The UltraSparc-II is the first time it'll be using five layers of metal. The part will also be 2.5 volts rather than 3.3. A 300MHz UltraSparc-II can be expected to dissipate about 28 watts so it'll need a heat sink and fan. The UltraSparc-II includes microarchitectural enhancements like full software prefetch and the ability to handle multiple outstanding requests to reduce instruction cycle time. Second-level cache has been extended to 16Mb and it includes flexible system clocking and cache interface schemes. Agrawal says it's sensible to assume that the next rev would produce a 350MHz chip. Presumably he is referring to the 500 SPECint92 II+ revision due, by last September's updated roadmap, early next year. According to what it said last year (UX No 555), the UltraSparc-III, which should push 1,000 SPECint92, is due in the first quarter of 1998 and the UltraSparc IV, which Sun co-founder Bill Joy started designing last summer and is slated to tip over the 1,500 SPECint92 mark, was then due at the beginning of 1999. Agrawal was hesitant enough about that last date last week to make us wonder. He also spoke of the IV being a new core and a new pipeline but Sun has also previously spoken of the III being a new core and said it was to the UltraSparc what the P6 is to the Pentium (UX No 527). It's got five engineers working on IV that have been taken off II.

TERA READIES SHARED MEMORY MPP SYSTEM

Formed in 1987, Seattle, Washington-based Tera Computer Co says its MTA shared memory multithreading architecture supercomputer will be announced in a couple of months time. It's currently working with a final prototype of the shared memory MPP system and expects no design changes to be made. MTA will use from six to 256 CPUs of Tera's own design, each of which will be able process up to 128 threads, or pieces of an application at a time using automatic parallelising compilers. The chips perform three instructions per clock cycle. Because memory is shared, Tera says its cache-less design will eliminate memory latency and locality issues. And additional processors can be added without limiting performance. It claims MTA, which runs a version of BSD 4.4 Unix, will run Cray Research Inc vector application supercomputer code with "normal porting." MTA systems will be priced from \$10m in the third quarter. It's got no advanced customers for the thing. Tera's OEMing Maximum Strategy Inc's Gen5 XL storage servers for use with MTA. It's already got PsiTech Inc, Fountain Valley, California, developing client and server versions of its OpenGL and X software for use with MTA. Tera is also to resell PsiTech's HIPPI-attached frame buffers designed to be used in conjunction with PsiTech's display products.

SUNSOFT TAKES ON MICROSOFT INTERNET SERVER

SunSoft Inc is repositioning its HTTP Solaris Internet Gateway Server with a series of enhancements and a new name to compete more directly against Microsoft Corp's Internet Information Server (IIS). Solaris Internet Server will provide Internet access to Windows NT, NetWare and other Unix clients and roll out with NT-style pricing. Netscape Navigator will be used as a front-end client for systems administrators. The Solaris Internet Server is a key component in a Solaris Server Suite that Solaris server group manager Tony Hampel said is being positioned squarely against Microsoft's BackOffice application suite. In comparing the Sun Internet offering against Netscape Communication Corp's and Microsoft's, SunSoft VP Jerry Keeley said Netscape's new Enterprise Server, which is also meant to compete against IIS, is different from the Solaris Server because Netscape is more suited to layering on top of other servers while Solaris sits directly on top of a machine. As to Microsoft's, well, "IIS on NT is a direct competitor," he said. SunSoft, the software arm of Microsoft's chief rival Sun Microsystems Inc, claims that Microsoft will be left behind in the Internet race. According to Hampel, "Microsoft is so focused on trying to sell licenses, their Internet strategy is somewhat myopic." SunSoft claims IIS lacks key features such as the IMAP4 mail protocol, POP 2 and 3 post office protocols, an integrated Domain Name Server (DNS), integrated Point-to-Point (PPP), unlimited user licenses, a single-box solution and two-way IP-to-IPX tunnels. Key to SunSoft's push is a server enhancement called WebScout NW, a NetWare version of its popular SolarNet WebScout software intended to give Internet Server access to NetWare customers stranded by Novell's deficient IP-to-IPX solutions. Other pieces, including Solstice PPP for Unix and Windows and the Solaris Internet gateway give SunSoft a cross-platform angle. The Navigator administration client uses HTTP links to jump from problem to problem. By going with Netscape, Hampel estimates, the Server appeals to 80% of its intended audience. It could also use HotJava in future versions. The Internet server ships April 1 at an NT-ish \$800, with the price going up to \$1,500 at the end of June. Solaris Internet Server integrates with the existing Solaris Server Suite, which Hampel claims means SunSoft "beat Microsoft to market with all the pieces of a BackOffice-type suite" while Microsoft is only doing press releases for things like Exchange Server. The server suite is more extensive and flexible than BackOffice, he said, with none of the Microsoft product's hidden licensing costs.

SYBASE STIRS MANAGEMENT POT AND MERGES PRODUCT GROUPS, AS IT ANTICIPATES Q1 LOSS

More of the Sybase Inc old guard has been swept aside in a reorganisation the company hopes will consolidate its recent acquisitions, shake off the ghosts of System 10 and put it on the road to recovery from an anticipated first quarter loss. Many of the duties of the now former COO and executive VP David Peterschmidt have been handed over to PowerSoft Division CEO Mitchell Kertzman, who's elevated to executive VP sales reporting to Sybase chairman, president, and CEO Mark Hoffman. Peterschmidt will stay on for now as a consultant. The company has also formed itself into two groups. An Enterprise Business Group incorporates the Information Connect Division (formerly MicroDecisionware Inc) and Enterprise Server Division. Enterprise Group president Dennis McEvoy was previously senior VP of the Enterprise Division. It will address large-scale customer requirements. The Powersoft Business Group is focused on application developers and mobile, desktop and PC LAN environments. Former Powersoft president David Litwack will head this group. Former MDI president Mike Forster becomes senior VP worldwide field operations reporting to Kertzman. Sybase co-founder Bob Epstein remains executive VP strategic planning. Tom Herring, VP corporate marketing now reports directly to Kertzman. Senior VP worldwide services Michael Bealmear reports to Hoffman. Ken Goldman, senior VP and CFO; Juanita Lott, VP human resources; Michael Engelhardt VP external affairs; and Pat Lencioni, director of organisational communications, continue to report to Hoffman. Sybase expects to report a loss of between \$0.07 and \$0.12 per share on first quarter revenue of \$245m, up from \$216m last time, when it's numbers are published on April 11.

AMDAHL PAYS \$145m FOR TRECOM TO GROW IN SERVICES

The dependence of Amdahl Corp on mainframe hardware is rapidly diminishing now, and the company took another big step in its transformation yesterday when it announced its second major computer services acquisition within the past year. This time the company is ~~privately held Trecom Business Systems Inc, the first was DMR Group Inc~~, the Canadian company for which Amdahl paid about \$139m last autumn after getting into a bid battle with IBM Canada Ltd. It is paying \$145m cash for Trecom, half now, the balance one year from now, which should still leave plenty in the kitty despite plans to spend \$100m buying in its own shares - Amdahl had \$530m net cash at the turn of the year. Born in 1985, \$140m-a-year Trecom employs 1,700 at bases in New Jersey, New York, Connecticut, Georgia, Florida, Alabama, Washington and Texas. It claims to have been growing an average 40% a year for the past three years, majoring on systems integration, with skills covering everything from databases and warehousing to object technologies, and has turned Year 2000 date conversion into a speciality. After it becomes part of Amdahl, Trecom will retain its name, but its methodologies will be adopted by the other service operations; once it has Trecom under its belt, 60% of Amdahl staff and over half its turnover will be in software and services.

COGNOS'S UK ARM UPGRADES POWERPLAY ANALYTICAL PROCESSING TOOL

Cognos Ltd, Bracknell, Berkshire-based arm of Canadian Cognos Inc has announced updates to its PowerPlay 4 on-line analytical processing software tool. Version 5.0 will be released in the second quarter of 1996. The software is intuitive. It enables users to drill down through their data and to slice and dice the information, particularly useful as an executive information system to provide on-line company-wide information. So far, Cognos has notched up 125,000 sales of PowerPlay and hopes the latest launch, which comes with an additional server, will establish the software as "the absolute standard in the industry," said marketing director Ketan Karia. During the past two years, Cognos has climbed its way to the top of the data warehousing pile, "putting daylight between us and our closest competitors," said Karia. And the stock market has shown increasing confidence in the company. In February 1995 Cognos shares were changing hands at \$16.0 per share. They are now listed in the high \$50s. The company attributes a high proportion of its growth to the partnerships it has built with 110 companies, the latest being Coda Group Plc. This year it hopes to increase that number to 300. Instead of designing and developing the technology themselves, the joint agreements allow the companies to bolt on Cognos's applications. The strategy has been so successful that where two years ago Cognos was constantly chasing possible licensing deals, today "new companies are queuing up to sign with us," said Karia. PowerPlay 5.0 is currently in beta test, but will retail for about £825 - a similar level to version 4. No prices for the PowerPlay server have so far been released, but Cognos says it will be competitively priced.

IT MAY BE FREE NOW, BUT DEC HAS BIG PLANS TO EXPLOIT ALTA VISTA

The Alta Vista search engine for the Internet is one of the hottest properties at Digital Equipment Corp at the moment - at least it would be if it made the company any money. "Alta Vista does not make money - it's a service," Ilene Lang rather disingenuously told *Reuter* at the Canadian National Internet show - most people expect to make money on the services they offer. But DEC does plan to exploit the success of Alta Vista, which it says is getting some 5m hits a day four months after it was first made available: according to Ms Lang, vice-president of the Connectivity Software Business Unit, DEC plans to introduce at least three new commercial software products based on Alta Vista and "We are not planning to sell advertising [as Yahoo! Corp does]. But we might change our mind later." First up will be an Intranet Alta Vista product for corporations so that in-house users can search for documents and data on their company-wide communications system. The other two products will be Village Alta Vista for a group of users on a local network to search for information within the workgroup, and a Personal Alta Vista for users to search their own personal computer files. The products will be piloted soon with commercial launches expected for later in the year. "We want to keep crawling the Web as it grows," said Ms Lang, adding that DEC might consider ways of franchising Alta Vista on the Web by allowing others to use the service at their Web sites. "Alta Vista will be our Java," she is elsewhere quoted as asserting.

LOGIC WORKS MELTS WAREHOUSE, WEB AND CLIENT/SERVER MANAGEMENT

Logic Works Inc has come up with what it says is the first workgroup model management system to meld client/server, Web and data warehouse applications development into a single package. The Princeton, New Jersey company's Application Object Server (AOS), which runs ~~on top of most Unixes or NT databases, combines workgroup access,~~ intelligent conflict resolution, security profiles, model versioning and merging. The core AOS program is \$20k. Erwin/ERX, a \$3,295 add-on, adds a core set of database design and generation features and includes server forward-and-reverse engineering capabilities. Erwin/OPEN, due next quarter at \$4,000 will include the ERX features plus direct links to Microsoft Visual Basic, PowerBuilder and other development programs. Erwin/Navigator, also a product for later in the quarter, will provide view-only access to models.

INNOSOFT OFFERS UNIX-BASED MAIL INTEGRATION

Claremont, California-based Innosoft International Inc is offering the first Unix version of its PMDF e-Mail Interconnect electronic mail integration software. The company has now implemented the final piece of the PMDF family - the PMDF-X500 directory component - for Digital Unix, representing the first conversion from Digital Equipment Corp's OpenVMS, which has been shipping since September 1994. Both versions of PMDF-X500 implement the 1988 X.500 OSI directory standard, promising an extensible, scalable central data store for directory information. The move is the first of more Unix-related announcements due to be made this year and Innosoft is currently working on a Solaris version of the product which is in field test and should be ready in 60 to 90 days. Other systems - presumably including Hewlett-Packard Co's HP-UX Unix - will also follow, although the company is not revealing any specifics. PMDF-X500 for Digital Unix is available now at a cost of \$6,500 per server. PMDF-X500 supports access to the directory service with TCP/IP clients using LDAP Lightweight Directory Access Protocol and Connectionless LDAP. It has also been enhanced to support access from World Wide Web clients, so users can browse directory services and send mail from any Web browser. PMDF-X500 can be used as a stand-alone directory service, or integrated with the rest of the PMDF e-Mail Interconnect product set. When it is coupled with PMDF-Message Transfer Agent, PMDF-X500 facilitates delivery of electronic mail messages based on fuzzy logic matches against the information stored in the X.500 directory - a feature designed to relieve users from having to know exact addresses for delivery of mail messages. The Directory User Agent included with PMDF-X500 is also touted by Innosoft as being able to make it easier for users to access X.500 directory services.

MOTOROLA VECOMP VECTOR CHIP INCLUDES POWERPC

IBM Corp has so totally mismanaged the campaign to turn the PowerPC RISC into a successful merchant part that most of the wins there have been have been down to Motorola Inc rather than IBM. Motorola cannot afford to wait for IBM and has to behave as far as it is allowed to as if IBM did not exist. And that is precisely what it is doing, announcing an innovative vector processing architecture called Vecomp, for Vector Communications Processor. Vecomp, which combines a PowerPC core with a vector processing array, is aimed at the high-performance, low-cost digital processing requirements of wireless communications systems and implements a Single-Instruction, Multiple Data architecture, "ideal for signal processing algorithms typical of wireless communications." The Vecomp processors integrate multiple processing elements with the a high-bandwidth input-output subsystem on a single chip. Low-level signal processing code runs on the vector array, and the high-level control functions and operating system run on the PowerPC core. "This distribution of the system software enables the vector core to be fully utilised running compute-intensive routines, making the most efficient use of the high processing bandwidth available," says Motorola, which reckons that by replacing multiple processing engines or fixed-function ASICs in the cellular network, the new chip can bring big cost-savings, adding flexibility by making the system software-upgradable instead of requiring an ASIC to be replaced. The first Vecomp is due for introduction in 1997.

FORTE DEVELOPERS GET WEBBED

Forte Software Inc will deliver the anticipated Web support for its three-tier application development environment in two phases (UX No 547). The \$20,000 Forte Web SDK phase one, now in beta and due to ship by mid-year, will allow Web browsers to function as Forte clients using a customised Common Gateway Interface (CGI). Forte says it'll be quicker than conventional CGI. It'll also provide HTML class libraries that format responses to requests made by Web browsers, including formatting the results of SQL queries. Developers will be able to create Windows look and feel interfaces. A new utility will automatically create HTML Web clients from Forte interfaces. It'll also support Javascript. The second piece of Forte Web SDK will generate Java interfaces, allowing Java applets to interoperate with the Forte framework, sharing the Forte business services that support multiple applications. It will also include support for Netscape API as an alternative to CGI. The second piece will be released along with the next major release of the Forte application environment due by year-end.

HP DELIVERS TORNADO II DISTRIBUTED NETWORK NODE MANAGER

Hewlett-Packard Co has finally introduced the second part of its delayed "Tornado" distributed release of OpenView Network Node Manager claiming it allows management tasks and processes that until now ran on a single server to be shared by multiple servers - as long as each server is running a full-function copy of the Network Node Manager. HP says it'll allow OpenView to manage corporate networks with tens of thousands of devices, up from thousands in the previous version. Each server can send information about the devices it is running to one or more other Network Node Managers. Topology and status information is consolidated at a central console. Network Node Manager comes with three new filters, claimed to reduce CPU and memory use; domain filtering, allowing operators to monitor only the IP devices they are interested in; inter-domain filtering, which can restrict what management information is passed from domain to domain; and map filtering for customising views. A Windows NT release due by year-end will allow customers to deploy the Manager on NT as a domain manager only. HP says third-party solutions written to SNMP v2c or v1 standards can also be used in conjunction with the new Network Node Manager 4.1 which is priced at \$16,000. An Entry Network Node Manager with distributed functionality, which is limited to monitoring 100 devices, is available now costing \$5,000. IBM Corp and SunSoft Inc have previously claimed their own network management environments already provide Tornado's functionality and that HP is playing catch-up.

SET OFFERS CODE DECOMPOSITION FOR RAPID APPLICATION DEVELOPMENT

Software Emancipation Technology Inc's offering version 4.0 of its Discover C and C++ group development environment with a new set of modules called Package/sw, Partition/sw, and Simplify/sw - or Reengineer/set collectively - for logically and physically decomposing code to determine how to divide existing software packages into discrete application components and reduce compilation time. The notion is that developers will be able to respond to customer and market demands more quickly. Reengineer/set applications cost \$150,000; Sun and HP versions of Discover 4.0 are priced from \$50,000.

TI WEBCENTER NEAR

Texas Instruments Inc is apparently close to finishing the Internet Server it promised in December, which will move applications developed with its Composer application development program out on the net. WebCenter will link enterprise-class server applications to browser interfaces that can be customized with HTML and Java. Until now applications developed with Composer have been internal corporate affairs. It's the first fruit of an Internet unit TI set up at the end of 1995. The unit is also believed to be working on a net-enabled version of Arranger, TI's application development program which was used to turn out desktop applications designed to link to Composer programs.

ULTRASPARC NETRA PRICING, AT LAST

Sun Microsystems Inc says \$16,400 will buy a 143MHz UltraSparc Netra i 1/140 Internet server with 64Mb RAM, 2Gb disk, floppy drive, CD, 17" screen and TurboGX graphics, plus pre-installed Solaris 2.5, Solstice FireWall First, Netscape Enterprise Server, LiveWire site management, Navigator Gold, Java developer kit, graphical installation and administration tools, TCP/IP and IPX gateway, POP2/POP3 server, IMAP4 server, SMTP Sendmail v8, telnet, ftp, anonymous ftp server, asynchronous PPP, and DNS server. \$21,150 buys the equivalent Netra i 150 with 64Mb RAM, 4Gb disk and software. The Netra i 1/170 is \$24,400 with 64Mb RAM, 2Gb disk, 17" screen, Creator graphics and software. The 110MHz microSparc II-based Netra i 4 with 32Mb RAM, 1Gb disk and software costs \$7,500 - the Netra i 5, which has a CD, 17" screen and TurboGX graphics is \$10,800.

NEW DIMENSION CREATES SEPARATE COMPANY TO MARKET SINGLE SIGN-ON UNIX SECURITY

System and output management company New Dimension Software Ltd, Tel Aviv, Israel (formerly 4th Dimension Software) is creating a business around its recently introduced MultiPlatform Control-SA GUI-based single sign-on Unix security administration software. A wholly-owned subsidiary based at its headquarters is currently putting together a series of technology partnerships for specialist security providers. It's also looking for additional investment. It should be ready to go public with partners, and a name for the new unit, in a couple of weeks. New Dimension already has Tel Aviv neighbour, Memco Software Ltd, distributing Control-SA in the US and Canada, which has been integrated with Memco's own SeOS Unix security add-on. New Dimension says HP's SecureWare Inc, Argus Systems Group Inc, Sun Microsystems Inc and Data General Corp could all be potential partners. HIS Software AG, Zurich, is distributing MultiPlatform Control-SA in Switzerland and Germany. New Dimension's US unit is in Irvine, California is also distributing Control-SA. The rump of New Dimension's systems and output management business is worth some \$35m.

THINKING MACHINES TO SHIP PARALLEL SOFTWARE IN ONE MONTH

Thinking Machines Corp say its anticipated GlobalWorks software for harnessing Sun Ultra 1 servers and other systems into parallel application processing arrangements is still in beta but will ship in around one month (UX No 564). Initially on Solaris, Thinking Machines also has Silicon Graphics Inc implementing the software across its SMP clusters, due by year-end. The Bedford, Massachusetts company says it has other partners in hand. Its MPP Connection Machine-derived Darwin data mining tools are just now going into beta and should be ready by early summer for Sun and by year end on multiple platforms. The company's tapped Ralphe Wiggins from data mining software company Information Harvesting Inc, Cambridge, Massachusetts to spearhead its data mining solutions business.

CYGNUS GNU TO ARM, ADDS POWERPC PORTS

Cygnus Support Inc's developing a version of the GNU Pro C/C++ compilers, debugger, assembler, and file utilities for use with Advanced RISC Machines Ltd microprocessors and cores. A beta for ARM7DMI is due in July with production ships in October. A beta for the "Thumb" ARM7TDMI is due in November with general distribution next January. Embedded developers for GNU Pro for ARM hosted on Sparc and NT are expected. Cygnus has put its GNU Pro Tool Kit for PowerPC up on HP-UX 9.05, DOS, AIX 4.1.1 and Solaris 2.4 and is offering a GNU Pro Simulator for PowerPC. It also plans to offer an IEEE695 translation capability for GNU Pro. Also expected is an MRI compatibility mode within the GNU assembler to provide migration from MRI to GNU.

HP ADDS MIDDLEWARE MONITOR

Hewlett-Packard Co's also offering a DE/service monitor which collects enterprise-wide information about the status of distributed applications and middleware services and presents it to OpenView IT/Operations or HP-UX system administration manager GUIs. It gives HP system administrators the ability to see an enterprise view of services rather than a picture of individual nodes. It supports DCE Naming, Security and Time services initially with HP Encina/9000 support due later in the year.

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O2 Technology SA chief financial officer Helene Gans reports that, if O2's Korean distributor Nextech Inc sells everything it has ordered, Asia will account for much more than 20% of the company's exports this year.

The potentially multimillion dollar **Addamax Corp** antitrust case against the **Open Software Foundation**, **DEC** and **HP**, filed in 1991, finally goes to trial August 12 - there being no chance, it appears, of a negotiated settlement. At the hearing last week, the presiding judge called it an "embarrassment" that a case filed five years ago should not have made it to trial yet. What he failed to note was that it was the court itself that kept the case cooling its heels for about three of those years. It'll be a jury trial.

Help Wanted: A major US company is looking for a director for its Unix-based firewall product development group in the eastern US. Salary is \$80k-\$90k excluding bonuses and stock options. Must have strong personality and strong Unix systems development background. Send resumes to 708 305-9640 or nkokoris@aol.com.

BusinessWeek's obit of David Packard, after listing his many virtues, noted how different he was than the overnight millionaires the industry has spawned lately. "...Too many of them seem intent on living out a stereotype of techno-fame, talking trash at rivals, hosting flashy parties, and collecting showy cars and trophy girlfriends. Their charisma can be captivating, their tantrums legendary...."

"What is killing us is having to teach them to read, compute...and to think." **IBM CEO Lou Gerstner** on the current state of education and the work force, and one would think he still gets the pick of the litter.

Intel Corp may have given **Dolphin Interconnect Solution's** SCI (Scalable Coherent Interconnect) clustering technology a backhanded blessing but that doesn't mean it's moved in any noticeable way to provide a direct connection between SCI and the P6. We expect Dolphin to create a back door in the Alamo soon by announcing a PCI-to-SCI connection.

Evans & Sutherland Computer Corp's Portable Graphics Inc has released its promised OpenGL and OpenInventor 2.1.1 toolkit implementations for Hewlett-Packard Co's graphics boxes (UX No 568).

Toronto, Ontario-based Motif widget house **KL Group Inc's** offering a \$100 JClass Table Applet and a \$1,000 JClass Table development system.

Canadian Motif GUI builder company **Visual Edge Technology Ltd**, Quebec, says **Oracle Corp** is now shipping its ObjectBridge bi-directional object translation technology with the Sedona Developer/2000 tools. It says it'll add a Java option to UIM/X GUI builder but hasn't decided whether it'll re-write it in Java yet because lots of "deep GUI stuff" simply can't be written in Java as developers need to write to a mature, sophisticated toolkit. Moreover, it observes, the Motif market's still growing and most of the Unix hardware vendors are shipping it.

Visigenic Software Inc says its ODBC-based OpenChannel database connection suite (with optional Java support via a JDBC-to-ODBC interface) transfers ODBC application administration and processing from the client to the server and maintains database location transparency for client machines. An OpenChannel client replaces individual ODBC drivers and database libraries on clients. Prices start at \$3,900 for five concurrent users on NT, Solaris HP-UX and AIX servers and Microsoft clients.

Hewlett-Packard Co has introduced its promised Corba 2-compliant ORB Plus 2.0 object request broker for HP-UX, Solaris and NT (UX No 578). It includes the Internet Inter-ORB Protocol and will interoperate with the Distributed Smalltalk environment (actually VisualWorks plus Corba 2 services) it recently turned over to ParcPlace-Digitalk. HP-UX users can also develop with the DCE Inter-ORB Protocol. An OLE-to-Corba translation feature is due in the summer.

As reported in *Infoworld*, **SunSoft Inc** is readying a Public NFS version of its Network File System software for the spring which will enable Web browsers to transfer files using NFS instead of HTTP, eliminating the need to deploy NFS client software on the desktop. SunSoft demo'd the software at the recent Connectathon show.

Specialist network management house **MicroMUSE Plc** has snagged former Sybase Inc senior VP worldwide sales and field operations Dominic Gattuso as president and COO. He'll work out of an office in San Francisco, California which the London, UK company is making its new company headquarters. Chris Dawes remains chairman and CEO of the company, which after some false starts now appears to be on the verge of winning some significant US interest in its NetCool brand of SNMP network management following the success of main rival Objective Systems Integrators Inc, worth a billion or more since floating. MicroMUSE also plans a New York office.

Sun's Microelectronics business is offering VIS SDKs kits for developing with UltraSparc's Visual Instruction Set. A \$1,000 early access program nets VIS user's guide, VIS C simulator and debugging tool, the INCAS (It's a Nearly Cycle Accurate Simulator) model of UltraSparc, Solaris 2.5 linker upgrade and sample C and VIS code. It's also touting 20 new UltraSparc design wins.

As expected **IBM Corp** put some meat on its Information Warehouse Solution bones last Tuesday (UX No 583), announcing an AIX-based Intelligent Miner toolkit for analysing, extracting and validating data held in the data warehouses due in the third quarter and Intelligent Decision Server, an OS/2 LAN-based decision support application, .

Hewlett-Packard Co will offer version 2.2 of Encina/9000, its implementation of the **IBM Corp** Transarc 2.0 OLTP monitor release which was introduced at Unix Expo last June (UX No 556). HP will offer an implementation of Transarc's DE-Lite cut-down DCE client and gateway for PCs as HP DCE Encina Lightweight Client in July (UX No 525).

Tenon Intersystems Inc, Santa Barbara, California, is offering a new version 6.0 of its Xten server for Power Macs based upon the MIT X11R6 standard. An Xten Manager allows users configure their X environments from a Web browser. Tenon bypasses QuickDraw and sends the X drawing primitives directly to the hardware screen buffers.

XVT Software Inc's offering a new 4.5 version of its C development environment priced at \$2,330 on PCs and \$7,500 on Unix. It includes enhanced internationalisation support.

Despite what we hear from **SunSoft Inc**, sources still insist the **Active Software Inc** Java GUI builder it's licenced for Java WorkShop will be a short-lived indulgence and that it'll build its own downstream.

Code-tester **Mercury Interactive Corp** now has an operation down under in Sydney.

SPL WorldGroup BV is the exclusive distributor of **GemStone Systems Inc's** object application system in Israel, South Africa, Australia, New Zealand, Hong Kong, Singapore, Malaysia and the Philippines.

Passport Corp, Ronkonkoma, New York, (formerly InSync Software) is offering version 8.1 of its three-tier development environment enhanced to provide easier building of Passport application servers. It has a new GUI and object browser. Two-tier Passport is \$4,000 on Unix and Microsoft. Multi-tier versions are \$8,000 per seat. An OS/2 version is due in the third quarter.

Trident Systems Inc, Fairfax, Virginia, is looking for a partner to distribute its Unix touchscreens in Europe, a business it reckons could be worth \$250,000 a year.

Data General Corp's Clariion RAID subsystems now support NCR servers running MP-RAS 3.0.

Ilog SA is readying a point release of its Views C++ library and cross-platform GUI builder to support Windows 95 look and feel. It's also working-up a set of Web-oriented offerings expected in a couple of months. Its going to extend the TwinPeaks Java-to-C++ bridge it's created for SunSoft Inc for use with its own C++ components (UX No 583).

Cognos Software Inc, Markham, Ontario is bundling its PowerPlay on-line analytical processing tool and integrating its query and reporting tool with **PeopleSoft Inc's** client/server personnel software.

Santa Clara, California-based **Central Design Systems Inc** says version 4.0 of its LicenseTrack 4.0 licence manager now supports Java applets, a GUI-based console for managing **Globetrotter Software Inc** Flexlm daemons and the ability to set SNMP traps that integrate with network management tools. Prices are \$1,000 on PCs, \$5,000 on Unix servers.

Javaworld notes that all the Java code in the world would probably fit on one CD-ROM. (All right, maybe two.)

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UNISYS PUTS MULTIPLE SYSTEMS UNDER ONE HMP ROOF

Unisys Corp's going to pitch heterogeneous multiprocessing (HMP) against the rising tide of NUMA and scalable SMP systems, corralling its Unix, NT and mainframe server lines into a stable of ClearPath systems that provide multiple, interconnected operating system environments under one hood (UX No 565, 581). Unisys says HMP removes the problem of heterogeneity for administrators and is ideally suited to vertical markets such as financial services which typically maintain multiple application environments. There are three ClearPath HMP models which mix and match new Intel Corp-based Unix and NT SMP nodes with A Series or 2200 mainframe processors in one box. They're pre-configured with all the cabling and connectivity software - including Unisys subsidiary Usoft's Tuxedo-based Online software, TransIT and Open/OLTP - required for interoperability and shared data access. As well as TCP/IP, Netware and SNA networks support, Unisys has integrated Microsoft networking and SunSoft Inc's NFS with the mainframe operating systems. A distributed shared memory architecture is being readied for year-end to hook multiple HMP systems together. ClearPath HMP IX4800 supports the new Unix or NT-based SMP61000 servers together with the new single-chip mainframe models (see below). Unisys' Intel SPP-based Open Parallel Unisys Server (Opus) will be supported by year-end. Each IX4800 server has a shared electronics complex and system control facility, a single operations console and peripheral complex. The IX4800 ships in August. No prices. The NX4800 and NX4600 servers combine 2200 mainframe and A Series nodes with NT respectively. They both ship in June. No prices. Unisys - which has reorganised its business five times in as many years - will use a combined Computer Systems Group team to market HMP.

Sierra

Originally thought of as upgrades to the mid-range Unix-based U6000/500 SMP series the Clearpath SMP 61000 servers support two-to-ten 150MHz or 200MHz PentiumPros and run Unisys' Unix SVR4/MP, UnixWare 2.1 or NT. They are priced from \$90,000 to \$150,000 as quads; \$190,000 to \$240,000 with eight CPUs. The 61000 series includes Unisys' 533Mbps Synchronous Coherent Memory (SCM) bus which allows users to mix and match Pentium and PentiumPro chips in Unix arrangements. NT versions (PentiumPro-only) are due in the third quarter. Pentium units ship this month. All support up to 4Gb RAM, seven PCI and five EISA slots. Unisys says it'll phase out its own SVR4/MP operating system in favour of UnixWare by year-end. 61000 models will replace the Unix-only U6000 Series - although the Sequent Symmetrys OEMed as Models 75 and 85 are still available. Non-SCM NT systems will remain. Unisys claims it'll be the first out of the hatch with 10-way PentiumPros by eschewing Intel's SHV board and Orion chipset in favour of its own Sierra dual-processor boards. Unisys' A Series and 2200 mainframe lines get new models, each fitted with the 0.5 micron CMOS single-chip implementation being fabricated by IBM Corp, including the A2400 and A2800 and eight-way 2200/3800 (which can go to 64-way with clustering). Unisys will also debut its proof-of-concept Intel Corp-based A2100 server running the A Series MCP/AS operating system (mostly under emulation until P7 arrives). The PCI bus system is object-code compatible with A Series models. The 2200/3800 is due in August, the A2400 in May and the A2100 and A2800 in June.

BIG E SEEKS ENTERPRISE SOFTWARE FOR UNIXWARE

The Santa Cruz Operation, Intel and UnixWare OEMs have been off concocting a plan to get chi-chi enterprise programs ported to UnixWare 2.1. The initiative is code named the Big E, "E" standing for enterprise, and they are supposed to go public with it in San Francisco on Tuesday April 23, though it was to have been a month earlier at one point. The great unveiling, one would think, also depends on getting all the related, still-pending issues like structure, viable programs and funding ironed out - or maybe they'll just squabble about the money after the announcement is made no matter what they say publicly. The OEMs nominally involved include Compaq, Data General, ICL, NCR, Sequent and Unisys. The names Olivetti and SNI cropped up in some quarters, but not in others. They have their work cut out for them. UnixWare is practically never mentioned as a key ISV platform, a distinction that belongs, among the Unix set, to Solaris-on-Sparc, HP-UX and AIX, all RISC-based operating systems, which doubtless explains Intel's Big E involvement. The place UnixWare might have had, if it and its purveyor inspired any great confidence, even among its own OEMs, seems to have been usurped by Microsoft's up-and-coming NT platform which ISVs often mention these days in the same breath as the industry leader, Solaris-on-Sparc. Intel can thank its lucky stars that NT installations are estimated to be better than 90% Intel-based, but of course everyone's relationship with Microsoft, even Intel's, is ambivalent, to say the least, again explaining its Big E involvement. SCO and Intel will now attempt to position UnixWare, which failed dismally in its first incarnation on the desktop, and still suffers from that reputation, as the industry-standard enterprise-level Unix operating system for Intel servers, an assertion that could meet with derision from Microsoft, resistance from Sun and its equally weak x86 Solaris implementation, and continued indifference from the enterprise user let alone the ISV. Any number of folks have had their fingers in the Big E pie by now considering that they've been trying to pull the initiative together for some weeks. Still, as of last week, mere days before lift-off, we had the distinct impression that crucial points were still up in the air even as Big E representatives were scheduled to start briefing market analysts and creating what they themselves called "hype" among the press. *Continued on page three.*

DEC OFFERS COMMERCIAL TRUCLUSTERING

Sun's only going to have 24 hours to bask in the glow of its Sunfire announcement next Tuesday before DEC brings the starting flag down on its TruCluster commercial clustering solutions. High-availability, database and storage management software packaged as TruCluster Software using the 100Mbps PCI bus Memory Channel interconnect from Alpha partner Encore Computer will provide node-to-node connection for up to four DEC Unix-based AlphaServers, plus storage. Last December DEC strung eight 12-way AlphaServer 8400 TurboLasers together in a demonstration to the technical crowd at Supercomputing '95 (UX No 557). Memory Channel gives all nodes access to common memory. Each server is connected to Memory Channel through a PCI card - hubs are used where more than two systems are clustered - such that one server can access memory on another without interrupting its CPU. The company claims existing applications are automatically distributed across nodes and will run without modification. Different versions of applications and operating system releases can run in the same cluster. TruCluster software includes Oracle Parallel Server; DEC's Distributed Lock Manager which controls access to shared resources; Distributed Raw Disk, which transfers disk access ownership in the event of system failure and provides access to remote storage; and Available Server with DECsafe, AdvFS and LSM modules which provide failover, journaling and load balancing. System failover is touted at fifteen seconds, application failover is longer.

JAVA START UP SAID TO BE READYING BACKOFFICE-STYLE APPLETS

The Java start-up being created by former JavaSoft luminaries Kim Polese and Arthur van Hoff, plus Sami Shaio and Jonathan Payne, expects to settle on a funding plan in two or three weeks' time, but is unlikely to reveal its product technology hand for a while yet. Polese said the hardest job has been finding a name. Yajsu - Yet Another Java Start Up - was a nickname suck.com gave the venture. Speaking at last week's IntraNet conference Polese said the company will be breaking out of the Web browser metaphor to do Java over the Internet/Intranet. "The Web isn't an environment for distributing applications. It's for distributing documents," says van Hoff. Even that model is broken, he believes, noting the three T3 lines Netscape must maintain to support users accessing Netscape pages when they boot up their browsers each day. The start-up's challenge will be to remain outside the browser but be consistent with it, and to maintain security whilst accessing file systems and network services in ways that Java applets can't right now, the founders say. IntraNet attendees suspect the company is working on a suite of Java-based Microsoft BackOffice-type applications. *More on back page.*

IS SENSE8 TAKING THE VR INTERFACE LEAD?

Virtual reality is on the verge of becoming the standard interface for visualising complex software management tasks, if negotiations between companies such as Oracle Corp and Sybase Inc and a small California start-up see the light of day in product form. Computer Associates International Inc has already implemented virtual reality interfaces within its CA-Unicenter TNG edition of systems management tools, launched in January as the CA originated Real World Interface, and due to become available this month. CA demonstrated this at the DCI Client Server and Database World show in Boston, last month. The small 50-person technology start-up in question is Sense8 Corporation, of Mill Valley, California, and despite the fact that it has been shouting the CA relationship from the rooftops, it is still almost unknown that the revolutionary CA visualisation within the TNG release is almost entirely down to the Sense8 WorldToolKit development system. A spokeswoman for Sense8 said: "We announced our CA relationship in the summer and we have both worked hard on this product. We've been touting the fact to anyone that browses our web site for a couple of months. But CA seems to have decided not to mention the fact in its own promotions." Indeed CA made great play of the technology when it announced TNG, but declined to mention any of its suppliers at the time. It subsequently turned out that TNG will use the Fujitsu Ltd supplied ODB-II object database, instead of the much touted, but not delivered, object-relational extension of Ingres that CA promised. Sense8 jumped from 18 to 50 employees during the past year, expects to double its revenues during 1996 (but still hasn't declared what they are yet), and dubbed the CA relationship as the first ever true commercial application of virtual reality, which is going a bit far, but certainly it seems destined to be the most widely installed VR system ever.

Discussions

Now Sense8 talks openly about advanced discussions with other software suppliers, and it sounds as if Oracle or Sybase are planing to follow CA's lead whether or not they choose Sense8 technology. The CA deal allows for each corporate user to use the development version of its WorldToolKit to build a rendered visualisation of its network and IT infrastructure, and for each systems management console to use a run-time version of the same tool. This, in conjunction with the active agent technology that CA inherited from the Legent Corp takeover, makes for a systems management environment where the diagnostic lights on a laser printer 3,000 miles away can report a fault by showing in rendered form on a management console, or a piece of software that has not been correctly loaded can be dropped into a virtual PC and loaded by clicking on a rendered graphic of the real world software packaging. The spokeswoman added: "CA is one of our biggest clients, though not the biggest, and we are very interested in pursuing the same business model with other major software suppliers." Sense8's products start at \$995 for a single Windows development license and rise to \$23,000 on the SGI Onyx Reality, with average user installations around \$12,000. 50% of Sense8's licenses are Unix.

NEC POOLS RESOURCES WITH SIEMENS ON MIPS GRAPHICS

NEC Corp and Siemens Nixdorf Informationssysteme AG will jointly develop a three-dimensional graphics chip for R-series RISC-based Unix workstations. The two companies are members of MIPS ABI and use the same R-series processors in their workstations and servers. "The jointly developed library and graphics accelerator boards will typically be used for computer-aided design and manufacturing," said NEC marketing manager Mr Yoshinda. The technology will comply with the PHIGS Programmers' Hierarchical Interactive Graphics System specifications. Financial terms of the agreement have not been released. Development is already under way for the graphics library, based on NEC's previously-developed proprietary systems, and the technology is to remain in joint ownership. NEC is to manufacture the accelerator boards and sell them on to Siemens on an OEM basis.

ORACLE SNAPS UP REST OF DEC'S Rdb TECHNOLOGY

Oracle Corp's bought the remainder of Digital Equipment Corp's Rdb technology that it didn't pick up back in December 1994 when it acquired the database. It's paying an undisclosed amount for the DB Integrator, Data Distributor and Integrator Gateways families of distribution, replication and query parallelisation tools which use Rdb SQL and Rdb ODBC; plus their associated engineering and support resources. The products allow Rdb applications to share data with Oracle7 databases.

NETSCAPE HAS GOT MICROSOFT ON THE RUN, CHAIRMAN JIM DATABASE APPLICATION BUILDER

Microsoft Corp is out to get Netscape Communications Corp any way it can - and the strategy will trip the company up. That is the message Dr Jim Clark, chairman of Netscape - and founder of Silicon Graphics Inc is delivering to anyone who will listen. "You can talk to any company in the world and Bill Gates or one of his representatives has been in and specifically discussed us and said they want to kill us. That implies to me they're worried" about Netscape's 70% of the Internet browser market, Dr Clark told the BBC Radio Five Live programme The Financial World Tonight last Monday night. Asked "do you think they're trying to drive you out of business?" he responded "Well, they've stated that. I've been told by CEOs of other companies that Bill Gates personally has said 'we're gonna take their air, we're gonna make them spend all of their cash and drive them out of business.' That kind of maniacal focus is gonna leave him vulnerable. When one person is so narrowly focused on one thing they inevitably can't see the larger picture. So great, we've got a great little target. He may think he can decimate us, but in fact by focusing, what he's going to do is leave his flanks open, and people are going to attack him." Dr Clark is not too convincing on the benefits of being first into a market - although Netscape was anyway far from first into the browser market. "The real benefit of being first is that you get the first opportunity to listen to what the customers want. That's the kind of feedback that guides a successful company. It isn't just because you sit around and create all these great products. The world isn't gonna beat a path to your door, you have to go out to the customer, listen to what they want," and refine and polish your products accordingly. "If you don't listen to them you end up being a pioneer with arrows in your back," he said - but the biggest criticism of Netscape right now is that it is not listening to what the customer wants. Overall, Dr Clark believes that the Internet is just a data version of the telephone. "Within a few years it will be as important as the telephone, because you won't be able to exist without it." He forecasts that it will subsume the voice system and become the medium for every kind of wire transfer, ultimately including video. Asked to comment on Dr Clark's assertions about Microsoft, the company said it was pleased to see Netscape had noticed the company's Internet products, but asserted that it was not focused on Netscape, simply on the customer and his or her needs.

AMDAHL files WRITING CLUSTER SPEC

Out sister publication *ClieNT Server News* reports that NetFrame Systems Inc co-founder and erstwhile chief technology officer Carlton Amdahl, son of computer giant Gene Amdahl, is working on mating Dolphin Interconnect Solutions' Scalable Coherent Interconnect Interface or SCI-based messaging technology with NetFrame's own messaging layer, a technology that rides above the operating system. Justin Rattner of Intel Corp and Jeff Merkey of Novell Inc are apparently also involved. Intel is looking at clustering over geographic distances so that servers can back each other up. Rattner's group has been working with public switching technologies and ATM links. The new initiative is trying to develop a flexible clustering scheme, one that would encompass Intel's geographic clustering and a Tandem-like way of configuring tightly coupled processors in a machine for speed. The hardest part of the initiative, one source said, "was getting all these guys talking."

CONTRACT SERVICER CERPLEX NOW OWNS MODCOMP OUTRIGHT

Daimler-Benz AG, now assiduously liquidating AEG AG assets - after all, since 1973, the company had made a profit in only three or four years - is finally shot of Fort Lauderdale, Florida-based industrial computers specialist ModComp, Modular Computer Systems Inc. It sold a 50% stake in the company to Tustin, California-based Cerplex Group Inc in December 1994, and the latter has now acquired the remaining 51% of the new Modcomp/Cerplex LP. Sales for Modcomp in 1995 were \$38.2m, up 15.75% from 1994; some 60% of its business is international these days, coming from Germany, France, the UK, Venezuela and Canada. Cerplex offers contract repair, logistics, parts, remarketing, training and help desk services.

SCO, INTEL AND OEMS IN UNIXWARE RAH RAH

(continued from page one)

The Big E announcement - *see front page* - seems to be intended as much to convince the OEMs to actually standardise on UnixWare, which has hardly proved a volume platform, as to recruit showcase ISVs. There will doubtless be some ISVs rounded up by the April 23rd event, perhaps led by Oracle, which would be SCO's first choice, if it can persuade it. SCO is believed to want to recruit around 30-50 enterprise ISVs, representing about 100 applications, and it wants to be in charge of signing agreements with them. The ISVs may not be rounded up so docilely. At press time there was no evidence any had signed and they may want to put their two cents in before committing. They may find the scheme thin and UnixWare not truly enterprise-worthy, at least not for the glass house. Such considerations could conceivably delay liftoff. It is believed the initiative, when it does launch, will paper over variants among the UnixWare implementations and present a single face to the world - positioning UnixWare as meaning fewer ports and lower maintenance and support costs - though, from the ISV's point-of-view, one port is in reality not a port to all OEM platforms. The OEMs, on their side, may have resisted SCO's notions of creating a war chest that they fund and SCO brokers to underwrite porting fees, engineering resources and hardware. It is unclear whether SCO had a lump sum figure in mind to cover up-front and on-going payments to key ISVs or some alternative. It is known to have considered both in the last month or so. Intel meanwhile is believed to be willing to fork out a few million for the cause. The OEMs may also be asked to offer ISVs volume guarantees. It will be interesting to see whether they do or whether they have dissuaded SCO from this tactic. Either form of inducement would seem to undercut the premise of UnixWare as a high-volume Intel model, a claim the Big E initiative stands ready to make based on what it calls a "Multiplier Effect," a sound bite - its expression - that alleges that there is suddenly an eightfold increase in the number of targeted users per binary shipped. As part of the Big E push, SCO and the OEMs will pledge to bring new enterprise capabilities to UnixWare 2.1.

Shy

It remains to be seen how sincere SCO really is about hardening UnixWare. Its troops have been criticised by both the ISV and OEM wings for "not knowing what they don't know" about the enterprise and for being captive to their history at the low end. SCO's also been faulted for wanting too much control and for being unwilling to accept aid. Reports suggest that in the last few weeks it has ignored offers of high-end RAS-style technical input from NCR and Sequent. On the operational side, it remains to be seen how the Big E club handles such things as ISVs that individual OEMs already have relationships with. Are they supposed to share them with competitors? Will they also then "share" sales calls on users? How are special hardware configurations or products handled such as the upcoming DG and Sequent NUMA platforms? Do ISVs need hardware from everybody? Both NUMA and non-NUMA? Only from the vendor-neutral Intel? Will the Big E participants assign engineers to actually do the ports for the ISVs? Can they generate enough user pull by dint of price/performance and investment protection arguments to push ISVs into their court and vice versa? We imagine one of their points of persuasion might be to clearly label UnixWare the source base for the next-generation 64-bit Unix, Summit/3D, that HP is running up, a point everyone's been terribly shy about so far.

WWW CONSORTIUM AGREES ON NET STYLE

One of the most potentially harmful obstacles to future interoperability on, and development of, the Internet has now been overcome by the World Wide Web Consortium. The Consortium has announced that its members have agreed to develop a common way of integrating style sheets into hypertext documents for publishing on the World Wide Web. At present, content providers do not have any control over colour, text indentation, positioning and other style aspects of pages. The style sheet work will be based on Hakon Lie's Cascading Style Sheets initiative at INRIA Sophia Antipolis. The Cascading Style Sheets mechanism will enable authors and readers to influence the presentation of HyperText Mark-Up Language documents by inserting their preferred style sheets, and will offer better support for printing HyperText Mark-up Language documents.

SUN RETAINS TOP WORKSTATION SPOT; ONLY SGI AND "OTHERS" GROW SHARE

Although Sun Microsystems Inc's touting Dataquest's preliminary 1995 workstation numbers in its escalating trade-in, performance and market share battle with Hewlett-Packard Co, the research company notes that in fact Sun "didn't have a very good year." Although Sun is still well ahead of HP, its unit share of the workstation market declined from 38% in 1994 to 35% of the 861,000 boxes shipped 1995 - its 30.4% revenue share of \$13,058m was about a point down on 1994, Dataquest says the two months of UltraSparc ships (November and December) probably came too late to make up for all deferred orders. However Dataquest thinks it amazing that Sun's position as the leading workstation supplier has held up so well over the last five years given its technology hiccups and HP's aspirations. Actual system shipments are still increasing rapidly, it observes. HP's unit share of the 1995 workstation market was 19.8%, down from 20.9% in 1994. Its revenue share was up about a point at 24.9%. IBM came in third with units slipping marginally to 9.7% of the market from 10% in 1994. Silicon Graphics Inc overcame early problems to take an 8.5% share of the 1995 market, up from 6.3% in 1994, beating DEC down into fifth place, which slipped to 7.9% last year from 9% in 1994. Along with SGI the big winners were vendors in the "other" category, whose combined share of the market rose from 6.3% in 1994 to 8.5% in 1995. Sparc-compatibles and Motorola Inc's PowerStacks have driven the increase, Dataquest says. It expects vendors that don't move at least 10,000 boxes a quarter - those below third place in the market share table - to have difficulty maintaining workstation business in the long run. The Unix workstation market is coming under increasing pressure from NT solutions such as Intergraph Corp's revamped engineering products, though the emergence of Unix standards in all areas is helping keep users loyal, it notes. The next big thing will be P7 workstations running NT and HP-UX/SCO.

OEC SHARES HIT ROCK BOTTOM AS IT WARNS OF FIRST QUARTER LOSS, LOSES CEO

Open Environment Corp has its head in its hands. Shares in the Boston, Massachusetts-based three-tier application development and OSF Distributed Computing Environment house had tumbled to a 52-week low of \$4.37 as we went to press last week, after the company warned that it will record a loss for its first fiscal quarter of 1996 quarter to March 31 and that its president and CEO Nathan Morton has resigned. Open Environment Corp (OEC) says it failed to close a number of large orders and that as a result its Q1 results, due on April 30, will come in below analyst's expectations, which had been pegged at break even. Only a couple of weeks ago OEC was forced to restate its fiscal 1995 numbers to reflect the delayed shipment of a \$1.85m order, leaving it with a profit of \$49,500 on turnover of \$29.3m, compared to a \$1.3m profit on revenue of \$31.1m it had previously published. OEC, whose DCE-based application development tools business grew rapidly through 1995, says Morton resigned because he did not have the skill set for the company's increasingly technology-oriented market. Philip Copeland, founder and chairman of Australian repository and tools house Jarrah Technologies Pty Ltd which OEC acquired last August (UX No 554), takes over as acting CEO; VP and co-founder Adam Honig is interim president. After four years of sending out sometimes confused messages about its market, technology and mission (most of its customers are DCE shops but OEC doesn't like us to think of it as a DCE house these days) the company says it'll stand up on April 30 and tell us what it's really all about. It plans new packaging and product enhancements, including unbundled components, discreet management tools and additional Web and Java technologies, plus a new corporate strategy and focus. It expects an executive search to take a full quarter. The company wouldn't say if it'll shed other staff, although its pre-announcement home page described it as having 230 employees compared to the 200 declared in its revenue warning.

SYBASE CALLS Q1 "A BLIP"

Sybase Inc, which only came in with a penny-a-share in the September quarter, calls the March quarter for which it expects to record a loss just a blip (UX No 584). It blamed Oracle Corp for muddying its reputation lately, claimed it anticipated no changes in its pricing structure and denied it has been discounting deeper than usual or that its database market is slowing. Instead it claimed its pipeline is building. However the company expects to close no really big deals in the second quarter but is hoping for a string of \$1m, \$2m and \$3m orders, 20% of which might come from new accounts. Sybase competitors have lambasted it for selling only to its installed base. Sybase estimated 35%-40% of sales would come from "new sites."

NOW INFORMIX COMES IN BELOW EXPECTATIONS

Shares in Informix Corp plunged \$8.50 to \$17 last Monday before recovering to \$20.37 as we went to press on Thursday, after the company warned that it now expects first quarter earnings to come in at around 7 cents to 10 cents a share on revenue of \$200m to \$204m compared with Wall Street expectations of 14 cents a share on \$211m. The profits warning comes hard on the heels of one from another relational database company, Sybase Inc (UX No 584). Morgan Stanley & Co technology-watcher Chuck Phillips attributes the problem largely to a change in US sales management and the resulting disruption. He says customers are also buying products more incrementally as opposed to some of the mega-sized enterprise deals of last year. The brokerage house reckons Informix will take two quarters to regroup from both a product integration and sales force execution perspective.

Plate full

After visiting the development lab in Portland where the bulk of the Informix-Illustra product integration will be designed and implemented, Phillips says that "to put it mildly, Informix engineers have a lot on their plate for the next year." The current production level version of Informix Online is 7.12. Release 7.13 will add data replication and is being tested with select customers as a separate branch of the base product. It will be merged back into the base product and called release 7.2 (a three-week effort for four people, Phillips is told). Version 7.3 comes later this year and adds an improved loader and new administration tools. The 7x code line will continue for two years, the bank learns. The initial Illustra integration will target the 7.2 release of Online. The bulk of the integration has to do with extensible access methods and indexes (EAMI). EAMI technology is Illustra's technical innovation and allowed the product to handle abstract data types. As we learned following the acquisition (UX No 570), Informix is taking the Illustra EAMI work and merging that with the underlying management processes of Online (memory management, disk management, buffer manager, fragmentation, and the allocation of resources). The project requires some changes to the On-line kernel but it's not a rewrite, Phillips notes; instead, the new Illustra access methods will be layered on the On-line kernel. Everything in the superset product from the optimiser on down will be On-line technology and above that level will largely be Illustra technology. Phillips estimates the initial integration of a product suitable only for a controlled release for early adopters, should be ready by the fall. The company is targeting formal beta testing for the first half of 1997. Most of the data blades Illustra had written will have to be modified. Informix estimates that the modifications will represent 20% of the original effort to create the data blades. As a result Morgan Stanley is moving out its prediction of a production-ready superset product "until the second half of 1997 at the earliest." Once the merged 7.2 product is out, the company will attempt to merge it into version 8, which is the massively parallel product currently in controlled release. That merge of version 8, 7.2, and Illustra will result in version 8.1 in late 1997. All the administrative tools and the ultimate integrated product come together in version 9, which is targeted for early 1998.

OLAP COUNCIL DEVELOPING PERFORMANCE BENCHMARK

The OLAP Council is now sponsoring the development of an analytical processing benchmark, calling it the APB-1. The benchmark is meant to simulate a real life on-line analytical processing application and will measure the performance of OLAP operations against databases, rather than the speed of the OLAP server per se. Measured operations will include the bulk loading of data from internal or external data sources, incremental loading of data from operational systems; aggregation of input level data along hierarchies; calculation of new data based on business models; time series analysis; complex queries; drill down hierarchies; ad hoc queries and multiple on-line sessions. Benchmarking will be carried out by independent auditors certified by the OLAP Council. Disclosure items will include an audit report, the database schema, code required for data loading plus any pre-calculations, code for the execution of each query, number of users, size of the benchmark data files, database size, the database server software, database tuning parameters and hardware and operating system parameters. The Council will release the benchmark for public comment this week. It hasn't worked out a pricing scheme yet. Meantime the Council's multidimensional data access API will be released into the public domain in the summer (UX No 562). The specification will supposedly lead to the creation of standard technologies for connecting front-end access software with OLAP data sources.

SUNSOFT UNVEILS FIRST PIECE OF EXCHANGE COMPETITOR

With its new Solstice Internet Mail Server, SunSoft Inc has unveiled the first piece of what's been code named the Mission Critical Messaging (MCM) server (UX No 583), that it's hoping will knock the wind out of ~~Microsoft Exchange. SunSoft has made client and server versions of a~~ proof-of-concept Internet Mail product - basically an unsupported advanced alpha or early beta - available for download on the Web. VP of engineering Phil Rosenweig said that the IMAP4-based Solstice product will be the "enabling product for the Mission Critical Messaging server," although he was coy about what MCM would look like. He suggested that MCM will compete in function with Exchange but provide cross-platform support and open protocols rather than be a proprietary system. SunSoft said that IMAP4 is key to the strength of both Solstice Internet Mail and future messaging products. "IMAP4 will roll over POP" as a protocol, Rosenweig said, in part because it functions better over slow links and remote access, provides filtering capabilities, and synchronises e-mail folders between the desktop and the server. The Internet Mail products are supposed to ship in June with a new GUI but share the same engine as the unsupported version. It will ship on Solaris, Windows 95, NT and 3.1 clients with a Solaris server. Meanwhile, SunSoft has added support for NetWare and LanManager LANs through its Solstice LM Server 2.0 and NW Server 2.0 gateway products. They allow companies to transparently place those LANs on top of Solaris without changing platforms. LM sells for \$545 for a server and five clients, while NW is \$645.

CLI OFFERS INTERNET FREeware BUNDLE

Meantime, Austin, Texas-based Computational Logic Inc is offering version 1.1 of its Basic Internet Server Solution (BISS) package of Internet freeware for Solaris 2.4 Sparc or higher priced at from \$2,000 through June - \$3,000 thereafter. BISS includes Web, FTP, email, Usenet, MIME, dial-up, HTML programming and security. An x86 version is due this quarter. Additional security is due in the third quarter.

SPIDER ADDS DATABASE ACCESS, CREATES JAVA INTERACTIVE DATABASE APPLICATION BUILDER

Palo Alto, California-based Spider Technologies Inc claims its NetDynamics interactive database application development tool is the first Java-based Web/database development system that automatically creates server-side Java code for application runtime. It allows users to access and update Java-based applications which leverage existing databases from Web pages. It sees internal company applications such as 401k as ideal development targets for NetDynamics. Spider claims the software supports any Web GUI, runs on Unix and Microsoft and supports ODBC and other databases. The development system comes with a personal Web server, HTML editor and browser priced at \$1,300 - \$2,000 including the database option. Spider says NetDynamics provides corporate developers with a familiar client/server application development-style desktop environment with wizards, graphical palettes and object editors. Java applications run against a NetDynamics server layer which includes Rogue Wave Software Inc's connector libraries allowing calls to be made to individual databases. It's using Visigenic Software Inc's software for ODBC connectivity (UX No 584). The rest is its own work. The company will continue to ship its Spider 1.5 development environment and provide a migration programme to get 1.5-based applications up to NetDynamics. It's going through integrators and is looking for other resellers.

HP HIDES P6 DETAILS FROM COMPAQ

Hewlett-Packard Co is trying real hard not to show its Pentium Pro hand to rival Compaq Computer Corp, which is going flat out to get its own P6 systems away before HP does. HP showed a prototype of its P6 NetServers at CeBit and announced them - sans configuration and pricing - at Networld+InterOp last week. HP's expected to use 200MHz chips and Intel Corp's standard high volume motherboards in production versions that go to four-ways initially, running SAP, Oracle, Sybase and Informix. Industry watchers say Compaq may be faulted for weak duplexing, redundant power supplies and slots. And it's no wonder Compaq's worried about HP. *Computer Reseller News* quotes an IDC report as saying Compaq lost seven points of server market share in the fourth quarter to IBM Corp and HP, dropping to 33% from 40% the previous quarter. IBM went from 17% to 12%, while HP rose 2% to 13% market share.

JAVA PROCESSOR, THE BEST THING SINCE SLICED... RAT?

Is Sun Microsystems Inc's idea of producing a Java-specific processor an excellent or a terrible idea? Chris Rowen, the director of Silicon Graphics Inc's European Core Technology Group told our sister publication *Multi-media Futures* the strategy is problematic in a number of ways. Although SGI is a competitor of Sun, Rowen's points are more than sour grapes. He argues that not only is Java a "terrible" architecture to try and implement in silicon, he also points out that the strategy of closely linking programming languages to processors has been tried before with little success.

On the technical side here are his objections:

- 1. "Very very little Java code exists in the world today, and even on a dedicated Internet machine, much much more time will be spent running the kernel, the window interface, the graphics subsystem, the network protocols and basic HTML interpretation. A Java processor will actually be a detriment in these circumstances, compared to an optimized, high-volume, raw-performance-driven RISC."
- 2. "Java is a good software architecture, but a TERRIBLE processor architecture - much worse than x86. To implement Java in hardware (with hardware objects, garbage collection, byte-coded instructions) takes computer architecture back 16 years, to Intel's ill-fated 432 project. They will find it very hard indeed to build truly fast processors to execute Java directly."
- 3. "The one clear architectural advantage of the Java byte-code format is that it is very compact - clearly a good thing in a model where you download software on each use. Once however, you get that code into local memory, or into cache, it becomes much more desirable to expand it into a format, a la RISC, which is much easier for the processor to decode and execute, especially since code in the inner loops will get executed millions of times before being discarded and downloaded again. Any hardware strategy that significantly increases the instruction decode time or complexity to save a bit of static code density, is not a good long-term tradeoff."

The whole effort, Rowen says, reminds him of projects in the late 1970's and early 1980's to put LISP on a chip (MIT) or Berkeley's attempt to build SmallTalk-specific processors. Rowen's contention is that the industry has already decided once against the approach and will probably do so again: "the computer architecture community ultimately concluded that compiler technology moves too fast, that software patterns have too much tendency to evolve, and that underlying VLSI technology moves too fast for anyone to successfully freeze the relationship between the programming language and the chip implementation." While he acknowledges that some hardware support might be desirable to accelerate some of the nastier memory management questions that come from Java's security, memory management and garbage collection schemes, "these memory management features, however, are largely independent of the user-level instruction set, and might easily be incorporated into most existing, simpler processor definitions (RISC or x86)" he says. Rowen's lucid demolition-job came in response to our question, "When SGI decided to license Java, did it know that Sun had a Java processor up its sleeve?" to which he answers that he, at least did not know about Sun's specific plans: "If I had known, it would not have affected a decision I would make. This is a pretty natural position to take, since I think that Java processors, at least for the next few years, will be a non-event." Finally, for those in SGI's MIPS Technologies Inc camp seeking solace, Rowen suggests that the silicon Java project could bleed valuable skills and focus from Sun's Sparc operation. Let battle commence.

SAP TO DETAIL R/3 FUTURE TO COUNTER NEGATIVE REPORTS

Shares in SAP AG got the full treatment in Frankfurt last week, falling 3% the day after Handelsblatt quoted a new report on SAP by Forrester Research Inc saying the company would be forced by developments on the Internet to create a new completely new successor to R/3. SAP board member Henning Kagermann told *Reuters* the company planned no successor to R/3 and that although it needed to make changes to R/3 to enable its use within corporate Intranets, R/3 would not become obsolete - "the conclusion that these changes cannot be made within the R/3 platform is wrong," Kagermann asserted. SAP says it is going on the offensive to counter the negative comment and is bringing forward publication of its first quarter figures to this Wednesday, and will at the same time outline its strategy to develop the company's flagship R/3.

POWER CENTER OFFERS SYSTEMS MANAGEMENT

Innovative Software Development Co's Power Center Software Inc, Englewood, Colorado, is offering a new Power Center systems management suite. It says system problems (events) can be handled automatically at a local level or communicated to the Mission Control Station or Enterprise Notification System for action by pre-determined user specific policies. It has built-in alarms for disk space, CPU utilisation, file systems, memory, printers and processes. Other notification can take place via pager, email or via SNMP traps to HP OpenView, SunNet Manager, IBM NetView, DEC Polycenter NetView and Tivoli T/EC network management environments. Components include a System Problem Monitor (Power Center/SPM) for monitoring system performance, disks, printers, processes and file systems; an Enterprise Notification System (Power Center/ENS); a Mission Control Station (Power Center/MCS) including a Motif-based GUI; and PUMA architecture - Power Center's Universal Management Architecture - for managing multi-platform networks. Power Center is up on Sun, DEC and HP Unix. AIX, Windows and OS/400 versions are due later this year. Prices start at \$500.

BROKERS WARNED TO AVOID 'NET-TOPS'

Hot on the heels of predictions from Goldman Sachs & Co that the Internet market is the new boom, major city brokers Citicorp have been advised that "the notion of Internet terminals" is one conjured up by the "losers" in the PC market and "unlikely to be a major moneyspinner". Independent research firm and Citicorp's investment advisor, Oxford Analytica, was asked to provide its take on the rise in popularity of the set-top browser, a box that would follow the model of the satellite set-top box to connect to the Internet. Pundits and industry heavyweights have drawn lines from the current technology outwards to predict the set-top browser will take over from the PC as the home computing platform of choice. But Oxford Analytica's predictions were hardly so rosy. "These are envisaged as low-cost, minimally specified diskless workstations which would allow users to access the Internet and send email, but little else," the report states. The terminals are a return to the mainframe model, the report says, and are "best seen as a response by losers in the desktop operating systems battle to Microsoft [Corp]'s dominant grip on the PC market." Sun Microsystems Inc is seen by many as the contender to Microsoft's domination. It has populated the press with its Java language, which promises to run applications from remote sites letting users pay for software as they use it. Closely following was the 'Java chip', a super-powerful processor touted as being ideal for the Java language (although some say it was ideal only because Java is a power-hungry program). A few days ago, Sun demonstrated its set-top browser, the JavaStation, for the corporate market. While the concept - from Sun and the rest - is some way off from mass production, Oxford Analytica sees significant problems that have to be resolved: "It seems highly unlikely that users who have experienced the flexibility of being able to access the Internet, store data, and run a variety of different programs on their PCs will relish the prospect of entrusting their data and programs to remote machines," the report says. The PC has given users their own "ownership of data," it says, which reflects an important psychological sense of control. The model would rely on the telecommunications firms providing high-speed high-bandwidth access at prices that users would be willing to pay. Given the threat that the Internet currently poses the telcos in lost revenues to the Internet phone and local-access email, it seems unlikely that many will have such a benevolent point of view for some while. Oxford Analytica points out that these costs do not exist for data held locally on PCs. Thus, the report concludes, the Internet terminal could only be a success if priced well below a basic PC. The JavaStation was announced at \$750-\$1500, which equates with average PC prices.

VAG CHOOSES MOVING WORLDS AS VRML 2.0 SPEC

The VRML Architecture Group has chosen Moving Worlds, the language pioneered by Silicon Graphics Inc, as the specification for Version 2 of the Virtual Reality Modeling Language (VRML) for use on the Web. The next generation of VRML adds motion to static three-dimensional worlds on the Internet and is expected to enable users to act much more naturally within virtual worlds than is currently possible, adding properties such as objects that can be picked up and moved. VRML 2.0 scenes and objects will contain behaviors, animation sensors and sounds. Moving Worlds was put forward by a group of 56 firms, including SGI, Netscape Communications Corp, Adobe Systems Inc, Sega Enterprises Ltd and IBM Corp. SGI architected the first draft of the language and posted the proposal on the Web in January after incorporating contributions from Sony and Worldmaker. A modified version of Apple's 3DMF (3D metafile format) was chosen as the binary file format for the specification. Apple's tailoring a version of it for VRML 2.0 - which will be separate from the current 3DMF - and will rename it VRML 2.0 to reduce confusion. Microsoft Corp's ActiveVRML technology was the loser; no date has been set for a Mac version of ActiveVRML.

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As expected, **Cray Research Inc** chairman and CEO Philip Samper is not staying around to watch the transformation of the company, recently sold to **Silicon Graphics Inc** and is leaving.

Tandem Computers Inc indicates the nature of its seven-month-old NT co-development project with **NEC**, a deal that was a year in the making, has changed and that it is not using a Mips R10000 platform anymore to create a fault-tolerant server around Tandem's ServerNet technology. It's believed to have substituted Intel for the Mips chip. Under the deal, Tandem was supposed to resell all of NEC's Mips R4400 NT servers and workstations too. NEC maintains its royalties to Mips remain unchanged.

NCR has apparently abandoned the notion of an IPO despite the experience of its brother corporation **Lucent Technologies** which floated the biggest IPO in American history, selling \$3.02 billion worth of stock initially priced at \$27 a share. As for NCR going public, AT&T shareholders are simply going to get NCR stock in return.

That Solaris Server Suite that **SunSoft** envisions competing against BackOffice (UX No 584), consists of the Solaris Internet Server, the Solaris Application Server, a Solaris PC Administration Server which combines Solaris Application Server with PC-Admin LAN management utilities and a Solaris Base Server which includes SCO compatibility. The price, they tell us, including the underlying Solaris 2.5 on which all is based, is \$2,995.

With **IBM's** systems management forces folding into **Tivoli**, Tivoli CEO Frank Moss estimates that the combined revenue and 1,000+ employees would make his operation - if separated from the rest of IBM - the fifth largest software company in the world.

Since **IBM** is dumping the SystemView name, its NetFinity product, recently renamed PC SystemView, will get its old name back. Since it's being integrated with **Tivoli's** systems management line, it'll officially be called TME NetFinity.

Java luminary Kim Polese believes retrofitting OLE for network distribution as ActiveX is "dangerous" because OLE wasn't designed for network programming, isn't secure, is platform-specific and its big binary objects make it bandwidth intensive. She describes **Next Software Inc's** WebObjects as a "nice forms-based database access/interface tool," but says it isn't really in Java's space as it can't do any local, client processing. **Macromedia Inc's** Shockwave for Director plug-in she describes as a "very large plug-in" and not full-function like Java. And VRML? "Java is an extension to VRML." Polese believes the **OMG** Corba model and implementations - which will eventually allow discreet portions of applets and applications to run across the net - are getting "really bad PR" with all the Java stuff going on. She thinks a name change a la Microsoft might help. **OMG** didn't think so; "Great idea, we'll call it Active whY, or, better yet, PassiveX!"

Sybase Inc duly announced an expected first quarter loss of \$6.9m, or \$0.09 per share (UX No 584), compared to a \$3.4m profit last time, on revenue up 13% at \$243.7m over the \$216.3m it did in the first quarter of last year.

As part of a new Enterprise Warehouse initiative, **Sequent Computer Systems Inc** is introducing a version of its new Model 20 processor board claiming it has first error detecting and correcting (EDC) circuitry guarding the processor's data cache, along with the Intel Corp 166MHz Pentium.

A TruCluster arrangement with four eight-way AlphaServer 8400s and 8Gb RAM are expected to deliver around 30,000 tpm-C.

Ahead of the forthcoming server announcements from **Sun Microsystems Inc** and **DEC** this week, **Hewlett-Packard Co's** touting new performance estimates for its 64-bit PA-8000 chip without a home. It reckons a 180MHz PA-8000 goes to 11.8 SPECint95 and 20.2 SPECfp95 compared to a 133MHz PowerPC 620 at 5.6 SPECint95 and 5.6 SPECfp95, the 167MHz UltraSparc at 5.6 SPECint95 and 9.1 SPECfp95, 400MHz Alpha at 11.0 SPECint95 and 14.0 SPECfp95, and R10000 at 8.9 SPECint95 and 12.5 SPECfp95. HP previously estimated PA-8000 at 8.6 SPECint95 and 15 SPECfp95.

Hewlett-Packard Co says that all D, K and T class servers are upgradeable to the forthcoming PA-8000. It describes the PA-8000 workstations it has in the field as post-beta, pre-production units. To be announced this month, they are expected to ship in May.

Now **DEC's** picked up Alpha and Memory Channel partner **Encore Computer Corp's** disk-based Infinity Gateway which allows AlphaServer users to read IBM mainframe data as if it were on local disks. Mainframes see the shared volumes as Block Mux Channel or Escon-attached 3990 controllers with 3380/3390 disks. AlphaServers see them as local SCSI-connected disks. Prices start at \$80,000.

Cupertino, California-based **Los Altos Technologies Inc** is offering version 3 of its UniShred Pro software which can remove classified and confidential material from SCSI disks.

Pure Software Inc is the latest software quality tester to climb aboard the Internet. It's offering PurePerformix/Web for load-testing server-based Web applications by emulating large numbers of users. It can be used independently of the PurePerformix load testing suite. Prices start at \$36,000.

San Mateo, California-based Unix distributor **Qualix Group Inc's** Systems Group has gathered up a package of high-availability software it's calling QualixHA for monitoring, restart, failover and recovery of Unix/RAID systems. Event information can be sent to SNMP managers. There are add-on modules for Oracle, Sybase, Informix and CA-OpenIngres databases. Qualix offers **Veritas Software Corp's** First-Watch as its base failover engine, for use with its Qualix HA-Environment and HA-Modules. Prices go from \$8,000 to \$95,000.

The squeeze exerted by the arrival of former **HP** big-wig Wim Roelandts' at **Xilinx Inc** as CEO (UX No 572) appears to have been too great for president and COO Curt Wozniak, the ex-director of **Sun** marketing who last week upped and offered to wafer probing product company **Electroglas Inc** as CEO, according to *Electronic Buyers News*. Roelandts assumes Wozniak's former roles. Wozniak succeeds Neil Bonke who continues with the \$200-million firm as chairman.

Hewlett-Packard Co is shipping **AT&T Co's** Unix implementation of LAN Manager on its HP-UX systems as Advanced Server/9000. AT&T's Advanced Server for Unix 3.51 (formerly known as Pegasus) is the functional equivalent of Windows NT Advanced Server's network operating system and domain functions on Unix. Prices go from \$1,000 to \$30,000.

Logica Plc's Lexington, Massachusetts-based North American subsidiary will use Mountain View, California-based **Connect Inc's** OneServer software to develop and deploy large-scale turnkey interactive commerce applications.

Usenix's Conference on Object-Oriented Technologies and Systems is at the Marriott Eaton Centre in Toronto between June 17 and 21. It's focusing on Java, Network OLE, CORBA, C++, and Patterns (language independent software templates to an application wizard).

Tandem's gone to **IBM Corp** partner **Amsys North America** for version 2 of big blue's MQSeries messaging system up on its Himalaya MPP systems. Betas are expected early 1997. MQSeries 1.5 is already up on the servers.

Morgan Stanley & Co puts **Computer Associates' CA-ManMan/X** installed base at 600 - twice the number it picked up when it acquired the manufacturing software from ASK. It learns version 3.2 of the software is in beta, and the product will add warehouse management functionality converted from the PRMS product line. The company is also selling new CA-PRMS (AS/400 product acquired with Pansophic) licenses as existing AS/400 sites roll out the product to new plants. An 8.4 cut is in beta. A version tailored for use with the Unix-based ManMan/X hasn't yet surfaced (UX No 568).

Hewlett-Packard Co has a new version 6.0 of its Printer Control Language claimed to include new object-oriented features which provide closer integration with the Windows Graphics Display Interface. It's also expected to provide support for PostScript Level 2-compatible implementations (UX No 583), and HTML plug-ins.

Sequent is OEMing **Data General** Clariion RAID storage systems. Meantime, Tech Data Corp's distributing the Clariion 100 and C150 arrays.

Sun is expected to propose a Java language mapping for Corba at **Object Management Group's** June meeting in Washington DC.

"Things are moving so quickly right now - one web week is the equivalent of a normal year. Sleep is a nice fantasy. We'll do it again one day." Kim Polese.

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SUN TAKES ON THE BIG BOYS WITH ULTRA ENTERPRISE SERVERS

Sun Microsystems Inc duly made its pitch for the large-scale enterprise server market with the launch of its 64-bit UltraSparc-based Ultra Enterprise 3000, 4000, 5000, and 6000 servers - leaving the company very well placed in the Internet server market if the Java language and the concept of the super-skinny network computer really do take off. Sun has tried to build in mainframe features, such as the capability for processors, power supplies and memory to be swapped in and out while the systems are running. The company has also done all it can to convince mainframe users that it is up to speed on the kinds of things that matter most to them - uptime and effective support. The servers use a new Gigaplane system bus interconnect which is claimed to provide up to 2.5Gb per second sustained I/O throughput. Sun has also launched an array of new services for the immediate around-the-clock support regarded as essential for enterprise applications, including a SyMon smart monitor that can predict potential system failures. It also introduced a new data centre storage system, the fault-tolerant Sparcstorage Array model 214 RSM, which is OEMed from Unisys Corp and includes the SCA hot swappable connector Sun developed with Seagate Technology Inc (UX No 573). A new SunATM 622 Adaptor Asynchronous Transfer Mode network board is claimed to deliver four times the speed of the fastest existing adaptors. Mips and DEC are already 64-bit, but Sun's key targets are IBM, whose 64-bit PowerPC effort has run off the rails on the Unix side of the house, although it is up and running for AS/400; and Hewlett-Packard, still some way off with PA-8000 servers. Although it doesn't say as much, the servers are also priced to compete with the anticipated crop of Unix and NT servers that are set to come to market using commodity Intel boards. Sun hopes the so-called Sunfire servers will appeal particularly to companies building intranets. It's claiming up to 10-fold better data transfer rates than HP's largest HP 9000 T520 server and more than 16 times the throughput of the IBM RS/6000 R30 server. The new computers signal the first time Sun will be selling computer equipment in multi-million dollar configurations in volume. *Details, page 5.*

DEC'S 2ND GENERATION UNIX CLUSTERS SMASH TPC RECORDS

DEC's supremacy in VAX clusters has been widely acknowledged by the industry, but a Unix equivalent has been a long time coming. TruCluster, launched with great fanfares in New York last week (UX No 585) is DEC's second stage along the way (the first, AdvantageCluster, came out two years ago - UX No 483), but there are still things missing, most notably a clustered file system, one of the lynchpins of the VAX offerings. Even so, the low-latency, high-bandwidth properties of its new Memory Channel, licenced from Encore but enhanced by DEC in the area of structured communications for error survival, have allowed DEC to claim the world record TPC-C benchmarking result - 30,390 tpmC at \$305 per tpmC running 64-bit Oracle Parallel Server on four clustered AlphaServer 8400s, each with eight processors. The previous record holder was a proprietary Tandem Himalaya K10000 with 112 processors, which managed 20,918 tpmC at \$1,151 per tpmC. The Memory Channel is connected to individual nodes via the PCI bus - native connections for very high performance may also become available over time. Four clustered nodes is the current limit, until a second Memory Channel release increases it to eight later this year. TruCluster components include Available Server for fail-over and rapid file recovery; Distributed Lock Manager for synchronising data across the cluster among multiple users; and Distributed Available Disk for SCSI storage access across all nodes. The Oracle database, which utilises DEC's Distributed Lock Manager technology, is currently the only option, though others are expected to follow. Informix Corp, which expects to have an OnLine port ready for TruCluster by the fourth quarter, expects to achieve a TPC benchmark figure in excess of 50,000 tpmC, a result, it says, of its more efficient XPS parallel architecture that circumvents the distributed lock manager. Information Builders plans to build TruClusters support into its EDA middleware and Focus decision support software, and BEA Systems Inc says it's already fully integrated its Tuxedo transaction processing monitor into TruCluster. Customers working with early versions of the technology include Ottawa-based TMI Communications, which has tested failover times of 39 seconds on an 8Gb database, and Baxter Health Care of Chicago, Illinois, which says it is building "the largest SAP R3 site in the world," an anticipated 400Gb OLTP database application. The promised native clustered file system is likely to emerge next year. TruCluster software is \$15,000 per server on AlphaServer 2000s, \$30,000 per server on 8000 series boxes. The Memory Channel interconnect is \$2,995 per server, and a Memory Channel hub, needed for clusters of three or more, is \$6,995.

ORACLE THROWS A JAVALIN INTO SEDONA

Oracle Corp previewed parts of Sedona, its next generation server development environment and object database extensions, at its European User Conference in Amsterdam last week. Sedona development tools are still mostly under construction, but the object repository is pretty much there, according to Mark Jarvis head of Oracle's server marketing. What's new, he says, is Javalin, a Java tool that will allow Java applications to access the object repository in Sedona. Selected customers can expect beta versions of Sedona around November and volume shipments are expected in tandem with Oracle8 in the first quarter of 1997.

SUN FILLS OUT ULTRA DESKTOP STORY; FROM \$10,000

Following its Sunfire server hoop-la, Sun Microsystems Inc this week fleshes out its 64-bit UltraSparc workstation story, introducing the sub-\$10,000 Ultra 1 box promised at last November's roll-out (UX No 564), plus new uniprocessor and two-way Ultra 2 models. There are now 12 different Ultra 1 and 2 configurations available. Lopping 32Mb RAM and 1Gb disk from the basic \$16,500 Ultra 1 Model 140 and claiming other economies of scale, Sun's created a \$9,995 system with 32Mb RAM, 1Gb disk, 17" screen and TurboGX graphics. Rated at 4.66 SPECint95 and 7.9 SPECfp95, this entry-level 143MHz UltraSparc I system won't put the low-end SparcStation 4 and 5 lines out of business anytime soon yet. Sun's added uniprocessor version of the two-way 200MHz Ultra 2 Model 2200 as the Model 1200. Rated at 7.67 SPECint95 and 11.1 SPECfp95 it's priced from \$30,000 with 64Mb RAM, 2Gb disk, Creator graphics and 20" screen. The two-way Model 2200 with the same configuration is priced from \$37,500. Sun's still saying this quarter for 200MHz ships. It's also adding a 167MHz uniprocessor Ultra 2 Model 1170, upgradeable to a two-way Model 2170. The Ultra 2 Creator 1170 is rated at 6.20 SPECint95 and 9.27 SPECfp95, comes with 64Mb RAM, 2Gb disk, 20" screen, Creator graphics and costs from \$26,000. The two-way Model 2170 is rated at 6.39 SPECint95 and 11.8 SPECfp95 and costs from \$28,500. Both are due next month. Meantime, Sun's already cutting tags on its high-end Creator 3D graphics and "E" series Ultra 1 models which support the UltraSparc Port Architecture bus, 100Mbit per second Fast Ethernet and Fast/Wide SCSI. Both Creator and Creator 3D cards provide 24-bit colour at 1,280 x 1,024 resolution but the latter also provides double-buffering support for complex 3D graphics. The 167MHz Ultra 1 Creator 3D Model 170E with 64Mb RAM, 2Gb disk, 20" screen and Creator graphics now costs \$25,000, down from \$28,000. Sun's also cut tags on a product it hasn't even shipped yet. The Ultra 2 Model 2200 Creator 3D, with two 200MHz CPUs, 256Mb RAM, two 2Gb drives, Creator 3D graphics and 20" colour screen costs \$52,500, down from an original target price of \$60,000. 512Kb cache is available for the 167MHz UltraSparc I - 1Mb on the 200MHz version. Sun says it'll continue to provide its 75MHz SuperSparc II and 150MHz HyperSparc SparcStation 20 for a while - the line runs SunOS and Solaris applications which haven't yet been ported to the Solaris 2.5-only UltraSparcs - but says it won't reduce prices any further on the line.

CYGNUS DOES A VERSION OF GNU PRO C/C++ COMPILERS FOR THE ARM

Mountain View, California-based Cygnus Support Inc is developing a version of the GNU Pro C/C++ compilers, debugger, assembler and file utilities for use with ~~Advanced RISC Machines Ltd microprocessors and cores~~. A beta version for ARM7DMI is due in July with production shipments in October. A beta release for the Thumb ARM7TDMI is due in November with general distribution next January. Embedded developers for GNU Pro for ARM hosted on Sparc and Windows NT are expected. Cygnus has put its GNU Pro Tool Kit for PowerPC up under HP-UX 9.05, MS-DOS, AIX 4.1.1 and Solaris 2.4, and is offering a GNU Pro Simulator for PowerPC. The company also plans to offer an IEEE695 translation capability for GNU Pro; also expected is an MRI compatibility mode within the GNU assembler to provide migration from MRI to GNU.

SPYGLASS OFFERS NEW WEB CONSULTING, DEVELOPMENT SERVICES; COMPONENTIZED WEB TECHNOLOGY KIT

Naperville, Illinois-based Spyglass Inc's getting into the Web consulting and service business, creating a Developer Services Group under former PeopleSoft consulting group VP Paul Steimle that'll target financial institutions, in-house development organizations and ISVs. The group will offer consulting and development services for integrating Web technologies into applications, services and devices, including the company's new Spyglass Web Technology Kit for client applications which supports Java and Javascript. The kit breaks Spyglass' client technology into components which it says will provide easier integration of Web technologies. Computer Associates International Inc has licensed the software and will bundle it with every copy of CA-OpenIngres/ICE sold worldwide. Spyglass has also established a wholly-owned subsidiary - Spyglass International - also headquartered in Naperville, Illinois, that'll service Asia/Pacific. The company booked a profit of \$832,000 on revenue of \$4.64m in its second quarter, up from \$405,000 and \$2.45m last time.

WALL DATA COMBINES DATA REPORTING AND ACCESS TOOLS FOR WEB PUBLISHING AS ARPEGGIO

Kirkland, Washington-based connectivity specialist Wall Data Inc's striking out for the net, offering new Web publishing software called Arpeggio - Italian for "a series of notes" - which unites its Concentric Data Systems Inc subsidiary's R&R Report Writer with Wall Data's Rumba data access query engine. Arpeggio ODBC and IBM database drivers will allow administrators to query databases and publish the results as icons in the shared Arpeggio Data Organizer. Users will need an Arpeggio Viewer to view the publishing information. Arpeggio Live will publish the database information to a Web server that can be viewed by any browser. A beta version of Arpeggio Live is up on Wall Data's Web site running applications on an AS/400; IBM mainframe, VAX and Unix systems, plus data access, mail and report applications will follow. Arpeggio Live uses the Microsoft Internet Information Server and Netscape's Enterprise Server for Windows NT, and is based on Wall Data's ActiveX (OLE) controls. Arpeggio Viewer will be \$100 per user; Arpeggio Desktop \$250 per user; and Arpeggio Developer \$400 per user. Arpeggio Live will be available by mid-year. Wall Data's also offering new Windows 95- and NT-to-AS/400 connectivity with Rumba Access/400 95/NT and an entry-level Rumba 95/NT for AS/400, priced at \$250 and \$150 respectively.

UNISYS AND NCR ANNOUNCE SPANISH JOB CUTS

Both Unisys Espana SA and NCR Espana SA have announced further cuts in their workforces. Unisys Espana has embarked on its fifth restructuring phase since 1990, which will lead to the departure of 75 workers. The latest job cuts will leave the Spanish subsidiary with a workforce of 330, less than half the number employed six years ago. Sales and administrative services are to lose 30 staff apiece, while 10 maintenance technicians will also go. Unisys claims that the restructuring plan is essential if the Spanish arm is to continue receiving injections of capital from North America. Even the severance payments have been reduced this time round, from 45 days per year worked (as agreed for the last cuts in March 1995) to 38 days. Unisys Espana personnel manager Manuel Cubero commented that this was inevitable in the light of the subsidiary's poor results in 1995, with losses of \$9.3m, up from \$6.5m losses the previous year, on turnover down 19% at \$80m. Meanwhile NCR Espana has also announced that it will shed at least 70 jobs, a decision that will affect staff in all areas of the company. Unionized workers have complained that there has been no collective negotiation and that no official announcements have been made, with workers being informed individually. The latest cuts will leave NCR Espana with a workforce of 680.

FRENCH SYSTEMS INTEGRATOR UNILOG LOOKS FOR ACQUISITIONS IN FRANCE, ALL EUROPE

French systems integrator Unilog SA reported 1995 profits up 24%, to \$7.5m, on revenues that grew only 4%, to \$145.6m. After reorganising its activities in early ~~January, Unilog expects to proceed with a legal restructuring, reducing its subsidiaries to six from eight before embarking on a series of acquisitions~~. The acquisition targets, chief executive Gerard Philippot told *Les Echos*, would be French companies that are profitable, with revenues of between \$14m to \$20m. Unilog also wants to expand its presence in Europe, despite inconclusive previous partnerships with Plnzke AG in Germany and Data Sciences Plc in the UK, after those companies were purchased by Computer Sciences Corp and IBM Corp respectively. For a long time undervalued on France's Deuxieme Marche, Unilog has seen its share price take off since the first of the year, going to 490FF at the end of March from 310FF on December 31. *Les Echos* cites an unidentified financial analyst saying that Fidelity Investments Ltd recently purchased shares of Unilog and also of Axime SA, fellow French systems integrator.

SEEK DELAYS ADAPTIVE RAID

Kirkland, Washington-based Seek Systems Inc says the April release date for its Adaptive Raid Redundant Array of Inexpensive Disk (RAID) controller and subsystem has slipped and it's unlikely to ship until the summer (UX No 583). The privately-owned company says it was over ambitious with its release date. Adaptive Raid dynamically manages block sizes of disks, avoiding the need to reconfigure block sizes as each disk is added. Current RAID arrays require system administrators to choose between high transaction performance and high throughput performance by defining RAID groups and levels according to Seek, and once set, configuration remains static and is unable to respond to a change in workload or new applications. To change the RAID level for performance tuning, or capacity to accommodate growing databases or applications, requires data to be moved off disks, the new configuration set and the data moved back on to the disks. Adaptive Raid sidesteps this problem, claims Seek, removing the need to understand RAID levels. Decisions on which levels to use for storing data is taken by Adaptive Raid automatically and dynamically minimising response times for applications. Disk space usage is also optimised and new disks added transparently without impacting normal operations. At the core of Adaptive Raid is an intelligent controller combining hardware and embedded software. Each controller is able to manage an array of up to sixty four disks. Patented algorithms dynamically determine which RAID level gives the highest performance based on sensing the write type: small or large block, random or sequential. As well as minimising response times, performance gains are derived from the elimination of the RAID level 5 "write penalty". Adaptive Raid manages additional disks to redistribute existing data and parity to continually take advantage of the increased space and performance capability. The increased number of disk actuators dynamically re-stripe the new capacity to preserve the maximum number of disks for a given capacity. Adaptive Raid prices are expected to go from \$1,500.

IBM BRIGHTENS MIXED FIRST QUARTER WITH 10 CENTS ON THE DIVIDEND

Reporting first quarter net profits down 40% at \$774m after \$671m in acquisition and redundancy charges, IBM Corp last week moved to convince doubters that it really is on the mend by raising its dividend for the first time since the boom fell and Lou Gerstner took the helm. It put the pay-out up 10 cents a share to 35 cents for the quarter, leading holders to hope for \$1.40 for the year, up from a dollar last year. Turnover advanced 5.2% at \$16,559m. Net per share fell 33% to \$1.41.

NOW FRANCE TELECOM SETS THOMSON-SUN OPENTV TRIALS

It does no harm to be teamed with a Thomson SA company when it comes to winning business from French state-owned entities, and so Sun Microsystems Inc has reason to congratulate itself that its interactive television partner is Thomson Multimedia SA. France Telecom has decided to use the partners' OpenTV interactive television system for initial development and trial phases of new interactive services. The OpenTV operating environment will be incorporated into 2,000 decoders Thomson Multimedia will ship to France Telecom. No details of the trial were given.

INFORMIX REVENUES UP 38%

As predicted, Informix Corporation announced first quarter revenues of \$204m, up 38% from revenues of \$148m in the year earlier period (the quarter ended April 2, 1995). Earnings per share for the quarter were \$0.10. Merger-related charges reduced earnings by approximately \$0.04 per share. Earnings per share for the same quarter of the prior year were \$0.12. Results for the year earlier period have been restated to reflect the acquisition of Illustra Information Technologies, Inc, in February, 1996.

SYBASE USES BMC TECHNOLOGY FOR MAINFRAME DATA REPLICATION...

Sybase Inc has licensed mainframe database application management company BMC Software Inc's change capture technology to develop Replication Agents for IMS, VSAM and DB2 which will beta in the third quarter and ship by year-end. The BMC technology will be used to capture IMS, VSAM, and DB2 transaction data. The transactions are logged to a database independent logging system in MVS. Sybase's Replication API for MVS reads the persistent transactions in real-time and converts that information into a format that Replication Server can interpret. Sybase says the combined functionality defines the Replication Agent which then transmits the transaction information to Replication Server for delivery to all sites. Replicate sites can subscribe all changes to a given DB2 table, IMS segment or VSAM record type or just a subset of the changes. The idea is that companies can replicate transactions from IMS and VSAM sources directly to a client/server target without an intermediate staging table in DB2/MVS. Sybase claims the process is transparent and asynchronous to the IMS, VSAM and DB2 legacy applications that are operating on the data. The Replication Agent products will support both APPC (LU 6.2) and TCP/IP communication protocols from the mainframe to the LAN environment.

...BEEFS-UP MDI DATABASE ACCESS GATEWAY

Meantime, Sybase Inc's offering a new version of its Micro Decisionware Inc unit's database gateway mechanism as DirectConnect which provides read/write access to DB2, IMS, Oracle, AS/400, Informix, Ingres and other databases. It includes a new GUI management tool for monitoring gateway usage; support for text, image and decimal; a built-in Unicode engine for character set conversion; and a passport expiration manager. DirectConnect for AS/400, MVS (DB2) and Oracle will be generally available this quarter. Versions for InfoHub/MVS and Ingres are scheduled for this year.

D&B USERS LOVE GETTING HELP OVER THE INTERNET

A massive 40% of Dun & Bradstreet Software's customers have switched to the Internet to get help with D&B software in the few weeks since D&B quietly began notifying users they could connect to D&B's help desk via the 'net. The Internet link, which takes a small piece of free software D&B provides and doesn't even require a browser, was publicly announced last week. The Internet link, which goes into D&B's SmartStream Assistant on Windows NT/3.1 or Unix, replaces dial-up and more expensive long distance calls via voice or computer. (D&B figures 35% of its customers still make voice calls for help, another 25% still use direct dial computer links to its help desk). Meanwhile the Atlanta firm is using Java to develop an intranet applet to do purchase requisitions electronically using its SmartStream Suite. So far the \$50 applet is only targeted for use within intranets. D&B said Sun is helping it with the applet, which it hopes to have ready for release in May. If its timing's right, D&B will tout it as the first Java-based enterprise-class applet for corporate intranets.

HARRIS ADDS SMALLER NIGHT HAWK REAL-TIME SYSTEM

Harris Computer Systems Corp has added a single slot 6U VME board-based Model 6400 to its 9U Night Hawk SMP series of PowerPC real-time systems. It supports from one to four 150MHz PowerPC 604s; each processor board can function as a stand-alone computer. \$26,000 buys a single 150MHz PowerPC 604 on a board with 32Mb RAM and the company's Real-Time/Power Unix SVR4.2 MP kernel - or what it now calls PowerUX. It'll also be available as a ruggedised unit, as a module for rackmount or in its own chassis. It's aimed at embedded developers and defence contractors. Harris' real-time systems business is currently being transferred to new owner Concurrent Computer Corp following a complicated acquisition process (UX No 583). Harris CEO Corky Siegel will become president and CEO of Concurrent. Former VP new technology at Blockbuster/Viacom Group Robert Carberry will become chairman, president and CEO of what remains of Harris Computer Systems Corp.

EDS TO MARKET DIVISION VIRTUAL REALITY SOFTWARE

Bristol-based virtual reality pioneer Division Group Plc has looked more and more forlorn as the promised alliance with Hewlett-Packard Co receded into the distance and fewer and fewer people believed it would ever happen. But at last the company has something to cheer about: on Thursday, it announced that Electronic Data Systems Corp would market its virtual reality software in North America, Europe and the Far East. "This will give us access to a major new tier of clients worldwide," reckons Charles Grimsdale, managing director of Division, as the Plano, Texas-based services king asserted that "Virtual reality is becoming an essential part of the services offering to our Fortune 500 client base."

QUANTUM PROJECT TO COMPONENTISE UNIFACE 4GL

Farmington Hills, Michigan-based Compuware Corp hopes that by componentising the architecture of its lacklustre Uniface 4GL it'll create a lucrative middle ground between low-end desktop development solutions and complex offerings from the likes of Forte, Dynasty, Oracle, Seer and Unify which have captured most of the high ground. Initially what's called the Quantum project will open up Uniface's application model for specifying events, actions, conditions, connections for use with third party business modelling tools, business process re-engineering and workflow engines. It's already struck a deal with London, UK-based Staffware Plc for its Workflow automation system. Quantum will be the next major release after Uniface 7.0, which is due by year-end (UX No 584). Quantum will provide three loosely-coupled GUI, code generation and application (business rules, events and processes) layers. It'll provide interfaces to other graphical front end development tools. Quantum will include a proprietary object request broker that Uniface says will allow application components to be executed across distributed networks, plus object services, transaction processing and a workflow engine. It claims the technology will be Corba, OLE/COM, SQL, ODBC and HTML compatible. Quantum is due in the fourth quarter of 1997.

Web strategy

Uniface 7.0, due by the end of 1996, will include new object-based form templates, a distributed processing agent, partitioning for its PolyServer networking software, ODBC and MVS database extensions and printing enhancements (UX No 584). It will also include the first of two pieces of a Web strategy that'll allow browsers to function as Uniface clients using Common Gateway Interface, Netscape and Microsoft APIs. Developers will deploy Uniface forms on the server. Uniface executes the business rules, accesses data sources and formats responses into dynamically generated HTML documents for access by browsers. Other HTML documents can also be displayed on a Uniface form. That's Web Enabler. Web Services will include the ability to generate HTML and Java documents on the server from client-based HTML and browser controls embedded in Uniface forms. The most recent cut of the Uniface 4GL is 6.1d, which has a new Distributed Computing Manager Component plus OLTP support (UX No 567). OSF Distributed Computing Environment support is planned for Uniface 7.0. Compuware will add a maintenance release with support for international languages in June. Parent Compuware's EcoTools and Playback automated testing tools are being integrated with Uniface 7.0 (UX No 574).

\$30M for R&D

Uniface, which claims three thousand users, admits its failing to get its message across and recognises it must "do a better job of creating perceptions." It's partly because the new breed of second generation application development houses such as Forte and Dynasty have created a new vocabulary for three-tier coding which Uniface doesn't yet speak. It's going to focus on HP, Sun, IBM and DEC Unixes; NT, Oracle, Sybase, Informix and SQL Server and expects to axe other supported platforms over time. It currently supports two thousand platform combinations. It claims it plays against Oracle and Forte but never sees Dynasty or Unify. Uniface general manager Frank Sloatman runs development, Compuware has installed Doug Barre as VP and general manager to run the business side of things. Compuware says the \$30m it'll save by axing 100 jobs from its mainframe business will fund a Uniface R&D plan. Compuware, which describes itself as "the biggest computer company you never heard of" expects to report up to \$800m in revenues in its year ending April 1996.

BAAN OFFERS VERSION 4 OF ITS MANUFACTURING SOFTWARE

Baan Co NV this week debuts version 4.0 of its Triton manufacturing software as Baan IV. It includes new Windows 95 and NT client support, with NT Server and SQL Server versions to follow. DB2 support is on its way. Baan IV comes with new support for process and discrete manufacturing which will be backed by vertical market programmes. 32 character part numbers are now supported as well as the ability to define product formulas and identify end products, and track products and ingredients based on expiration and effective dates. There's a new module to manage enterprise-wide quality inspection, Internet-based EDI, plus the ability to exchange rates at any point in the order lifecycle. Baan IV also comes with new Orgware implementation, methodology and service tools which allow users to graphically depict organisational structures, implement process reference models and run new performance management tests.

VISNET BECOMES VISCAPE, AS SUPERSCAPE VR HIRES

Anyone looking for a job in virtual reality should head for Hook, Hampshire or Palo Alto, California, as Superscape VR Plc is looking for people to develop the company's relationships with IBM Corp, Silicon Graphics Inc, Northern Telecom Ltd, Gateway 2000 Inc and Intel Corp. The company recently launched its three-dimensional Web browser, for viewing virtual worlds using Superscape's VRT tools, and eventually anything complying with Virtual Reality Modelling Language 2.0. It was launched as Visnet last month, but chief executive John Chiplin said the name trod on another company's toes and will be called Viscape from this week, when it is downloadable from the company's Web page. It plugs into Netscape Communications Corp's Navigator browser and later into Microsoft Corp's Explorer and other browsers. The Visualiser run-time software was converted to Silicon Graphics' system during the half, and Intel chose Superscape to provide software for its MMX Pentium multimedia extension. Superscape continues to pay no interim dividend.

EXCALIBUR EXPANDS IBM AGREEMENT; TARGETS HORIZONTALS

Information retrieval software developer Excalibur Technologies Corp, San Diego and IBM Corp plan to expand their current product development relationship, targeting advanced information management offerings in horizontal markets. Excalibur's next generation document image management system, RetrievalWare EFS, will be integrated with IBM's ImagePlus VisualInfo. Excalibur currently has OEM agreements with IBM for embedding Excalibur's RetrievalWare search libraries into extensions for DB2 and SearchManager. The combination will provide enterprise-wide image and document management, work management, and full-text retrieval on Unix, OS/2, Windows NT, and MVS/ESA. Future integration is also planned with IBM's Intranet products, they said.

McAFEE WOOS CHEYENNE HOLDERS AS CHEYENNE SUES

McAfee Associates Inc continues to stalk Cheyenne Software Inc, but the dispute between the two has turned nasty as McAfee said it would woo shareholders of the Roslyn Heights, New York company, seeking to persuade them to demand that their board appoint an independent committee to negotiate a possible merger. Cheyenne responded by suing McAfee and its chairman William Larson alleging securities fraud over the statements he has made about the contact between the two, and saying that no formal offer had been made. McAfee says Cheyenne's suit is merely an attempt to divert attention from its offer. Cheyenne's also implemented a "poison pill" takeover measure.

APPLE TO CUT 1,500 MORE JOBS AS SALES SLUMP BY 18%

The \$740m loss for the quarter is a one-off event soon to be forgotten, but Apple Computer Inc's fiscal second quarter figures were worryingly worse than expected in two other respects. Sales for the period slumped 18% compared with the same period last year, and the company is cutting another 1,500 jobs over the next 12 months on top of the 1,300 cuts already announced. In a fast-growing industry like computers, the fate of a company that sees a sharp fall in turnover tends to be like that of a steer that trips in the middle of a stampede. Cash and short-term investment drain was just about as bad as feared, down to \$592m from \$1,100m at the end of the previous quarter. Apple is renewing some short-term loans and pursuing additional financing alternatives. Apple intends to outsource more operational functions and sell off some assets, and it will reposition itself as a multimedia and an Internet company. Apple reported a second quarter net loss of \$740m after net inventory write-downs of \$388m and net restructuring charges of \$130m, against a profit last time of \$73m, on turnover that slumped 17.6% at \$2,185m. The mid-term net loss was \$809m against a profit last time of \$261m, on turnover that fell 2.7% to \$5,333m. Meantime, the changing of the guard at Apple continues apace with the departure of David Nagel, senior VP and head of the company's advanced technology for the last eight years. He's going to head-up AT&T Labs, the telephone giant's computer-based research division.

SUN TO RUN ENTIRE COMPANY ON JAVA-BASED INTRANETS BY JANUARY 1998

By January 1998 Sun Microsystems Inc will have moved the entire corporation to intranets of network computers, or 'zero-administration clients, as Sun president Scott McNealy calls them. McNealy, speaking at last week's European Oracle Users conference in Amsterdam said there is likely to be around 33,000 nodes and the project has been fully costed, but he would not reveal the figures for others to chew over. He also asserted that Sun would be at least a \$10,000m-a-year company by then. Last year revenues stood at \$5,902m and in the first nine months of the current fiscal revenues were \$5,077m. It would also mean a doubling of the headcount in the period, as Sun currently has around 16,000 employees.

SUN, IBM, DEC AND HP ACCOUNT FOR MAJORITY OF SYBASE REVENUE

Included in Sybase Inc's first quarter figures, which showed a loss of \$6.9m on revenue up 13% on the same quarter last year at \$243.7m (UX No 585), was a 12% increase in its North American market, which represented 62% of revenue. Europe was up 6% and other markets were up 31% in the quarter. Its server business was up 4% - though down 20% on its fourth quarter - and development tools were up 21% as a result of a new release of Powerbuilder. Sun, DEC, IBM, and HP platforms accounted for 47% of revenue while PC-based products (tools and databases) accounted for 44% of revenues. New sites represented 49% of revenues. The company hired about 100 people in the quarter; and expects a similar hiring rate going forward. Total headcount stood at 5,970 at the end of the quarter. Investment bank Morgan Stanley & Co believes recently announced products including Powerbuilder 5.0 (cross platform version), Sybase IQ (data warehousing product), and Optima++ (visual C++ development tool) will help second quarter revenue.

HP OUTLINES PLANS FOR CONVEX

Making it clear that part of its aim in acquiring Convex Computer Corp was to bring in-house the capability to offer a complete alternative to IBM Corp's RS/6000 SP parallel systems, Hewlett-Packard Co has been outlining its plans for the Convex SPP Scalable Parallel Processor servers, committing to maintain a consistent binary-compatible architecture based on CC-NUMA Cache-Coherent Non-Uniform Memory Access to the year 2000 and beyond. Unlike IBM, which is firmly pitching the RS/6000 SPs at commercial applications, HP is still describing the SPP as a high-performance technical computing, but that is the way of the computing world. From its birth in 1968 right through to 1975, the traditional minicomputer was firmly embedded in the technical, scientific and control world. By 1980, minicomputers were overwhelmingly used for business applications. HP's SPP systems road map outlines how a new-generation SPP will be introduced with each new Precision Architecture RISC processor, and a provision for adding new PA-RISCs and other new capabilities as they become available. The company is threatening to change "dramatically" the high-performance technical computing market with the PA-8000-based SPP when it launches the thing in the autumn. Each new-generation SPP is intended to feature expanded performance, operating system capabilities and system bandwidth while maintaining compatibility with applications and peripherals, and HP says its planned 64-bit Unix will complement the SPP's current 64-bit operating system features. The company also announced its new High Performance Computing Advanced Technology Center, which will open in June to support customers, software vendors and partners in developing systems that take advantage of PA-RISC and other high-performance technologies. It is expected to have headquarters at the Convex Technology Center in Richardson, Texas, with satellite locations planned for Fort Collins, Colorado; Chelmsford, Massachusetts; Detroit; London; Tokyo; and in Boblingen, Germany.

AMDAHL RUSHES TO ANNOUNCE SUN'S NEW ULTRA SERVERS

Amdahl Corp is no doubt thrilled with all the mainframe-strength features Sun Microsystems Inc claims to have built into its new Ultra Enterprise servers - see page 5 - and has rushed to add the things to its own product line without even bothering to change the name or dress them up in Amdahl colours. It hopes to hold on to its mainframe customers committed to moving to open systems with the servers, highlighting their suitability applications such as SAP AG's R/3, data warehousing, and transaction processing. Amdahl is offering all standard Oracle Corp products including database, gateways and protocol adaptors, tools, development aids, Web and media products on the machines. A new Fibre 2000 Storage Array Series of disk subsystems can be installed up to a mile and a quarter away from the processors. An A+InterConnect Gateway parallel channel from Data/Ware Development Inc links System/39p applications and data to the servers; it has picked up an uninterruptible power supply from Exide Electronics Inc.

NCR FINALLY READY WITH TERADATA DATABASE FOR UNIX

NCR Corp says its promised Teradata DataBase System for Unix is now available worldwide, and is pitching the thing at the data warehouse market. The software is a portable adaptation of the database search software written for its massively parallel Teradata DBC1012 back-end database systems. Teradata for Unix is up on NCR's entry-level iAPX-86-based WorldMark 4100 deskside symmetric multiprocessing server so that users can over time grow right up to a large-scale WorldMark 5100 massively parallel server without changing the operating system, database software or decision-support applications. Teradata DBS for Unix runs under NCR's Unix System V.4 MP-RAS 3.0, and will be offered on alien Unix systems in due course.

SUN PITCHES SUNFIRE SERVERS AGAINST COMMODITY INTEL, PLUS HP AND IBM RISC BOXES

On the back of impressive third quarter numbers Sun Microsystems Inc has gone on the offensive, unveiling its first 64-bit commercial SMP servers as the Ultra Enterprise line and targeting them clearly at the anticipated crop of commodity Intel SMP servers, plus traditional RISC adversaries HP and IBM. The Ultra Enterprise "Sunfire" servers accommodate from six to 30 167MHz UltraSparc II RISC processors across four cabinets; CPU modules, I/O boards, disk storage and power supplies can be hot swapped and are interchangeable between models. Sun will miss out the 200MHz UltraSparc used in high-end Ultra 2 workstations and their server variants altogether - *see below* - and offer models using the 250MHz UltraSparc II parts in the Autumn followed by the 300MHz, which it says it already has working in systems. Sun won't support mixed processor environments - its boot-up mechanism will run a system at the speed of the slowest CPU - and instead will promote aggressive trade-up programmes. Although there's no technical reason why the 167MHz processor can't support more than 512Kb cache, that's all Sun's offering it with right now. It says it'll offer the 250MHz with 512Kb, 1Mb or 2Mb caches.

Gigaplane system bus

A new Gigaplane system bus interconnect is claimed to provide up to 2.5Gb per second sustained I/O throughput on RAM-laden systems compared to DEC's 1.7Gbps AlphaServer 8400 system bus and HP's 960Mbps T520 bus. It provides three times more throughput than the XDBus Sun uses in its existing 1000 and 2000 series servers. Gigaplane sits between the CPU/memory boards and SBus I/O boards which support ATM, Fast Ethernet and Fiber Channel but no PCI until 1997. Sun has already licensed Gigaplane to Sparc partner Fujitsu Ltd for systems it'll build for the Japanese market. Sun says it's unlikely to licence the system bus to any of the Sparc-compatible houses which sell systems in the US, claiming they wouldn't be able to support it effectively. It's still considering whether to let Europeans, such as Fujitsu's ICL Plc have the thing. Although the Sparc compatible builders have access to UltraSparc, the 1.6Gbps UltraSparc Port Architecture for two-way SMP and a range of ASICs, it was their inability to licence XDBus that prevented them from building compatible versions of Sun's existing 1000 and 2000 server lines.

Shy of Spec95

The mainframe-class Ultra Enterprise 6000 can accommodate up to 30 UltraSparcs, 30Gb RAM, up to 16 CPU or I/O board slots, up to 45 SBus slots and 10Tb disk in a rackmount form. An entry-level uniprocessor costs \$213,100 with 64Mb RAM, 12Gb disk, one I/O board and CD-ROM. Sun estimates it'll perform 17,000 transactions per minute. It's still shy of Spec95 numbers on its servers, claiming Spec92 still provides a better measure of SMP. It says it'll do Spec95 soon. The rack-mount Ultra Enterprise 5000 data center is designed for large-scale OLTP and can house 14 processors, eight board slots, up to 21 SBus slots, 14Gb RAM and 6Tb disk. It starts at \$95,100 with one CPU, 64Mb RAM, 12Gb disk, one I/O board and CD-ROM. It achieves 11,465.93 tpm-C (\$189 per tpm-C) running Sybase SQL Server 11. The desk-side departmental Ultra Enterprise 4000 can house 14 CPUs, 14Gb RAM, 4Tb disk, eight board slots and 21 SBus slots. It's positioned as a database engine and costs from \$72,800 with one CPU, 64Mb RAM, 4Gb disk, one I/O board and CD-ROM. The Ultra Enterprise 3000 departmental tower for business and technical applications supports up to six processors, 6Gb RAM, 2Tb disk, four board slots and nine SBus slots. An entry-level uniprocessor with 64Mb RAM, 2Gb disk, one I/O board and CD-ROM costs from \$39,100. It's estimated to perform 6,900 tpm. Each I/O board has two 200Mb per second channels, 100Mbit per second Fast Ethernet, Fast/Wide SCSI, Fibre Channel and three SBus expansion slots. All models will ship this quarter.

Workgroup

Sun's also offering monitor-less versions of the SMP Ultra 2 workstations with up to two 167MHz or 200MHz CPUs - and 512Kb or 1Mb cache per CPU - 2Gb RAM and 1Tb disk as Ultra Enterprise 2 for database management, Web service and Internet commerce (*see front page*). With one 167MHz CPU, 64Mb RAM, 2Gb disk and CD-ROM, it costs from \$21,000. The one- and two-way systems use only one CPU board and don't include the Gigaplane interconnect bus. UPA throughput is 1.6Gbps, I/O is 133Mb per second. It ships in May and is rated at 3,107 tpm-C (\$141.74 per tpm-C) running IBM DB2 2.0. The new tower form factor server recently introduced as the 167MHz Netra i 150 is also being made available as the Ultra Enterprise 150 workgroup system. Stripped of its Internet baggage it comes with 512Kb cache, 32Mb RAM, 2Gb disk, 100Base-T, CD-ROM, floppy and Fast/Wide SCSI and 12 disk bays priced from \$16,500. It'll ship in the third quarter and is estimated to perform 1,332 tpm. The 143MHz Ultra 1 Model 140 workstation is also available as an Ultra Enterprise 1 server from \$12,000 with 64Mb RAM, 2Gb disk and CD-ROM. It's also estimated to perform 1,332 tpm.

Storage

Sun's offering Unisys Corp's Open Storage Module rack-mount disk subsystem as the SparcStorage Array Model 214RSM for use with the Sunfires. The

Fibre Channel interface-based array implements the SCA2 (single connector attachment, second generation) Sun co-developed with Seagate Technology Inc, which also supplies the drives (UX No 573). It can accommodate 75Gb to 176Gb storage per array; the data center servers support between 75Gb and 10Tb disk. A \$77,800 buys 75Gb; the 176Gb model is \$118,200.

SyMon management

For use with the Sunfires there are new releases of Solstice Backup, Auto-Client, AdminSuite, Site Manager and Domain Manager systems and network management, plus a SyMon graphical systems monitor co-developed with Network General Corp's AIM Technology division which is interoperable with AIM's SharpShooter systems management solution. SyMon will go up on the Ultra 2 and 150 servers, and on the 1000 and 2000 series from November.

Solaris 2.5.1

The new servers will run a new release of Solaris, version 2.5.1 includes support for 64-bit asynchronous kernel I/O and 4Gb RAM. SunSoft was keeping mum on the new version last week as it wants to make a splash about the next stage of its 64-bit Solaris roadmap next month with 2.5.1.

Best of three at 100Gb TPC-D

Indeed Oracle Corp's TPC-D decision support benchmark results were achieved on a 24-way Ultra Enterprise 6000 running Solaris 2.5.1. Oracle7 7.3 delivered a power metric of 625 and throughput of 351 on a 100Gb database. Price/performance was \$4,501 (dollars per-queries-per-hour). The combination outperforms the other two TPC-D results posted so far; Teradata V3R1.1 running on a five-node, 40 CPU NCR 5100M achieved a power metric of 217, a throughput metric 170 and \$28,272 price/performance. IBM DB2 PE on a 32-way SP2 302 achieves a power metric of 207, throughput metric of 85 and a price/performance of \$33,640.

ORACLE DEVELOPS PRODUCTS ON SUN, BUT RUNS ITS BUSINESS ON DEC

Sun Microsystems Inc's new Ultra Enterprise servers won a ringing endorsement from Oracle Corp CEO Larry Ellison who described Sun servers as his company's "primary development platform," and the base development platform for future products, including Oracle8, as well as the reference platform for new versions of Oracle Universal Server, the latest cut of the database. It even turned out its first TPC-D decision support benchmark on a Sun server - *see above*. It hasn't done TPC-D until now, Ellison said, because of competition from NCR and IBM. Sun runs its business on Oracle. Next day Ellison turned out to applaud DEC's new AlphaServer TruClustering for Unix (which currently works only in conjunction with Oracle Parallel Server) and the smashing of Tandem Computers Inc's long-standing TPC-C record, *see front page*. At that bash, DEC and Oracle were trying hard to convince the crowd that although Sun is Oracle's primary database development platform, it only gets something like a two week advantage, citing the example of the next-generation Oracle8, betas of which will go up on DEC AlphaServers and Sun boxes at the same time. Oracle, which has a 'special' relationship with DEC on high-end database stuff, runs its business on AlphaServers, not Sun.

OCS PUTS MAINFRAMES ON THE WEB

Mainframe terminal emulation company OpenConnect Systems has built a Java server that brings mainframe applications and data to the desktop through Java-enabled browsers. The product, OC://WebConnect, leverages its 13 years of experience in TCP/IP and reduces the complexity of terminal emulation. It's cheaper as well, with pricing starting at \$5,104 for 16 concurrent sessions going up to \$49,000 for 1,000 sessions. OCS president Stephen Clark said he's selling the product to his Fortune 50 installed base and has received overwhelming response. OCS is also working on a native implementation of an MVS/VSE Web server. The Java server hooks via TCP/IP to an OCSII mainframe gateway. WebConnect is available via download for demos and customers can tap into OpenConnect's mainframe for a test run.

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NCR Corp made a first quarter operating loss of \$37m, down from \$172m a year ago, but turnover was down 13% at \$1,586m; gross margins were 25.5%, improved from 23.1% a year ago, and total headcount, including contractors, was 39,300 at March 31, reflecting the reduction of about 7,400 of the 8,500 posts to be eliminated from the business as part of **AT&T Corp's** restructuring.

Tandem Computers Inc saw second quarter net losses of \$49.6m, after a \$52.0m restructuring charge, against profits of \$21.7m last time, on turnover up 11.7% at \$576.2m; mid-term net losses were \$47.6m, after the same charge, against profits of \$56.9m last time, on turnover that rose 3.6% at \$1,088.6m.

Cray Research Inc has shipped its first Alpha AXP RISC-based T3E scalable parallel processor machines to the Pittsburgh Supercomputing Centre (UX No 567). General shipments are slated for the third quarter.

Intel Corp achieved its eighteenth consecutive quarter of revenue growth in the first quarter of 1996, up 31% from the similar period a year ago. First quarter revenue was \$4.64bn, up from \$3.56bn in the first quarter of 1995 and net income was \$894m compared with \$889m for the similar period a year ago.

Seems **Oracle Corp** CEO Larry Ellison got a little ahead of events last week describing an agreement with **Sun Microsystems Inc** on common specifications for software that runs on the two company's proposed low-cost NC "Network Computer" devices. As we went to press Sun said that no deal had yet been signed. It dismissed reports of an announcement as soon as this week. *Information Week* believes Oracle and Sun will be joined by **IBM Corp**, other hardware manufacturers and telephone companies to announce a standard set of specifications and APIs for building these devices on May 20. Oracle has already described its plans to license a portable NC "Network Computer" operating system on Intel and other architectures and has developed an implementation for the ARM RISC in conjunction with **Acorn Computer Ltd**. Oracle won't sell the \$500 units itself.

Merrill Lynch claims that **Sun Microsystems Inc's** sterling third quarter results went right down to the last few weeks before salesmen hit plan. That has been the case the past few quarters. Merrill also figures Sun's gross margins may trend down in future quarters as it gets aggressive on the workstation pricing front.

Internet start-up **Open Market** has filed to go public.

Expersoft Corp has named Neal Waddington president and CEO. He's coming over from **EMC Corp** where he was senior VP and general manager of its Open Storage Division but before that he was VP and general manager of Tandem's Unix Systems Division, VP of marketing at **Sequent** and VP of corporate marketing at **Unisys** where he spent 19 years.

Acer America is supposed to roll out a trio of new servers this week including a high-end AcerAltos 19000 it thinks will be attractive mostly to the SCO crowd though it like the others can run Windows NT and NetWare as well. The thing uses one or two 200MHz Pentium Pro processors and supports up to 250 users. It'll sell between \$12,000 and \$25,000. The other two include the entry-level 133MHz Pentium-based 900 and the dual-166MHz Pentium 9000.

Sequent Computer Systems Inc has reported first quarter revenue of \$120.7m, up marginally on the \$116.1m it did last time - net profit slumped to \$0.6m (\$0.02 per share), from \$6.0m (\$0.18 per share) in the same period last year. The company laid the blame at increased R&D spend on its forthcoming NUMA-Q technology and expanded sales operations.

French based company **Business Objects SA** has signed new distributors in Brazil, Argentina and Colombia for its BusinessObjects on-line analytical processing query and report tools and appointed ex-**Sunsoft Inc** intercontinental channels development manager Joseph H Brand as director of Latin America. It says its got deals in Chile, Venezuela and Peru awaiting ink. Current customers include BP Colombia, Telebras in Brazil and Nabisco in Mexico. It's also opening an office in Toronto, Canada, to add to the ten it already has in North America. It's snared Oracle US alliances director Paul Doscher as VP of sales for the US, Canada and Latin America.

Progress Software Corp, Bedford, Massachusetts has enhanced version 7.3 of its Application Development Environment (ADE) to support DEC's VLM64 database-in-RAM technology. Progress Workgroup Server goes from \$225 per seat, Enterprise Server starts at \$560 per seat. Progress' ADE Version 8 is due on Unix platforms later this quarter.

SunSoft's finally come through with how much a Solaris Server Suite client costs. It's \$85 a head. The four-piece suite is \$3,000.

Network Computing Devices Inc wants everyone to know that its business is all about remotely hosted applications, whether they be Unix, NT or Windows, and not just X Windows, a term it'd like to get rid of if it could. It's readying Java-enabled versions of its X stations by year-end. It claims to have shipped 10,000 units of its \$1,000 Explora X devices in the handful of months it's been shipping.

A Garden Grove, California outfit called **Hot Coupons** has opened for business with what it claims is the world's biggest Web site offering 30,000 discount coupons that surfers can print out when they tear themselves away from their screen and go shopping. See <http://www.hot-coupons.com>.

Informix Software Inc's cranking up a DataBlade Developers Program to get ISVs building DataBlade modules for use with the Illustra Server and then migrated to Informix Universal Server.

Red Brick Systems Inc's offering its Red Brick Warehouse VPT 4.0 for Silicon Graphics Inc Challenge servers from \$50,000.

Hewlett-Packard Co's offering an integrated Web warehouse solution called WebOLAP Server as part of a data warehousing initiative. An HP 9000 D-200 server is kitted with Netscape Communications Server, Red Brick Warehouse for Workgroups, and the Information Advantage Inc DecisionSuite Server with WebOLAP. Pricing for a system with 128Mb RAM and 4Gb disk begins at \$75,000 for four concurrent users from June.

Netscape Navigator users will soon be able to run Java applets up to ten times faster now that Netscape's licensed **Borland International Inc's** AppAccelerator "just-in-time" dynamic compiler. AppAccelerator reads the intermediate byte code produced by Java development tools and translates it on-the-fly into machine-executable instructions on the local client system. Initially, AppAccelerator will be available for Windows 95 and Windows NT clients.

It was interesting to see **AT&T's** World Class database marketing group swearing allegiance to **Sun's** Ultra Enterprise performance over sibling **NCR/Teradata** solutions. AT&T uses Sun servers for all of its internal database marketing and decision support and says it's set to migrate its proprietary 20Tb database to Ultra Enterprise as soon as the Sun servers can support it. Ultra Enterprise clustering is due later in the year. It says Oracle, Sybase and other databases just can't cut the size of cloth it needs.

IBM will introduce VisualAge tools for Basic and Java this year and the long-anticipated Basic product, code named Bart and seen as a VB competitor, is in a development beta now. A Java tool will ship by the end of year and that can move quickly because its DSOM foundation is already in place.

Tuxedo's new master, start-up **BEA Systems**, would like nothing more than to somehow co-opt **NCR's** rival Top End business for itself. It already sells Top End.

There's talk of a one-to-two-processor server code named Spanky at **DEC** after the L'il Rascals character that'll probably be called the 2100ALP and will probably replace the DemiSable. It's said to be a seven-inch tall rack-mounted piece hence the initials LP for low profile. The "A" reportedly indicates more PCI. There's also talk that the entire two-year-old Sable line faces retirement by the end of the year, displaced by the newfangled Rawhide contingent. Sable doesn't have enough oomph as far as bandwidth goes, its 667Mbps now being over the hill and its fourth processor is said to be purely decorative which is why Maynard only does TCP benchmarks on three-processor units. Rawhide, however, has no cluster support yet.

Sun was last week making noises that it wanted to make some acquisitions. Rumour says it may be interested in **Borland** which would kinda seem to fit since Borland has a Java-base JIT compiler which Netscape has licensed. Anyway Sun could probably get it on the cheap.

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DEC HANDS MANAGEMENT BASE, PRODUCTS TO CA

It may come as a surprise, but there are still things left in Digital Equipment Corp to sell, and last week another one went. It is selling its Polycenter systems management software and base to Computer Associates International Inc and will standardise on the Islandia, New York company's CA-Unicenter. In all, the Maynard has sold 15 of its PolyCenter products to CA as part of the worldwide agreement - and some 100 DEC staff and the relevant customers transfer as well - but terms were not given. The product list includes some PolyCenter for Windows NT products that were due this summer, and will give CA access to some large VAX/VMS customers and the maintenance revenues that come with them. DEC will retain PolyCenter NetView (licenced from IBM), but it will be included in a combined system and network management product CA will create by early 1997 that combines Polycenter, Unicenter and NetView. CA will be able to call on DEC's 25,000-strong service staff for network integration and support services. CA's plan to write software for DEC's 64-bit Alpha - including a 64-bit version of its CA-OpenIngres database - will be the subject of a forthcoming announcement. DEC chief Bob Palmer, who believes the term "strategic alliance" is vastly overused these days, says his four - with Microsoft, Oracle, MCI/Microsoft and now CA - are quite enough for the present.

LSI LOGIC EYES JAVA CHIPS

LSI Logic Corp is setting up a unit in Utah to figure out how it can cash in on the Java craze. Naturally it's starting with a little list of bright ideas. At or near the top of that list is a proposal to design a species of Sparc chip embedded with Java acceleration. The accelerator would include a toggle so programs that don't use Java will bypass it. A high-priced version of the thing could power workstations, while a cheapie might find a home in those fabled Internet devices everyone's talking about. Hardware acceleration, experts note, is typically many times faster than software acceleration but depends on a stable instruction set since chip changes are a heck of a lot more involved and expensive than software updates. Also on the list is a dedicated Java acceleration chip that could be used with any CPU and operating system including Pentium Pro. LSI's trying to guess whether market demand for Java will make it worth it for OEMs to spend the extra money to add the part to their systems.

PERSISTENCE TARGETS THREE-TIER DEVELOPMENT

As anticipated (UX No 582), object class-to-relational table mapping company Persistence Software Inc's heading for the three-tier application development hills. It's re-casting its key data caching software for the creation of what it calls transaction application servers (TransApp Servers) that concentrate application data and logic in a middle tier between client objects and databases to accelerate processing. Persistence 3.2 allows multiple clients to share a TransApp server which maps object changes back to database transactions and optimises performance by loading frequently accessed information into a shared object cache. Used in conjunction with SunSoft, Iona or PostModern object request brokers, Persistence says it'll also allow a TransApp server to connect with Java clients. The company says the strategy reflects customers' transition from client/server and prototypes to three-tier production systems. They started out using Persistence for object-to-relational mapping and are now using its caching technique as an in-memory object database, it claims. Persistence has optimised cache writes to reduce update time and now works with native C++ exceptions. 3.2 includes support for AIX and Sybase ctlib. Persistence comes with an object builder that generates data mapping objects which link C++ objects to relational tables and an object server or transaction manager which controls the flow of information between Oracle, Sybase or Informix and client applications. In-memory cache maintains data integrity and optimises performance. 3.2 supports Windows NT, 95, C++ and Java clients. Messaging, support for shared objects and an event manager framework will propel it further into the three-tier world. A third quarter 3.4 release is supposed to add tighter ORB messaging and an "intelligent" object cache. 4.0, due in the first half of 1997 will support event management, Network OLE and OLE clients. A 4.2 release in the second half of 1997 will support Java servers. The 40-person company's got Morgan Stanley Venture to buy into its vision to the tune of \$4m in a second round of venture funding. It expects to be up to 100 staff by year-end.

DATAMIND OFFERS "DATA MINING FOR THE MASSES"

Redwood City, California-based start-up DataMind Corp has its promised data mining products ready to roll (UX No 573). The process of data mining is the discovery of new relationships by sifting through huge amounts of data stored in a data warehouse. The idea is that organisations can make and recommend decisions based upon the relationships they find. DataMind claims its tools are designed for use by business users, not statisticians and techies, and come with a GUI that guides users through the mining process by first creating a study which defines the scope of a search - or automated data modeling. Excel spreadsheet and graphics charts or Word documents are used to display the model and predictions (Web browser and PowerPoint front-ends will come). DataMind Professional Edition runs on Windows 95 and 3.1 clients, includes an ODBC interface and is designed to run against a data warehouse with millions, rather than billions of records. It costs \$5,000. A DataMind Solo "Lite" version costs \$2,500 and is designed for organisations with up to 20 users that have data stored in local spreadsheets and text files. It has fewer variables and no ODBC interface. The \$25,000 DataMind DataCruncher server allows users to off-load desktop data mining functions and automatically batch process regular data mining models. It supports Unix and NT. DataMind will sell direct and through partners it's now looking to recruit

SCO TRUMPETS INTEL ENDORSEMENT, SUPPORT FOR MULTIPLE NUMAs

Santa Cruz Operation Inc has got two dozen ISVs, OEMs Compaq, Data General, ICL, NCR, Olivetti, Siemens Nixdorf and Unisys - plus Intel Corp - backing its "Big E" campaign to get enterprise applications up on UnixWare 2.1 (UX No 585). SCO claims Intel's endorsement is the first time the chip-maker has advocated a particular Unix and that it's now providing hardware, marketing and other assistance to the 3DA Unix architecture. SCO and HP are developing for the Merced micro-processor. SCO says it will licence ccNUMA, clustering, large memory (8Gb), large file system (64-bit), SMP scalability, performance, availability, reliability and failover components from the Unix vendors to create enterprise versions of UnixWare which will be returned as OEM products. It reckons it's biggest achievement will be the ability to support rival ccNUMA implementations from the Sequent and Dolphin/Data General industry camps, plus any others that emerge. It says it got 40 engineers from ccNUMA wannabes round a table to thrash out how they'll all be supported. As well as supporting Oracle Parallel server, it'll take clustering from NCR, Unisys and Pyramid. UnixWare currently scales to 10 CPUs; SCO will push it to 32-way using proprietary technology from Chen Systems Inc which on an eight-way system can already offer better than eight times uniprocessor performance. SCO will do 4Gb file system support. The technologies will be added through this year and next, targeting the merged UnixWare 2.1 (Eiger)/OpenServer "Gemini" release next year. It may do an interim UnixWare 2.1.x code drop sooner for ccNUMA and 4Gb file support. An enhanced OpenServer release - Comet - is due late this year. A Gemini SDK compatibility toolkit for Eiger and Comet is due this summer. There's nothing alive as far as UnixWare-on-Sparc goes now that ICL Plc has reverted to its own DRS Unix SVR4 implementation for its Sparc systems. SCO claims there's still plenty of discussion on a PowerPC port, but no action.

IBM, MICROSOFT, NOVELL "TO EMBED JAVA VM"

Sun Microsystems Inc is expected to rally Microsoft Corp, IBM Corp, Novell Inc and other operating system developers, possibly Apple Computer Inc, to line up with it at Internet World in San Jose and commit to integrating the Java language virtual machine into their operating systems, enabling any Java-based application to run without requiring use of a World Wide Web browser. A separate run-time is currently required for every application and Netscape Navigator 2.0 is the only available application that supports Java, though Microsoft's Internet Explorer browser will support it soon. Microsoft is said to have agreed to turn Java into a standard Win32 application programming interface.

NEW MAN AT THE TANDEM HELM DREAMS OF NONSTOP INTERNET, NT

By Joanne Wallen

Tandem Computers Inc's new president and chief executive, Roel Pieper, has a delicate job on his hands. His stated mission, to turn around the "technically-rich, image-poor" company is a tricky one. But for the man who admits that in corporate life, when the task is done, he ~~moves on, it should not be impossible. By technically-rich, he means that it is a company with high end, tried and tested, reliable technology~~ for mission-critical business applications. By image-poor, he would appear to be talking about the company's position vis a vis 'emerging' technologies, such as the Internet. Tandem obviously recognises a need to broaden its areas of business, but, like an ageing rock star, is uncertain whether to prostitute its solid reputation for what it does well in order to update its image. Pieper admits his challenge is to find the delicate balance between maintaining and building on Tandem's core competencies, and moving into new technology areas. He is concerned about the effect of what he calls "\$49.95 software" - shrink-wrapped software at knock-down prices, becoming even more prevalent as a result of availability over the Internet.

NonStop Internet

He says this simply devalues software and systems in the eyes of the end user. "\$49.95 does not buy a mission-critical business system," Pieper contends, "but the whole currency is devalued." What he is looking at now, he says, is how to apply the company's experience and expertise in new areas, adding value to new technologies without frightening off existing customers. To this end, he moots the idea of NonStop NT and NonStop Internet. He believes the company will be able to map its core fault-tolerant expertise to new, emerging technologies. The idea being that once Windows NT becomes more widely implemented as an enterprise system, and once the Internet is being used in anger by major corporates, the reliability of those systems will become much more of an issue. It is here that Pieper believes Tandem will play an important role. In fact, he believes that Tandem could do for NT what Hewlett-Packard Co did for Unix. In other words, overcome the resistance to it as an enterprise operating system by plugging security holes and making it a robust, high availability, fault-tolerant environment. Although he admits that in the NT arena, Tandem will face strong competition, Pieper says the company's trump card is that the Windows NT architecture closely resembles Tandem's Himalaya NonStop architecture.

Better implementation

This, he says, will enable a marriage of NT and Himalaya to produce consistent database management, transaction processing and messaging between the two. He was keen to stress that it is precisely NT's differences from Unix that makes this possible, and he tries to make a feature of Tandem not being a primarily Unix company. Pieper says that most of his competitors are entrenched in Unix, and would not necessarily be able to move as easily to NT. He sounds rather gamekeeper turned poacher talking about Unix as some kind of a tying rather than liberating system. The man was formerly president and chief executive of AT&T Corp's Unix Systems Laboratories. In keeping with industry trends, Pieper is keen to focus Tandem more on being a software-led company, than a box maker. His strategy of licensing Tandem's core technologies is in line with this vision of the company. Having developed ServerNet, a part-software, part-hardware 'big bus' interconnect, the company has licensed it to NEC Corp and Compaq Computer Corp. There is, of course, the danger that these two, and other licensees, may develop a better implementation than Tandem. However, Pieper says that without the licence agreement, Tandem would simply sell differentiated servers as a niche player. He wants the technology to become more widely used, and sees licensing as the key to disseminating it. In fact, his aim is to make ServerNet the standard PCI bus evolution. Tandem will also license other core technologies such as database, networking and communications. Again, Pieper believes that by licensing the technology, it will be used more widely within the industry, which would mean that the same applications would run across Tandem's Himalaya NonStop systems, NT and Unix. Pieper was less keen to be drawn on his strategy for the company he has just left, Tandem's UB Networks subsidiary. The acquisition has always seemed a somewhat strange one, since Tandem has made no move to integrate the company, where Compaq Computer Corp has already fully integrated its recent network acquisitions Thomas-Conrad Corp and Network Inc. Pieper would not comment on the future of UB Networks, but indicated that he was again considering putting the company on the block.

Personal mistrust

So, will the new man succeed in turning round the company's image? At just-turned-40 he certainly brings young enough blood

to the task. And he has a very clear view of his mission. There seems little dispute among those that need fault-tolerant, high availability systems such as the stock exchange and the banking world, that Tandem is a technically rich company. So in this environment at least, Pieper does not have a huge image-boosting job. It is in the mid- to low-end market that he wants to build image, and Windows NT and the Internet could be just the places to start. But Pieper will not find this easy. Even the language of the new generation does not sit easily with him. He avoids industry jargon and buzzwords at all costs, choosing his own, proprietary, words instead, such as the "Information Utility," which seems to describe that which we know as the Internet. Since it is not due to any shortcoming he may have in the English language - the Dutchman speaks four languages fluently - it perhaps demonstrates his own personal mistrust of emerging technologies. Mistrust or not, Roel Pieper's challenge is to get all the new kids on the block to talk about Tandem NonStop.

MUCH WORSE PC RESULTS THAN EXPECTED MEAN DEC'S GROSS MARGINS ARE BETTER THAN INTENDED

Digital Equipment Corp's heavy guidance did the trick, and its third quarter profits of \$0.74 a share were exactly in line with Wall Street's revised expectations of \$0.74 - they had been looking for \$1 a share until the company warned that the personal computer business was in trouble again. Third quarter profits rose 68% over the same period last year at \$124m, its biggest third-quarter profit in six years. Turnover for the quarter was \$3,620m, up 4% on last year. Underlining what a small proportion of total business Alpha systems still represent, a 60% growth in sales of Alpha servers translated into a mere 5% increase in equipment sales to \$2,100m; storage was up 50% too, but DEC only integrates the disk subsystems now, where it once made the disks. Service business grew 4% to \$1,600m. Ironically, the weakness in desperately low-margin personal computers meant that overall margins improved and were better than expected. The company said overall gross margins for the quarter were 34.6%, up from 32.2% a year earlier, but within that, product gross margins were 37.1%, up from 32.5% in the second quarter and 28.7% in the year-ago third quarter, but service gross margins fell to 31.3% from 32.7% in the second quarter and 36.7% in the year-ago third quarter. Revenues from its personal computer business were lower than expected during the quarter, but it did not disclose the actual figures. It blamed the personal computer woes on an industry slowdown in the commercial market sector, competitive pricing pressure, and higher levels of inventory in distribution channels. "The company is taking steps to respond to this situation and expects improved performance in the June quarter," said Vincent Mullarkey, vice-president and chief financial officer. DEC had 60,900 employees at the end of the quarter, a net reduction of 2,200 from a year ago, and 200 since the turn of the year. "The personal computer business was hurt more than we thought," SoundView Financial Corp analyst Gary Helmig told *Reuter*. Total operating expenses were \$1,107m against \$1,029m in the same period last year; DEC's cash position is now improving fast: the third quarter reflected the highest cash flow from operations in five years and the company ended the quarter with \$1,738m in cash. Third quarter net profits were up 68.2% at \$124.1m on turnover that rose 4.4% at \$3,621m. Net profit for the nine months was \$321.0m against a loss last time of \$37.9m, struck after a \$64.5m gain from the cumulative effect of an accounting change, on turnover up 7.7% at \$10,843m. Net per share, up 68% at \$0.74 in the quarter, was \$1.91 in the nine months.

SUN ULTRA ENTERPRISE SPEC95s

Better late than never. Sun Microsystems Inc's put its shiny new 167MHz Ultra Enterprise servers through their SPEC95 paces; the SPECint95 and SPECfp95 numbers are official; the SPECrate95 numbers have been run but not submitted to SPEC and are estimates.

Enterprise 6000/5000/4000/3000 (1 CPU)

SPECint95	6.25
SPECint_base95	5.43
SPECfp95	8.73
SPECfp_base95	8.65

Enterprise 6000/5000/4000/3000 (6 CPUs)

SPECint95	n/av
SPECint_base95	n/av
SPECfp95	19.3
SPECfp_base95	16.9

SPECrate95 (Estimates)						
Ultra	Enterprise	Model	Number	SPEC	SPEC	
6000	5000/4000	3000	of CPUs	int_rate95	fp_rate95	
			24	1204	1309	
			23	1144	1279	
			22	1085	1249	
			21	1025	1219	
			20	965	1189	
			19	917	1131	
			18	869	1072	
			17	822	1014	
			16	774	955	
			15	726	897	
			14	678	839	
			13	630	780	
			12	582	722	
			11	535	664	
			10	487	605	
			9	439	547	
			8	391	488	
			7	343	430	
			6	295	372	
			5	248	313	
			4	200	255	
			3	152	197	
			2	104	138	
			1	56	80	

INFORMIX PARALLEL DATABASE TO SHIP IN AUGUST...

Informix Software Inc's OnLine Extended Parallel Server 8.0 (OnLine XPS) database (UX No 548), its high-end database server for cluster and massively parallel processing systems, based on its Dynamic Scalable Architecture and supposedly re-designed from the ground up to support large-scale data warehousing sites will be generally available in August. It's currently on controlled release in several production environments. Initial support is for IBM SP2, AT&T 5100, Pyramid Technology's RM1000 and HP's MC/ServiceGuard clustering software (UX No 576).

...TRUCLUSTER RELEASE "WON'T USE" DEC'S DISTRIBUTED LOCK MANAGER

Meantime, Informix insists the OnLine port to Digital Equipment Corp's TruCluster due in the fourth quarter (UX No 586), will circumvent DEC's Distributed Lock Manager (DLM) technology - used by Oracle Corp's Parallel Server - despite DEC's director of Unix marketing Patrick Smyth's reservations. "I'm not sure they've taken a close enough look," he said. The DLM stores the identifier of each cache and locks the mechanism to serialise access to particular file system blocks. Informix says that instead of using a global distribution locking model *a la* DLM, it holds locks locally, spreading the directory caches throughout the system, partitioned amongst the nodes. This frees up network bandwidth, it argues. It's scornful of the Oracle/DEC world-record TPC-C benchmark of 30,390 tpmC across four eight-way AlphaServer 8400s (UX No 586), poor to its mind when compared to the 9,414 tpmC achieved running Oracle 7.3 on a single eight-way TurboLaser. Informix reckons it'll best 50,000 tpmC in a similar TruCluster configuration. DLM was developed by DEC simply to enable Oracle over TruCluster, Informix argues.

SCO INTERNET BUNDLE IN BETA

Atlas, Santa Cruz Operation Inc's Internet server technology bundle went to first beta at 45 customer sites earlier this month. Beta 2 versions will go out to 400 sites on May 5th. General ships will follow in June - the SCO OEMs will have products available soon after. A layered product set includes Netscape Communications Corp communication (\$300), commerce (\$1,000) and proxy (\$1,000) servers, Columbus, Ohio-based Morning Star Technologies Inc's PPP (\$700) and security technology (\$1,000). Texas-based Micro Computer Systems Inc's IPX/SPX-to-IP gateway is \$1,000; 10 client connections costs \$1,400, 25 connections are \$2,000 and 100 connections costs \$4,000. The products will be available on CD-ROM for SCO OpenServer 5 and via ftp for UnixWare 2.1. SCO's also creating an Internet FastStart Bundle which includes an internet-enhanced version 5.02 of OpenServer with a better TCP installer and an HTML-based configuration tool. V5.02 is available only as part of the FastStart bundle, which also includes the PPP software, Netscape Communications server and Navigator 2.0. It's priced at \$1,000 to go against Windows NT. Bought separately, the pieces would cost \$1,835. Netscape Navigator for SCO costs \$490 for a ten-pack, \$1,225 for a 25-pack and \$4,900 for a 100-pack. The number of operating system user licences required is the highest number of either the number of traditional user logins (Telnet, Rlogin, Rcmd, FTP login) or the number of users/connections required by any application running on the system. http access and anonymous FTP access do not require user/connections licences. A second rev of the technologies due 90 days after the first release will include 2.0 versions of the Netscape servers. SCO also plans other packaged offerings, including a version bundled with the IPX gateway to compete with Sun's Internet Gateway product set. It's working with Verity, Cybercash and Oracle on other development. It hasn't inked a deal for Java yet. The internet enhancements will be added to each major release of OpenServer - the Comet version is due in the fourth quarter

ACER OVERHAULS ALTOS SERVER LINE, ADDS PENTIUM PRO HIGH-END

Acer America Corp has overhauled its notebook, PC and AcerAltos servers lines (UX No 586). The entry-level Series 900 mini-tower is designed as a small application server or intranet web server for up to 75 users. It comes with a single 133MHz Pentium, 512Kb cache, 16Mb to 192Mb RAM, 4Gb disk, four PCI and three EISA slots, PCI SCSI-3 controller, CD-ROM and 1Mb VRAM. It costs from \$3,000. The mid-range single-tower AcerAltos 9000 is designed to support up to 150 users and comes with one or two 166MHz Pentiums, 512Kb cache, 32Mb to 256Mb RAM, up to 4Gb disk, five PCI slots, three EISA slots, eight drive bays, PCI SCSI controller and CD-ROM. Prices range from \$5,000 to \$13,500. The AcerAltos twin-tower 19000 is designed to support up to 250 users. It supports one of Acer's one- or two-way 200MHz Pentium Pro boards with the Intel Orion chipset, 256Kb cache, 32Mb to 512Mb RAM, up to 8Gb disks, six PCI and three EISA slots, PCI SCSI controller, CD-ROM, 14 drive bays and redundant power supply. Prices go from \$12,000 to \$25,000. All come with Acer StartUp and Server Manager Pro software plus SCO OpenServer, NetWare or NT Server. The 900 and 9000 models replace the year-old 100MHz Pentium 800/p uniprocessor and two-way 7000/p. The 19000 replaces the four-way 17000. The 19000 uses Acer's own motherboard, not Intel's four-way SHV, volume deliveries of which had already been allocated by the time it was able to ask Intel about availability, Acer says. Like the other non-SHV Pentium Pro system manufacturers, Acer has been able to design additional expansion and other options into its own board design. It promises a four-way motherboard for the 19000 later in the year - its problem is the Orion chipset's current lack of scalability. Acer's also implemented the Desktop Management Interface into BIOS and has implemented a management and diagnostic ASIC chip-set into the new systems which support its Acer StartUp and ServerManager applications. The 19000 may not make it to non-US markets as the high-end solutions haven't sold well in international markets. Local countries may take the 19000 board and implement it in the less-expandable 9000 single tower to make it more attractive. The distribution channel is still shifting more NetWare servers than any other platform, although SCO OpenServer is up to around 30% of sales. In the corporate market NT predominates, Acer says. It's had no requests for UnixWare.

ARBOR ADDS WEB ACCESS

Arbor Software Corp, Sunnyvale, California, is the latest data analysis company to launch itself on to the world wide web, readying a bunch of modules for use with its Essbase OLAP multidimensional database. First of the block is ~~Web Gateway which will provide interactive, read and write access to Essbase data~~ from Web servers. The gateway converts Essbase query results into HTML pages. It'll come with a library of fifty pre-defined HTML instructions which provide access to Essbase data. The gateway betas next month and will ship in July on AIX, Solaris, HP-UX and NT. Arbor has European offices in the UK and France with a German operation due to come on stream in the summer. Its current product cycle is focused on distributing and parallelising its architecture. Arbor last week reported a fourth quarter profit of \$1.4m - up from \$219,000 last time - on revenue up 108% at \$8.2m. Revenue for the year was up 118% at \$25.1m from \$11.5m last year. Profit for the year was \$2.9m compared with \$374,000 last year.

SYBASE ENHANCES OPEN CLIENT AND SERVER CONNECTIVITY MIDDLEWARE

Sybase Inc has revved its Open Client and Open Server suites of connectivity APIs, claiming version 11.1 supports additional communication protocols and data formats, plus DCE, Novell NDS, Banyan StreetTalk and Microsoft NT Registry directory services, and a variety of security services. Version 11.1 includes a built-in Unicode engine for bi-directional character set conversion and multi-threaded applications written in DCE. 11.1 is due in the third quarter on HP-UX, AIX, Solaris, NT and Windows. Open Client SDK's cost \$800, Open Server is \$725.

HYPERION OFFERS TM1 OLAP ENGINE WITH DATA ACCESS TOOLS...

The supposedly rich pickings for software that can mine mountains of corporate data for gems are drawing all flavours of data warehouse, data mining, on-line analytical processing, decision support, data access and EIS ISVs to the sector. Latest on board is financial management and accounting house Hyperion Software Corp which has licensed Warren, New Jersey-based TM1 Software's OLAP engine (previously Sinper Corp) and wrapped its data access tools around it, selling the bundle as Hyperion OLAP. Initially available on NT, Unix support follows later in the year. Prices start at \$60,000 per server for ten users.

...REVS FINANCIALS SUITE

Hyperion has also introduced version 4 of its Hyperion Enterprise financial management software, adding new reporting functions and ad-hoc querying. A 4 XA (Extended Architecture) summer release will include support for 32-bit clients, legal reporting, larger application volumes and a new security model. It's up on Sybase, with Oracle support to follow. The company says it'll upgrade its Hyperion Pillar budgeting software with French and German translation, plus an ODBC driver later this quarter, with an international version due in October. Hyperion Financials 2.0 now supports Sybase System 11. Support for Oracle general ledger and payable modules, originally due in the first quarter, is now expected by mid-year along with receivable, purchasing and fixed asset modules. Hyperion is bundling its accounting, reporting, budgeting and analysis lines into Hyperion CFO (Complete Financial Offering) for the US market, providing common look and feel, data transfer between applications and drill through capabilities. Entry-level prices for the complete suite go from \$300,000 to \$500,000. It'll be renamed for the European market later in the year. The Stamford, Connecticut-based company says it did \$165m in sales in the year to the end of March.

HDS MICROKERNEL OS AT HEART OF NETWORK DEVICE

HDS Network Systems Inc King of Prussia, Pennsylvania, says its \$750 desktop Network Computer due by mid-year will run a 300Kb Posix-compatible microkernel as part of a Universal Client environment, which will include the Spyglass Inc Web browser. HDS claims the microkernel is its own work. The mini operating system is designed to support remotely hosted Unix, NT and Windows applications, and also hosts a Java virtual machine to support Java applets. Like its X terminals, the intranet devices are based upon Intel's i960 processor (UX No 578). Existing HDS X terminal users will be able to upgrade to the client environment - the company is currently seeking OEMs for the device and operating system. It has high hopes for the network computer and expects its introduction to alter its business model and image significantly. HDS is now offering its X stations with 21" Sony Trinitron screens. The ViewStation FX21CT costs \$3,300, the Ultra 21CT is from \$3,700 and the Dual 21CT is priced from \$5,600. The new configurations replace existing 21" Invar models. The company last week reported third quarter net profits down 92.8% at \$5,057, on turnover up 9.6% at \$3.7m; nine month net profits fell 12.9% to \$759,109, on turnover up 3.1% at \$15.7m.

SUNRIVER SOLOMON JAVA COMPUTER RUNS MACH

SunRiver Data Systems Inc's Intel i960-based "Solomon" Java computer is expected to cost between \$500 and \$1,000 depending on configuration. ~~The internet device - which goes to developers later this quarter - will come with~~ 10baseT Ethernet, SLIP/PPP, support for 4Mb to 32Mb RAM, 16-bit audio, monitor, keyboard and mouse. The pizza box device measures 1.75" x 9.75" x 9.25. Solomon's targeted at running server-based applications over corporate networks and will include a Mach microkernel-based Network Computer OS. A Java interpreter's currently being ported. Solomon will support a HotJava or custom Java user environment plus internet security software from SunRiver's Tradewave subsidiary. It'll be closer in function to Wyse Technology Inc's Win-Term device than Larry Ellison's Internet box, SunRiver says. SunRiver is now housed alongside the old NCR Corp ADDS terminal business in All Quotes Inc.

SNI TAKES openUTM STATESIDE

Siemens Nixdorf Informationssysteme AG (SNI) is taking its openUTM Universal Transaction Monitor to the US to do battle with the likes of Tuxedo, Top End, Encina and CICS. Now the dust has settled over its Pyramid Technology Corp acquisition (UX No 523) the Paderborn, German-based company intends to push the creature out into the VAR channels as well as offer it with servers from its Pyramid subsidiary. Describing openUTM as Europe's best kept secret, SNI claims it has a leading 30% share of the European TP market with an installed base of over 5,000. Of that base it estimates 3,500 are mainframe sites, from where openUTM traces its ancestry. It believes openUTM bests the opposition in memory and context management, allowing the TP monitor to hop around from application to application, and offers inherent processes and bespoke triggers for event management. It started life fifteen years ago on SNI's BS2000 mainframes and was moved on to the Nixdorf's Unix-based Targons. SNI ported it to other Unices three years ago. In the last two months it's got the thing up on NT in Europe. It's positioning openUTM as pre-enabled for secure transactions over the net, although encryption would be an add-on. It supports C++, C and COBOL applications, X/Open and other "open" APIs. It's added a Gina (General Interface for Network Applications) framework for implementing object-oriented OLTP applications. Prices start at £2,000 per license.

PEOPLESOFT 6.0 WILL GO INTERNATIONAL...

PeopleSoft Inc, Pleasanton, California will release Version 6 of its PeopleSoft applications and tools in September, with new "globalisation" features and a manufacturing module that resides alongside existing financials, human resources (HR), distribution and PeopleTools rapid application development environment. There are other extensions in the area of workflow. Version 6 is a full 32-bit implementation, supporting Windows 95 and most Unices. Countering criticism for being overly US-centric, version 6 will be the first product to roll out of its California lab in pre-localised editions. Country-specific modules can be attached to a core framework. The manufacturing module, initially aimed at the enterprise environment has been developed by its PeopleSoft Manufacturing Inc subsidiary and financed by Norwest Venture Capital using PeopleTools. The company claims the input of business analysts in the coding process is one of the main differentiators between itself and Oracle. It's currently integrating Cognos Inc PowerPlay 4.0 OLAP tools (UX No 584) and Arbor Software Inc's Essbase multidimensional database server with HR and Financials modules, and is offering Platinum Technology Inc's InfoBeacon for data warehousing. The PowerPlay and Essbase solutions will be available next month.

...AFTER PEOPLETOLS 5.1

Meantime PeopleSoft has released Version 5.1 of its PeopleTools rapid application toolset which includes Open Horizon Inc's Connection DCE middleware services providing single sign on and security (UX No 565). As well as Oracle, Informix and DB2, PeopleSoft is adding support for Sybase System 11 and Microsoft SQL Server 6. The release includes an application engine for developing background SQL processing programs, custom GUI components, support for inserting and deleting rows in language-sensitive scrolls, support for Crystal Reports 4.5, SQR3 and MicroFocus COBOL 4.0 and a SelectorSaver feature enabling PeopleTools to keep objects in memory. PeopleSoft has enhanced Data Designer, Panel Designer and tree manager tools and added security preventing the user from exceeding the maximum number of objects that can be manipulated at any one time, also enabling the search of excluded records. Users will be able to include BusinessObjects front-end decision support tools in place of Crystal Reports in a future release. Best known for its HR software, PeopleSoft says it expects revenues for its financials applications to exceed those from HR in the next financial quarter. It estimates SAP holds 36% of the business management software market, with Oracle and itself at 20%. It claims it'll move up to the number two spot this year. Prices for a minimum 3,000 to 5,000 seat HR installation go from \$100,000, Financials from \$500,000. PeopleSoft last week reported first quarter net profits up 104.7% at \$9.6m, on turnover that rose 100% to \$80.3m.

MMX: THE MOST IMPORTANT CHANGE IN INTEL'S ARCHITECTURE FOR A DECADE

By Lem Bingley

It has been a long time since the bedrock of the personal computer industry has experienced such an upheaval. The first rumbles began early last year, when Intel Corp announced plans to extend its basic architecture the better to serve the needs of multimedia applications. The tremors intensified on March 5 with ~~the release of specific details of the technology, called MMX (which, despite an obvious correlation with multimedia extensions, is not an acronym).~~ But the quake proper will not hit until the fourth quarter, when Intel launches its first MMX-equipped processor - the P55C. This will be a Pentium-class chip, probably clocked at the design maximum of 200MHz. Subsequent chips in the Pentium line and above will get the extra MMX circuitry on board, avoiding the kind of confusion caused by the maths co-processor in only some versions of the 80486.

Epochal significance

Intel has also confirmed that an Overdrive chip will be offered to upgrade existing Pentium personal computers. The P55C is being sold as a chip with epochal significance because it will be the first Intel CPU in a decade to offer an enlarged instruction set. Intel's processors, from the 80386 right up to the Pentium Pro, have evolved by adding new technology to the same basic tasks - but MMX adds new tasks. In 1985, the 80386 stretched the original operational capacity to 220 instructions from 170. MMX adds a further 57, significantly expanding the range of basic building blocks available to programmers. The changes appear at the assembly language level and will be hidden away - even from most programmers - behind device drivers, libraries and application programming interfaces, but the end results will be apparent to everyone. It is claimed that multimedia applications will run between 50% and 300% faster on MMX chips. MMX achieves these gains through the technique known as SIMD, Single Instruction, Multiple Data. As Alex Peleg, senior computer architect at Intel Haifa explains: "Programs carrying out tasks like image processing typically spend large amounts of time repeatedly cycling through small loops of code, applying the same series of computations to a long stream of data. In a lot of cases a parallel approach would be highly appropriate - because each calculation is independent of the others. Many such tasks in multimedia make a great fit for SIMD." It is also fortunate that most of the data types used by multimedia applications are small. Audio is normally encoded as 8-, 12- or 16-bit samples; pixels are stored using groups of four, six or eight bits. With a 64-bit internal architecture, Intel is able to lump several of these small data types together into a single 64-bit package (that is, the 'multiple data' part of SIMD) and process them all simultaneously (the 'single instruction' part).

No checks

This simple process provides most of the performance increase, since a 64-bit operation performs just as quickly as an 8-bit one but this time operating on many more instructions at a time. It also provides all of that 'parallelism' that Intel has been making such a fuss about. The new MMX instructions recognise the internal boundaries between small data types and prevent cross-corruption. Whereas a normal 64-bit addition could easily cause a 'carry' from one pixel to the next, an addition using MMX's 'saturating arithmetic' instructions will not. Attempts to increment an already full byte will have no effect on its neighbours. Although this can sound like an imprecise kludge, in most practical applications it is actually beneficial. For example, when carrying out Gouraud shading to make three-dimensional objects made up of flat polygons appear smooth, colour values are modified across each polygon. The progressive alteration of colour can cause a byte to overflow (or underflow past zero), causing a sudden transition in colour - so Gouraud shading routines usually check for this condition. With saturating arithmetic, no checks are needed and routines can be made simpler and quicker. Together with the new data types and new instructions come eight new registers. Registers are binary receptacles built into the CPU, into which data is put when calculations are to be executed. The MMX registers are described as 'virtual' - because they are actually the existing floating-point registers put to a different use. Where programmers need both floating point and MMX - for three-dimensional graphics, say, where geometry calculations and display routines rub shoulders - they must keep the two types separate and purge the registers in between. Architectural steps have also been taken to avoid mix-ups. Intel maintains that it came up with the clever specifications for MMX after wholesale analysis of 'bleeding-edge' applications, like videoconferencing, three-dimensional rendering, image processing and games. But MMX bears a striking similarity to the VIS Visual Instruction Set 'New Media' extensions to Sun Microsystems Inc's Sparc architecture, launched last year.

Puffing out its chest

Visual Instruction Set uses packed data types, employs the same floating point register trick and also provides saturating arithmetic among its 30 special instructions. Original or otherwise, Intel has been puffing out its chest over MMX - with some justification. Competing chipmakers NexGen Inc and Cyrix Corp have been keenly developing their own independent multimedia extensions, but a unified approach would clearly be beneficial to the industry. Fortunately, NexGen purchaser Advanced Micro Devices Inc has committed to

MMX, with a cross-licensing agreement signed in January. Cyrix has been offered a licence for MMX, but has so far made no formal commitment. "In all probability we will support MMX," commented the company's European general manager Brendan Sherry. "But I believe this is essentially a short-term and low-end solution. I don't believe that it addresses the core issue, which is that processors like the Pentium simply aren't fast enough for multimedia." Intel, of course, is not blind to that fact. And since it has often repeated that home multimedia users are driving its chip development, MMX may well turn out to be just the first gentle warning of much bigger revolutions to come.

BTRIEVE HEADS FOR THE SUN, WEB

Two-year-old Novell Inc spin-out Btrieve Technologies Inc is re-positioning its Scalable SQL and Btrieve 6.15 embedded databases for the development of packaged client/server applications. The databases are invisible to end users when ISVs bundle them as back-end application components. CompuServe users don't know that they are running Btrieve under the hood for example. The company says its Client/Server in a Box program allows ISVs to create applications which support automatic installation and management of distributed components from a single workstation, multiplatform client support out of the box, configuration management tools and maintenance free operation. Why now and not sooner? Because in the small company space - of which there are some six million in the US alone - it points to research which suggests that currently no more than 20% of these companies are using client/server technology and of these most only have one application that fits this bill. Within 90 days Btrieve will also begin offering Web- and Intranet-enabled versions of the forthcoming Scalable SQL 4 relational database and Btrieve 6.15 releases using some of its own and some third party technologies. It says it'll support HTML text and images and allow applications to be accessed from across the net by browsers or other applications.

Carve

Btrieve's going to carve a Unix business out of these releases beginning with a Solaris implementation, also within 90 days. IBM Corp is currently funding Warp Server ports of both. The next version of Btrieve will include the use of stored procedures and triggers brought over from the Scalable SQL 4 release. Btrieve, Scalable SQL and the company's ODBC interface are built upon company's 32-bit, C++, multi-threaded, OLTP-enabled microkernel. The company estimates there are 50,000 developers writing applications using its databases and some five million instances of their use. If you are running accounting, network services, human resource, healthcare or manufacturing applications the chance is you're running Btrieve under the hood, the company claims. Until last year Btrieve ran exclusively on NetWare servers, its Windows NT Server implementation now accounts for around 40% of its server revenue. It supports multiple clients. It counts Sybase Inc's desktop Watcom database technologies as its closest competition now that Gupta is more focused on the front-end. Microsoft SQL Server is higher up in the food chain, it claims. Other rivals include Faircom and Raima. The company has 100 staff at its Austin, Texas headquarters, another 25 in Europe and Japan. It claims to be approaching profitability but says it wants to put several profitable quarters behind it before going for an IPO sometime next year. It's not seeking further VC funding beyond the \$4m it raised last year (UX No 537). "We're a blue collar, practical play, not sexy," is the way the company describes itself.

FORMER ORACLE EMPLOYEE SAID TO HAVE FALSIFIED EMAIL IN WRONGFUL DISMISSAL SUIT

The *San Francisco Chronicle* reports that a former Oracle Corp employee who won a \$100,000 out-of-court settlement with the Redwood City, California-based company in February 1995 has been charged with felony perjury for allegedly lying and falsifying an e-mail message she used as evidence in the wrongful termination suit. Adelyn Lee's 1993 lawsuit alleged that Oracle fired her after she refused to have sex with president and CEO Larry Ellison. Key evidence included an email supposedly from her immediate boss, Oracle VP Craig Ramsey, telling Ellison that he had complied with the Oracle CEO's request to fire Lee. The paper reports the email was faked by Lee who used Ramsey's password to send the incriminating message to Ellison. Car phone records reportedly show that Ramsey could not have created the email because he was driving his car when it was sent to Ellison.

MICROSOFT DUMPS CAIRO'S OBJECT FILE SYSTEM

By Jeff Sweat

Microsoft Corp has abandoned the Object File System (OFS) that was to be the centrepiece of Cairo in favour of an enhanced version of the existing NT File System (NTFS), according to our sister publication *ClieNT Server News*. Microsoft low-keyed the news and practically lost it amongst the hype over the launch of its Exchange messaging suite. In place of what might have been a radical piece of technology, if it could have pulled it off, the still-distant Cairo will add features to NTFS that Microsoft claims will achieve the same goals as the mythic OFS. Microsoft's lead NT product marketing manager Mark Wood said that, unknown to the world-at-large, OFS was stripped of its objects-only meaning long ago and the term OFS actually described a feature set rather than a specific product. The objectives for Cairo haven't changed, he said, only the technology taken to reach them. Since OFS was first announced in very sparing detail, as Microsoft admits, "there's been a lot of brainpower applied to connecting the dots and creating pictures" of what it should look like by outsiders, Wood said. With little to go on, they drew pictures different than the ones in Microsoft's head. Then when Microsoft made more details public, those pictures were at variance with the so-called reality. Microsoft intended to create a whole new object system at first, but started casting around for alternative methods early in development after realising, it contends, that OFS would have been too revolutionary. Wood claims Microsoft had to choose between a "forklift upgrade" that would have been extremely costly for users as they switched to a new file system or gradual upgrades with the technology layered on top of NTFS. There was also the cost and time of development to consider, probably more so as Cairo slipped. Wood said Microsoft decided it didn't need an alternate file system because - with enhancements - NTFS would support OFS features like content indexing and queries, extensible attributes and the creation of a logical view of the network that's independent of its physical configuration - a "big disk" approach also known as a Distributed File System (DFS). Wood, mindful of the OFS experience, warned not to put too much stock in the DFS name lest its meaning change again and again just like OFS'. There is of course the camp that was never satisfied with the way Microsoft defined OFS and took it to mean that it either never really existed or that the effort failed or that it never worked and Wood's explanation doesn't really negate any of those suppositions. The switch raises the spectre of yet another Cairo delay.

Robbing Cairo

Microsoft has finally given up on the fantasy that we'll see a Cairo beta this year and now says 1997, with product possible in 1998, just as we've always maintained. However, Gartner Group analyst David Smith, a 1997-98 man himself, said the substitution may actually speed Cairo to market. As Cairo is pushed off, Microsoft is rolling out pieces of Cairo functionality sooner, to wit, the Windows 95 GUI and Distributed OLE or DCOM, Universal Data Access (the old OLE DB) and now the directory. The directory service shipping with Exchange Server is now to be understood as Cairo-developed technology that will be integrated into NT 4.0. The Exchange directory, which builds on top of NT Directory Services (NTDS), adds a hierarchical X.500 naming scheme and DNS support. It also has an extensible structure that allows users to add attributes such as mailing addresses, fax numbers and names to files. Provocatively, Smith sees the change in file systems as a sign of Microsoft's further - possibly passionate - embrace of the Internet, since the new directory will be subordinate to the Internet's Domain Name System (DNS), the stuff that URLs are made of. Since the Exchange directory is closer to what exists now, it will be easier for NT users to migrate to Cairo than if it were OFS-based. On the other hand, stripping out its features robs Cairo of much of its mystique, a PR challenge Microsoft will doubtless find a way to surmount.

UNISYS SEES MORE PAIN BEFORE ANY GAIN

Unisys Corp chairman and chief executive James Unruh warns that the cost-cutting measures that ate into first quarter results are likely to hurt the second quarter as well. Total orders declined in the quarter, and first quarter revenue and margins reflect fewer large-scale shipments, as Unisys shifts into its new product line. The company, whose creator targeted annual sales of \$20,000m by 1990, saw turnover slip again, to \$1,420m from \$1,460m, reflecting fewer shipments of mainframes. Unisys reported first quarter net losses of \$13.4m, against profits of \$44.6m the same period last time.

ORACLE ROLLS OUT HEAVY-DUTY WEB PRODUCTS

Oracle has announced additions to its family of industrial-strength Internet products including a Web-enabled version of its OLAP Server and a Web application generator. On May 15, Oracle will send a Web version of its Oracle Express Server OLAP product to beta. It will run what Oracle calls WWAP (World Wide Analytical Processing) and provide on-the-fly decision support analysis to users on a corporate intranet. It gives remote users full access to multidimensional data, although previous incarnations of Express Server let remote users take subsets of data for analysis, they had to know what data was needed. The server will generate HTML pages that contain multidimensional data and supports hyper-text links for drill-down and paging through data. It will include a session management scheme. Graphics capabilities will be added to the Express client tools to exploit the Web server. Oracle also released the Designer/2000 WebServer Generator, a repository-based modeling tool. It models the business functions beneath an application and delivers an application with database information that can be accessed by Developer/2000 or an HTML interface. The generator can then be sent across a network or intranet. Meanwhile, Oracle demonstrated its Parallel Server NT cluster technology in Amsterdam last week as we said it would. Product will ship by year-end. Oddly enough, Oracle hasn't made much of a fuss lately over its all-important Netscape-competitive Web Server 2.0 which has actually been downloadable and available for a free 90-day trial the last couple of weeks. Oracle's probably waiting for some kind of event to draw attention to it. There's no timer on the thing. It's being very trusting. The software departs from its predecessor in freeing itself of an integrated database though of course since it's coming from Oracle you know one slides right in there if you want. That was done if for no other reason than to speed the sales cycle. Databases weigh things down. 2.0 has a rudimentary web request broker. Apparently its successor 3.0, due out this summer, will go to Corba and bypass CGI. Reportedly third parties are writing apps to the request broker's API.

ORACLE NC TO DEBUT AT CAMBRIDGE TRIAL

Oracle's Network Computer will make its world debut in an interactive TV trial in Cambridge, England later this year. Acorn Computer group is putting together the reference designs for the machine. It also owns Online Media which is running the interactive trial. Online Media is looking at the Network Computer as an alternative to the set-top box for users that want to browse the Web or indulge in other Internet-based activity. In the third or fourth quarter the company will roll out NC boxes into homes. The trial remains small, it serves only about 90 homes and 10 schools in the East of England; the NC trial will expand this further and though the company is not certain how many users will be getting the things, sources suggested up to 30. Meanwhile Oracle chairman and CEO Larry Ellison was talking about much more grandiose figures when he visited his user group meeting in Amsterdam last week. In passing, he announced that Boeing had expressed an interest in buying 100,000 NCs - which came as something of a surprise to Boeing itself which pointed out that a) it only has 107,000 employees in total and that b) it would only be buying 70,000 of any sort of desktop machine in the near future. A company said it was talking to all the major companies including Oracle and Sun Microsystems Inc but that buying Network Computers was certainly not a done-deal: "to have dedicated equipment even at lower expense is still not a practical" he said.

BRAZILIAN-BORN NEW YORKER ENSEC TO SELL ICL'S ACCESSMANAGER WORLDWIDE

Ensec Inc, a developer and installer of all kinds of security systems born in Brazil and headquartered in New York has signed a value-added reseller agreement with ICL Plc under which it will take the ICL AccessManager software product and sell it as part of its EmWorks electronic security system. AccessManager is designed to enhance the security of information within an enterprise, and offers a single sign-on capability which ICL says increases overall productivity. The idea is that users should be able to implement consistent security across diverse, distributed locations; distribute and simplify security administration throughout the organisation; provide a common directory containing all security information; integrate business processes involving both electronic and information security, ensuring consistency between the two; generate co-ordinated alerts and responses; integrate audit facilities; and use common authentication mechanisms to simplify user identification and administration.

PRISM OFFERS CHANGE MANAGEMENT SOFTWARE FOR DATA WAREHOUSES

Recently-quoted Prism Solutions Inc, Sunnyvale, California, is offering a data warehouse change management software for use with the Prism Warehouse Manager and other databases. The company says the Change Manager tool will allow users to refresh the data stored in their warehouses without having to scan whole database files. It claims the module can capture, transform and apply changed data from DB2, IMS, Oracle and Tandem NonStop SQL and Enscribe databases to warehouses. It uses log tapes as a source to capture changed records off-line and apply them to target warehouses. The module costs \$80,000 with one changed data capture model, one transformation module with one developer workstation seat and one target module. Additional data capture models are \$25,000. Prism Warehouse Manager users can buy a changed data capture add-on option for \$25,000. It's up on DB2 and IMS now - Oracle and Tandem implementations are due in June.

INFOSEEK USE PARC INDEX

Another lightning piece of technology has slipped through Palo Alto's fingers as Infoseek Corp speeds up its Internet search engine to become 'Ultra-see' - at 1000 searches per second. The company's popular Internet navigation service - free to users and paid for by advertising - is one of a handful of powerful search engines on the Net that include Digital Equipment Corp's Alta Vista engine, America Online Inc's Webcrawler and Yahoo Corp. Using technology from Xerox Corp's Palo Alto Research Center (PARC), Ultraseek claims the capability to handle up to 1000 queries per second, and is intended to build to largest, near real time index on the Internet, using the Matisse object-oriented database from ADB Corp. It is intended to handle 25m Web pages, monitoring them in the space of a week and updating them as they change. Ultraseek is scheduled to be generally available in June. Ultraseek uses Xerox's Lexical Technology (XLT) developed at PARC. XLT is an advanced word root-indexing function that provides the ability to relate all words with a specific root together. Using this means longer query terms can be processed in a shorter time. In general, with search engine technology, the more query terms requested by the user, the slower the process. Infoseek intends Ultraseek to avoid this as longer and more complex queries can be run in split second times. On the more extensive queries, Ultraseek can be many times faster than other engines, the company claims. Ultraseek runs on a single Sun Microsystems Inc Ultra Enterprise 4000 server at up to 1000 transactions per second. Indexes can be run in parallel so that indexing speed is essentially unlimited.

NETSCAPE RECKONS IT IS NOW READY FOR NOTES, BACKOFFICE

Netscape Communications Corp, Mountain View has three new server products: an upgrade of its Netscape Mail Server 2.0 electronic mail system, to be available this quarter; a Netscape Certificate Server for security; and a Netscape Directory server, available in the third quarter. The company claims that with the three new intranet and Internet products, it now has a complete answer to IBM Corp's Lotus Notes and Microsoft Corp's BackOffice. Intranets are currently the most interesting part of the business for Netscape, because corporate intranet business currently accounts for more than 70% of its total. The three new server products join the SuiteSpot family of products, which currently sells for \$4,000 for a single copy, and volume discounts for multiple copies. Netscape Mail Server 2.0 is "seamlessly integrated" with the Navigator browser and has "several times the speed of more proprietary electronic mail systems;" it will be available for major Unixes and Windows NT for Alpha, at a likely \$1,000. Integration with Navigator enables users to read and post electronic mail or administer the mail server remotely on the network. The Netscape Directory Server, for running directories listing people and resources, uses the Lightweight Directory Access Protocol developed at the University of Michigan, and according to *Reuter*, three of the key developers are joining Netscape. The company says more than 40 companies, including AT&T Corp, IBM Corp, Novell Inc and the University of Michigan have agreed to support the Lightweight Protocol as a proposed open standard for directory service on the Internet. Netscape Certificate Server issues, signs and manages public-key certificates so that users of compatible products can authenticate communications over the Internet using the Secure Sockets Layer open protocol for Internet security; it was designed by Netscape with the help of VeriSign Inc and uses the X.509v3 open standard for certificate content encoding and the SSL 3.0 protocol to enable encrypted communications, message integrity and authentication to be achieved with public-key certificates. It will also be \$1,000.

FUJITSU ENGLISH-JAPANESE TRANSLATION ON INTERNET

Fujitsu Ltd last Wednesday launched an automatic English-to-Japanese and Japanese-to-English translation service on the Internet, saying it can be accessed ~~from anywhere in the world - which is rather the idea of the Internet, isn't it?~~ The service uses the Fujitsu Atlas high-performance machine translation system, with dictionaries in 22 fields, including business, medicine, electronics, computing, law and biology, and can be also customised with specific terms by the user. The service, available round the clock, translates one page of text (not one as densely written as *Unigram.X*) in 15 to 30 minutes, and Fujitsu plans to charge 0.65 of a cent per translated English character - so to do an issue of *Unigram.X* would cost about \$400 - and 1.3 cents per translated Japanese character. It is offering a free trial of Atlas until May 12, at <http://trns.cab.infoweb.or.jp>.

NCR SIGNS ETI TO DO TERADATA LIBRARY

NCR Corp has signed Austin, Texas-based Evolutionary Technologies International Inc, the first company formed around developments at the Microelectronics & Computer Technology Corp pre-competitive research co-operative, to create a Data System Library for the NCR Teradata database system. Evolutionary's Extract is designed to convert data between almost any two database formats, and the Library will enable ETI-Extract to automate the process of migrating large volumes of data to and from Teradata-based data warehouses. The Library will provide the framework of rules, models and templates that ETI-Extract software uses to generate programs that will load, access, collect and manipulate data in Teradata environments and also migrate the data between Teradata systems and "virtually any other" database environment.

NOW EMC WINS BULL FOR ITS SYMMETRIX 3000 UNIX DISK ARRAYS

EMC Corp has long supplied Compagnie des Machines Bull SA with its disk arrays for attachment to its mainframes, and now Bull has moved on to the EMC product that is generating a whole new round of excitement for the Hopkinton, Massachusetts company, its Symmetrix 3000 Integrated Cached Disk Array for Unix systems. The storage systems are accessible from a wide range of servers in the open systems market, including Bull's Escala and Escala Powercluster Unix servers and the new Sagister Unix multiframe systems. The Symmetrix 3000 stores up to 1Tb of data from as many as 32 different servers. The terms were not disclosed.

IBM RS/6000 OFFERS SYSTEM/390 SIDECAR; NEW VSE

IBM Corp has followed Unisys Corp's lead and come out with a version of the RS/6000 that takes a System/390 mainframe processor board in one of its Micro Channel Architecture slots. As well as presumably making it cheaper for users that insist on going Unix than if they bought a 9672 and an RS/6000 separately, it also makes it a little less likely that they will decide to go Unix with Hewlett-Packard Co. The company also came out with a new release - Version 2.2 - of the VSE/ESA mainframe operating system, which it had hoped would by now would have been dead for a decade. It's now official that VSE/ESA, direct descendent of the venerable DOS, lives beyond the millennium, because this release is stuffed with tools for getting to grips with the Year 2000 Problem. Available in the fourth quarter - thereby encouraging people to procrastinate over getting to grips with the big Problem for still a few more months, it also includes C run-time services, and debugging support for Cobol and PL/I to reduce application development time, as well as increased parallel processing capabilities, support for OS/2 LAN Servers and compatibility with the 3590 tape subsystem. The new R/390 has a Power2 for AIX, and runs OS/390, MVS/ESA, VM/ESA and VSE/ESA on the S/390 microprocessor; it will be out in June at from \$90,000. There is a new 4.2 release of AIX with features to enhance portability, scalability and usability, with "significant" new Internet capabilities and packaging options. And software developers can now download SOMobjects Version 2.1 from the Internet at no charge. SOM 3.0 for OS/2 is on early release; site for SOMobjects is <http://www.software.ibm.com/objects/somobjects>.

SPYGLASS ACQUIRES SURFWATCH SOFTWARE, OS TECHNOLOGIES

Naperville, Illinois-based Spyglass Inc, which is the source of licences to the Mosaic Internet browser, last week announced definitive agreement to acquire SurfWatch Software Inc, Los Altos, California developer of Internet filtering and parental control software, and will pay \$12.6m in shares for the company. Spyglass reckons that SurfWatch's filtering software is the industry-standard technology for blocking access to unwanted material on the Internet. SurfWatch employees and operations will become a product group of Spyglass and the core of its West Coast research and development organisation. SurfWatch reckons that while parental control has so far generated all the attention, its filter technology has "tremendous potential in enterprise applications" too. Spyglass also acquired OS Technologies Corp, developing and licensing World Wide Web conferencing and forum technologies; no terms were given.

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The Microprocessor Report says that the low-cost 21164 chip DEC is working on with Alpha second source Mitsubishi is called the 21164PC and puts its appearance in the first half of next year. It's supposed to use the current 21164 core and have similar performance. The newsletter puts its price at roughly \$500 and that's with external cache and chipset. The systems it makes could start at \$2,500. The newsletter also notes that the Alpha is coming under increasing pressure from competitors like the 64-bit PA-8000. HP may be having trouble making it in quantity but the part outstrips the 333MHz 21164 on both integer and floating point and even the 400MHz 21164 probably won't touch the 8000 on FP.

DEC said last week when its Q3 figures were released - see page 2 - that its Alpha-Unix business was up 70% year-over-year. It also said it has accumulated an installed base of 200,000 Alphas - including upgrades - since the machines first went on sale three years ago. It's sold 1,500 Turbo Lasers since their 4Q95 release.

Unify Corp, San Jose relational database developer-turned database tools designer, must feel a little long in the tooth alongside all the six-week-old companies that seem to be going public these days, but it wants investors to know that age has its virtues, and the venerable company has filed to go public with an initial offer of 2.1m shares, 1.85m of them new, at a target price of between \$10 and \$12 per share. It wants the \$17m or so net proceeds for working capital.

Netscape Communications Corp has reported first quarter net profits of \$4.7m, against losses the same period last year of \$3.9m, on turnover up to \$55.0m, from \$5.4m a year ago. Net earnings per share were \$0.06 in the quarter. Both periods reflect the acquisition of **Collabra Software Inc**.

Seagate Technology Inc says it's made no secret of the fact that it's looking to get rid of the Storage Systems Group it acquired with **Conner Peripherals Inc** back in February. The group makes nStor RAID arrays. To avoid competing with its customers, which include Data General, HP and Compaq, disk supplier Seagate hasn't previously offered its own RAID solution.

Computer Associates International Inc chairman Charles Wang describes **IBM Corp's** acquisition of **Tivoli Systems Inc** as "the best thing that could have happened to CA-Unicenter." CA claims a multi-million customer account came over to it the day after Tivoli was bought - the customer had been evaluating CA-Unicenter and Tivoli TME.

Oracle and **DEC** reckon they could have achieved 40,000 tpmC with a 133Gb database across four eight-way TurboLasers.

TruCluster systems can be no more than a few metres apart right now - **DEC's** working on longer connections.

Of its 45,000 clustering customers **DEC** says 2,000 are running its first-generation Unix clustering - AdvantageCluster - the rest are VAXcluster installations.

DEC says it'll speed up Memory Channel to a message latency of 3.5 microseconds soon - down from 5 microseconds now. It'll push up the 100Mbps - 35Mbps point-to-point - bandwidth too. None of the enhancements are being returned to **Encore Computer Corp**, from whom **DEC** licenced the interconnect.

The problem with Scalable Coherent Interconnect NUMA implementations is that they assume errors don't happen, **DEC** says. Also programming models must still understand the memory hierarchy in which instructions will be processed more quickly (even if only by a microsecond) by a CPU's local memory than by a distributed processor. **DEC** says it'll do "real symmetric processing" with no latency issues.

Sequent Computer Systems Inc was showing off its delayed Scalable Data Interconnect (SDI) page-sharing technology for distributing complex parallel database queries across as many as 120 Pentiums in clustered SMP nodes at the European Oracle User Group a couple of weeks back (UX No 560). It's due this quarter.

Oakbridge Terrace, Illinois-based **Platinum Technology Inc** is integrating **Visigenic Software Inc's** ODBC-based OpenChannel database connection suite (UX No 584) into its POEMS (Open Enterprise Management System) messaging technology. Platinum also plans to add support for Java via a JDBC-to-ODBC interface, plus encryption. It's licenced **Spyglass Inc's** Web Technology kit to Web-enable its existing technologies.

Hewlett-Packard Co's unbundled its AssetView hardware and software inventory information capture tool from OpenView. It runs on HP-UX and ships with a Sybase Inc database repository and the **Unify Corp** Vision 4GL in which the AssetView interface was written. AssetView started life as service offering from HP's Technology Finance group - was written. Prices start at \$22,000.

Santa Cruz Operation Inc reported second quarter revenue of \$50.73m down from \$53.27m last time. Net profits slumped to \$2.9m (\$0.08 per share) compared with \$4.5m (\$0.14 per share) last time. Revenue for the six months was \$98.64m compared to \$101.25m for the first six months of 1995. Net loss per share for the six month period ended March 31, 1996, including the non-recurring charges for the acquisition of **Novell Inc's** Unix business and the purchase of **Visionware Ltd** was \$0.85 compared to a loss of \$0.15 for the first six months of 1995. CFO John Jarvis has the additional role of senior VP international planning and business development.

Auspex Systems Inc founder and chairman Larry Boucher is stepping down in July but he'll stay on the board as a part-time employee. The Santa Clara, California company has hired Kent Robertson, former CFO of semiconductor outfit **Genus Inc** as its new CFO. Auspex last week reported third quarter net profits up 59.8% at \$5.4m, on turnover up 44.3% at \$43.3m. Nine month net profits rose 69.8% to \$13.6m, on turnover that was up 43.0% at \$114.9m.

Sybase Inc's picked up David Hsieh from **Learmonth & Burchett Management Systems (LBMS)** as VP Enterprise Product Marketing, reporting to Enterprise Business group president Dennis McEvoy. Houston, Texas, and London, UK-based LBMS is reportedly restructuring around product groups. Meantime, McEvoy is expected to outline Sybase's object strategy at its user meet in San Diego between May 6 and 8.

Hewlett-Packard Co is readying new line of Internet security software called Praesidium for HP-UX and Microsoft, the first incarnation of which, the Praesidium Authorization Server assigns privileges to individual desktops, and is due this week. Prices will go from \$30,000 to \$50,000 per server. HP bought Internet security company **SecureWare Inc** in February (UX No 578).

Santa Cruz Operation Inc's named Ninian Eadie, group executive director at **ICL Plc**, to its nine-strong board.

Recently-quoted data warehouse **Red Brick Systems Inc's** \$6.5m first quarter was up 54% on the same period last year. License fees grew 72% and services revenue growth of 7%. New accounts represented 45% of revenue; an average sale was \$260,000. Indirect revenue is at less than 10% - all Unisys resale business - the AT&T relationship accounted for nil. Red Brick reckons it has beat Oracle at 16 of its last 18 prospects. The company now has 24 direct sales staff out of 159 employees. Version 5.0 of the Red Brick Warehouse will beta next month and ship in the third quarter.

There's a go-slow between **Sun Microsystems Inc** and **Computer Associates International Inc**. The two made a big deal about integrating SunNet Manager network management with CA-Unicenter systems management on a single CD-ROM (UX No 551). The products supposedly work with each other now, but we're told there's no CD in sight yet.

Uniforum hasn't picked up executive director Richard Jaross' contract. It's been looking for a replacement for a while now. The last Uniforum show stunk and Jaross hasn't been a popular boy throughout his tenure.

NCR is supposed to trot out an Internet strategy in May or June depending on when its service department can support it. Initially it's got the higher end of its server line in mind and will cosy up with **Netscape**, **Informix** and **Illustra**. Meanwhile, the company has pretty much reverted to direct sales.

A little bird told our sister publication *ClieNT Server News* to circle Monday May 6 on our calendar. Apparently **Intel** is going to try to make a P6 splash and, among other things, wheel out wicked-looking Intel-made quad boxes that it wants to OEM. Apparently these are the things once code named Pocahontas and then shortened to Poca out of respect for Disney. The boards inside were once code named Sgt Preston and the connector was nicknamed King after the mountie's trusty dog. Sgt Preston then changed to Alder though we're not sure of the spelling. Some people say the initial versions of the box weren't all that impressive-looking so maybe they've changed.

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SEQUENT SHOULD HAVE NUMA-Q UNDER THE CHRISTMAS TREE

Sequent Computer Systems Inc has hung a December 3rd shipment date on its ccNUMA-Q-based systems, with deliverables shaping up as 16 CPU affairs initially with 32-way versions to follow in the first quarter of 1997. The Beaverton, Oregon-based company's cache coherent Non Uniform Memory Access (ccNUMA) system is currently six weeks away from going out to software partners, after which Sequent says it will freeze the NUMA-Q recipe. It's got what were originally 46 separate projects up and running and claims it will beat fellow ccNUMA journeyman Data General Corp to general delivery. From what it hears DG has yet to turn its first system on. Sequent's talking up its own NUMA-Q flavour of the architecture *de jour* over DEC's TruClustering, HP's Convex SPP buy-in, and Sun's Cache-Only Memory Architecture variant (UX No 583). Sequent reckons the key to its success lies in the fact that its existing SMP nodes won't require any changes to take advantage of NUMA-Q - they will perform at 80% of peak performance once hooked into the switch. It concedes however that tweaking software will optimise performance. Cache misses will be pushed over the 500MB/s, two microsecond latency IQ-Link by the Vitesse/Sequent gallium arsenide chipset. Sequent is re-engineering Intel Corp SHV Pentium Pro quad boards after concluding Intel's use of commodity PC parts and techniques isn't suitable for enterprise data centre systems. Although it concedes Intel has got the message it thinks companies using the vanilla boards such as DG will still have problems at the high-end.

DEC PLUGS MIDRANGE GAP WITH RAWHIDE

This Monday 6th May Digital Equipment Corp introduces its long anticipated Rawhide machines as the mid-range AlphaServer 4100s for departmental databases, decision support and groupware. They fit between the 2100 Sables and high-end 8000 series TurboLasers (UX No 583). They come as three models, the 400MHz system as a one-to-four 0.35 micron EV56 21164 Alpha RISC with up to 4Mb of cache, an entry level one-to-four way 300MHz uncached AlphaServer aimed at the network file and print and Internet market, and a one-to-four way 300MHz machine with up to 2Mb cache. A uniprocessor 5/400 AlphaServer 4100 is pegged at 12 SPECint95 and 17 SPECfp95 and ships in the third quarter. The two 300MHz machines, the 5/300E and 5/300 use the 300MHz EV5 21164 chip. All run Digital Unix 4.0, NT and VMS and come with from 128Mb to 4Gb of RAM, five PCI and three EISA/PCI slots, CD-ROM and PCI SCSI-2 and offer up to twenty one slots. The uncached 5/300E goes from £50,600 with Unix and OpenVMS or £38,200 with NT. With 2Mb cache, the 300MHz system costs from £58,000 with Unix and OpenVMS and £50,000 with NT. As uniprocessors they are rated at 8.2 SPECint95 and 13.3 SPECfp95. DEC puts the four way 4100/400 up against HP's four-way 120MHz K420 rated at 163 SPECrate_int95 and 248 SPECrate_fp95 and Sun's 167MHz Ultra Enterprise estimated at 200 SPECrate_int95 and 255 SPECrate_fp95, but at the time of going to press was still tweaking the last drop from the machine. Both the 300MHz systems ship this week. DEC claims it's already sold 750 Rawhide machines. At the high-end DEC will announce new 440MHz EV56 21164 upgrades for its TurboLasers later this month and a 375MHz EV56 21164 upgrade for its 2100A low-end. It's also reducing Sable pricing by 10% until September. DEC CEO Bob Palmer will announce new Internet software on Tuesday.

DEC'S BRIDGE TO NUMA

DEC has been developing a special Global Memory Bus and Global System Bus Bridge (GCD) for the new mid-range Rawhide servers it's supposed to debut this week. This bus and bridge scheme should eventually allow the Maynarders to field ccNUMA clusters of at least 16 CPUs (four buses). Configurations might even grow larger since, as we understand it, the Global Bus architecture should be able to support eight nodes or 32 CPUs. Sources say DEC will keep its GCD secrets to itself for the time being and not say anything about it at the announcement. Rawhide clustering is still a ways off and Digital Unix has to be fussed with for optimisation. The Global System bus is 256-bits wide and can reportedly operate at a peak bandwidth of 1GB/s. GCD techniques are supposed to connect multiple Rawhide motherboards together, extending the local MC bus on each board. These larger configurations could provide expanded memory, expanded I/O or additional CPUs. The company's early plans, which may have been subsequently refined, called for deploying increasingly larger, more sophisticated clusters starting with two to four motherboards. Initially, perhaps, GCD technology will only expand on memory, say, something along the lines of four times the base memory. The second level would expand I/O as well. The third level would connect multiple motherboards, allowing for at least 16 CPUs though GCD is believed to support up to 32 CPUs. Rawhide also incorporates another device that DEC will doubtless keep hush-hush this week as well. It's called the Stampede Hub and is described as an Encore-derived reflective memory technique that will let DEC cluster Rawhide building blocks more loosely and cheaply than with GCD. It's an interconnect box that should hook a maximum eight systems together. Stampede concepts are along the lines of what DEC is doing with its recently announced second-generation Unix TruCluster scheme for its top-of-the-line Turbo Laser boxes, the AlphaServer 8400s. TruCluster uses DEC's Memory Channel implementation of Encore reflective memory. Stampede and GCD both appear to be in line with what was sketched out recently as being DEC's plans to produce what was called a "better flatter NUMA" (UX No 584).

JAVA COMING TO AN OS NEAR YOU

In the event, Sun Microsystems Inc's JavaSoft unit managed to scoop up Apple Computer Inc, Hewlett-Packard Co, IBM Corp, Microsoft Corp, Novell Inc, Santa Cruz Operation Inc, Silicon Graphics Inc and, rather surprisingly given its enterprise bent, Tandem Computers Inc - plus its SunSoft Inc cousin - to announce they will embed Java into their operating systems. Integration of the Java virtual machine and Java class libraries at the operating system level means Java applications will be created and used independently of Web browsers and that browsers will not need their own integrated virtual machines other than for reasons of performance or enhancements. Systems won't have to support the multiple copies of virtual machines they do currently. Java will turn up embedded in a future version of the Mac OS operating system (the next-generation Copland release has been pushed out further again) and Apple will at the same time make some proprietary technologies generally available to provide Java support for network users. HP will integrate Java into HP-UX and its Internet security products. Java is being embedded into all IBM operating systems including a summer release of Lotus Notes and a September cut of OS/2. Big Blue's also retrofitting Java into Windows 3.1, work Microsoft isn't doing. Redmond is putting Java into Internet Explorer 3.0, Windows 95 late this year and NT, and integrating it with ActiveX. Novell's next GroupWise client and a late 1996 NetWare release will come with Java, as will SCO's 1997 Gemini UnixWare/OpenServer combine, SGI Irix and Solaris. Tandem, which has no client operating system, says it'll create middleware extensions to support Java in its ServerNet I/O system for use in enterprise set-ups but it's got nothing to do with its Unix, being all NonStop and NT work from the electronic commerce and Internet group which has no Unix bent. JavaSoft's currently trying to bring together all the API work being done for Java under one roof and expects to have 2D and 3D graphics, finance, security and communications APIs in hand for its JavaOne conference at the end of May. It's also working on breaking the technology out of the applet domain and into enterprise use.

ICL REVS DAIS ORB

ICL Plc will unveil version 3.0 of its Dais object request broker (ORB) at ObjectWorld East this week. The Corba 2.0-compliant Dais 3.0 provides additional support for UnixWare, AIX, Windows 95 and NT as well as new programming support for C++ in addition to C. ICL says 3.0 has been designed as a backplane to which other Corba services will be plugged over the next 12 months, including security, transactions and interoperability, plus Cobol bindings. ICL reckons it'll be first to market with a Corba security implementation and says it'll support Java and the interoperability services by year-end.

HP CHOOSES WIND RIVER'S VXWORKS FOR ITS NEW QUICKBURST CABLE MODEM

Hewlett-Packard Co's Interactive Broadband Products, part of its Home Products Division which supplies interactive electronics for the home, has chosen Alameda, California-based Wind River Systems Inc's VxWorks real-time operating system for use in its QuickBurst cable modem. QuickBurst will provide access to the same on-line services currently offered by telephone modems, but at network speeds thousands of times faster by connecting a personal computer to a standard coaxial cable television line. Hewlett-Packard hopes QuickBurst will become the core technology of the interactive home. It intends to sell the modem to broadband operators that could then offer it to their subscribers. The higher speeds will make the on-line environment more multidimensional, entertaining and user-friendly, reckons the company. QuickBurst will enable cable operators to offer subscribers high-speed access to services such as electronic mail, bulletin boards, special interest for, local community-based services and the facility to work from home. VxWorks, part of Wind River's Tornado development environment, will be the embedded operating system for controlling internal modem operations that manage the protocol and network management services. Its scalability will enable Hewlett-Packard to create a system that can grow with the operator's data services, thereby protecting its initial investment in the system. Wind River's development environment simplifies code development, enabling Hewlett-Packard to bring new cable modem products to market more quickly.

HP: NEW 5.25" ERASABLE OPTICAL DRIVE

Hewlett-Packard Co has begun shipping its 5.25" optical-disk jukeboxes using a 2.6Gb capacity magneto-optical disk drive that doubles the capacities of the company's optical-storage products. Existing SureStore optical jukeboxes will be based on the 2.6Gb drives and disk cartridges. Read and write speeds of the 3,000rpm third-generation optical drive are twice as fast as previous-generation magneto-optical drives and have been specifically designed for use in applications such as document and image management, archival-data storage, network storage, hierarchical storage management and data warehousing. The 2.6Gb drives have 3.4Mb per second read speed and 1.7Mb per second write speeds, an advanced caching algorithm and boast a mean time between failures rating of 100,000 hours. The optical-jukebox robotics have up to 2m swaps before failure. The new 2.6Gb products are compatible with rewritable and write-once disks. The drives can read and write industry-standard 1.3Gb magneto-optical platters and can read 650Mb industry-standard disks, to maintain compatibility with existing libraries of older archived disks. The 2.6Gb jukebox series is available with one to 12 optical drives with capacities from 40Gb to 618Gb. Prices start from about \$7,000, rising to about \$93,900.

RECOGNITION SYSTEMS SEEKS TO RAISE £3m ON BACK OF VERSATILE NEURAL NETWORKS

Birmingham-based Recognition Systems UK Ltd is looking to raise £3m for a major sales and marketing drive and raise its standing with its potential customers when it goes for a full listing on the UK stock market within the next month. Market capitalisation at the issue price is expected to value the company, which made losses last year on turnover of just £612,000, at between £15m and £18m. Formed in 1989, Recognition developed first the technology and then products that use neural networking techniques to analyse large customer databases and find unusual or individual buying patterns. Managing director Paul Gregory said the market is now ripe for the company's products, which are of particular interest to banks, insurance companies and other large financial institutions with huge amounts of customer data. Recognition Systems will announce this week that its software will now run on IBM Corp mainframes under the MVS operating system. It currently runs on both Unix and Windows NT systems. The company says its tools are ideally suited to mining data held in a data warehouse, and it has already formed a strategic alliance with Sybase Inc to exploit this potential. Last August, Recognition licensed its AutoNet neural networking technology to SPSS Inc, a US supplier of statistical software. It has also opened an office in Chicago, from where it is hoping to spearhead its drive into the US market. The company ran the NeuroData Club with Logica Plc as part of the UK Department of Trade & Industry's three year neural computing awareness project. It is currently involved in a UK Engineering Physical Research Council project with Barclays Bank Plc and Aston University, to provide visualisation of the findings of neural analysis of very large databases. Albert E Sharp is the broker.

OPENDOC "NO-BRAINER" FOR JAVA?

CI Labs, the OpenDoc front organisation, says that the cross-platform environment's capabilities and licensing terms would make it a powerful weapon for Sun's fight against Microsoft and its ActiveX framework. Though other sources say they've been chewing over a deal for ages, CI Labs VP Frank Mara wouldn't comment on rumours that Sun will license OpenDoc and embed it in the Java AWT GUI class library, but he did claim that OpenDoc answers key Java questions such as how to run two apps at once. For Sun to compete with ActiveX, it would have two choices: "spend \$70 million and five years" to basically recreate OpenDoc, or license OpenDoc itself. Sun has been doing Corba work, most obviously in Neo, but it's not to an OpenDoc level, Mara claimed. Besides, he added, "OpenDoc's the OMG standard." OpenDoc's licensing arrangements are wide open - with a one-time \$350 fee for unlimited use of the source code with no royalties - leaving Mara to say that it's a "no-brainer" for Sun to license it. Mara added, "We're very interested in working with [Sun]," no doubt in part because its presence in the boiling-hot Java would give it the momentum it's failed to build so far. Mara didn't sound keen on reciprocating the licensing, however, saying that Sun's terms would lock OpenDoc into a single vendor. He implied that CI Labs could take advantage of Java solutions from vendors who are building products from the open Java APIs.

MFS COMMUNICATIONS TO PAY \$2,000m SHARES FOR UUNET

The rate at which consolidation is progressing in the still embryonic Internet business, all the surviving players will be mature companies that have gone ex-growth in only a couple of years. Last week's lead deal saw MFS Communications Co Inc, the Omaha, Nebraska-based former Metropolitan Fiber Systems, created by construction company Peter Kiewit & Sons, eating UUNet Technologies Inc, which itself ate Unipalm Group Plc in the UK last year. MFS, which has built Metropolitan Area Networks in most major US cities, is busy cabling London and other UK cities and has a foothold on the continent, has agreed to pay 1.777776 MFS shares for each UUNet out, valuing the company at a whopping \$2,000m, compared with annual sales running at under \$200m - UUNet just reported \$233,000 net profits on \$43m turnover, up 186%, for the first quarter. Microsoft Corp, with 13% of UUNet, Fairfax, Virginia, supports the deal. The news caused shares in other Internet access providers to soar. MFS, which claims to have built the first US-wide Asynchronous Transfer Mode network, looks for big savings as UUNet transfers traffic to the MFS network. UUNet recorded a first quarter net profit of \$233,000 against a loss last time of \$263,000 on turnover that rose 186.3% at \$43.0m. Net earnings per share were \$0.01 in the quarter.

NOW THE INCREDIBLE SHRINKING DEC SELLS DISASTER ASSETS TO SUNGARD

And still the never-to-be-repeated fire sale at Digital Equipment Corp. Latest of what must be a rapidly dwindling residue of business assets is the company's North American disaster recovery services business, which has gone to SunGard Data System Inc's SunGard Recovery Services Inc subsidiary, on undisclosed terms; SunGard, Wayne, Pennsylvania will acquire subscriber agreements and hardware assets, including new generation Alpha AXP systems.

BURKHARDT BARRED FROM OFFICE OVER KENDALL SQUARE

Data General Corp co-founder Henry Burkhardt III is barred from acting as an officer or director of any public company for 10 years and will pay penalties totalling \$1.1m to settle charges from the US Securities & Exchange Commission of fraud while he was running Kendall Square Research Corp. The Commission charged Burkhardt, president and chief executive of Kendall Square, its executive vice-president Peter Appleton Jones and principal financial officer Karl Wassmann III with issuing "materially false and misleading financial statements" for fiscal 1992 and the first half of 1993. The company was alleged at the time to have recognised revenue from installations long before it was even clear whether the customer would ever accept the parallel processor, and the charge is that, knowing this, the defendants sold shares at artificially inflated prices. Burkhardt and Wassmann both agreed to settle without admitting or denying the allegations; Wassman is barred from practising as an accountant.

VISIGENIC TAKES OUT POSTMODERN FOR ITS JAVA, C++ ORBs

Rumours that object request broker (ORB) house PostModern Computing Inc had been put into play some weeks ago proved correct last week when Roger Sippl's Visigenic Inc last week moved in for the Mountain View, California-based company. The big question was why Visigenic? Insiders claim the database vendors are under pressure to put together ORB strategies and that even Microsoft Corp has been flirting with the notion of getting a Corba story. Visigenic will use PostModern's Java and C++ ORB technologies to extend its Microsoft Open Data Base Connectivity (ODBC) and SunSoft Java Data Base Connectivity (JDBC) tools for creating and managing database applications across distributed internet and intranets. Although officially described as a merger of the two privately-held concerns, Visigenic said it had decided not to reinvent the wheel in its pursuit of a distributed, net-based strategy and will take over the marketing, development, servicing and support of all PostModern products, including ORBeline, TPBroker for C++, and the Java-based BlackWidow ORB which seems to be the focus of its attention. The merger is expected to be completed by the end of May; the PostModern name is expected to fade from use. Although PostModern was regarded as the weakest of the independent ORB vendors - its market includes Iona Technologies Ltd and Expersoft Corp - the company was first out of the gate with the announcement of a Java-enabled ORB last December. BlackWidow generates client and server Java code that runs over the Object Management Group's Corba 2 Internet Inter-ORB Protocol (IOP) for connecting ORBs, bypassing HyperText Transfer Protocol (HTTP) and the Common Gateway Interface (CGI). Users are required to download an IOP/Java-enabling communications runtime module once to run applets. Visigenic's ODBC driver products provide access to multiple SQL databases from a single API. It has an exclusive agreement with Microsoft Corp to license and port the ODBC Software Development Kit to all non-Windows platforms. PostModern's eight employees will transfer the fifteen miles to Visigenic's San Mateo offices; PostModern co-founder, CEO and president Jens Christensen becomes Visigenic VP and chief technology officer. Visigenic has 75 employees.

EXPERTSOFT ADDS COM-TO-CORBA MAPPING, REPACKAGES ORB TO ATTRACT ISVs

With a new president and CEO and \$7.5m third round venture capital funding under its belt, Expersoft Corp, San Diego, California, is repackaging its Corba 2 object request broker implementation to make it more attractive to ISVs and developers. PowerBroker CorbaPlus includes a new COM-to-Corba mapping to support Microsoft Corp OLE objects and will be available in versions for C++, OLE and Smalltalk. It includes the existing PowerBroker 4.0 ORB, Corba naming services, support for multithreading, plus extensions for asynchronous operations, an IFR Explorer for viewing and managing the interface repository and editing and generating IDL, an OLE wizard and utilities for configuring runtimes and launching Windows NT services. Like Iona Technologies Ltd before it, Expersoft is using DNS Technologies Inc's Corba 2-compliant SmalltalkBroker to provide interoperability with ParcPlace VisualWorks. A CorbaPlus for OLE component converts Corba interfaces into OLE Automation interfaces for inclusion in OLE applications. CorbaPlus for C++ on Sun, IBM and HP Unix is \$6,000 - \$3,000 on Windows 95 and NT, now. For SmallTalk developers it costs \$10,000 on Unix, \$5,000 on Windows 95 and NT from next month. CorbaPlus OLE is \$500 from July. Windows 95 runtime deployments are \$50 - \$100 for NT and Unix. Expersoft admits it's behind the game - ie ORB rivals PostModern Computing Inc and Iona Technologies Ltd - when it comes to support for Java. Indeed it admits only to an "intent" to offer Java binding and Java code generation. The company says it's two months away from disclosing how it's spent its latest VC money. It's got a plan it thinks will turn it into a volume supplier and claims it has enterprise-class technology relationships in hand. The bulk of its revenue is still derived from its extended C++ XShell ORB-cum-object management environment. It promises enhanced support for events and transaction processing and claims to have systems management, reliability and high performance prototype code up and running.

UNIPLEX SEPARATES ONGO FROM OFFICE AUTOMATION; SHEDS 10% OF WORKFORCE

Uniplex Software Inc president and COO Tom Frederick has split the Folsom, California-based CP Software Group subsidiary company into two pieces as part of a business plan he says will put the unit on track to an IPO. He claims Uniplex came in above the line in 1995 and is looking for a few more profitable quarters before going to market. Uniplex, originally based in Hemel Hempstead, UK, but now headquartered in San Mateo, California, is losing around 10% of its staff as a result of the reorganisation, bringing total headcount down to 110, half based in the UK where much of the research and development is still done. Frederick has also axed the company's international operation - losing VP Europe Nigel Brown in the process - bringing all country reports back to San Mateo.

Division

A Workgroup division will house the recently introduced onGo Document Management System plus the onGo Office messaging system, which includes mail, calendaring, scheduling and directory, and resource management. onGo office is designed to be used in conjunction with Hewlett-Packard Co OpenMail messaging and is currently being ported to Microsoft Corp's Exchange on Windows NT where it'll integrate with BackOffice. The division will report directly to Frederick and is positioned to be the genesis of a revitalised Uniplex. A second Internet Mail division will incorporate the Uniplex Business Software (UBS) Unix office automation suite, for which the company is best known, and the Uniplex Mail standalone Unix email system. The company's seeking a general manager for the division who'll report to Frederick. Uniplex once ruled the roost of the Unix office automation world and was sold to Midlands, UK-based engineering company IMI Plc after it had reached its peak. IMI didn't keep Uniplex long, turning it over to CP Software in July 1994. At that time the California company was hoovering up Unix ISVs; its other acquisitions included Island Software Corp and Australian text retrieval company Intext. Uniplex is currently integrating Intext's document routing technology into DMS for an end-of-year release. It expects current DMS prospects to wait until that version is out of the gate and says Java and ActiveX applications should be front-ending DMS within a year. Uniplex does around three-quarters of its \$20m revenue on onGo products, the remainder on UBS and Mail.

NOVELL BOOSTS INTRANET IMAGE

Novell Inc has souped up its Internet/Intranet offering with a suite of new products for NetWare users as it tries to boost its image on the corporate intranet scene. At the publishing suite's core is a new 2.5 release of the NetWare Web Server for use on NetWare 4.1 server. The suite includes previously unavailable support for Java plus the ability to browse the all-important NetWare Directory Services. 2.5 also includes an IP/IPX translator meaning users will no longer need to use products from third parties such as Firefox, Cisco or Quarterdeck. Novell will ship the \$2,500 suite in June. Novell has also licensed Frontier Technologies Corp's SuperNFS Client product allowing NetWare users to access Unix file and print services across intranets.

FTP OFFERS JAVA VERSION OF AGENT BUILDER

Andover, Massachusetts-based FTP Software Inc's offering a Java implementation of its CyberAgent suite which can now be used to create Java-based utility agents for managing and automating network tasks. The suite includes a CyberAgent Manager which is a management package for deploying agents; an SDK is used to create agents with FTP-developed Java-classes (it also includes a wizard and various sample Java-based agents); Security Packs provide security; CyberAgent Listener listens for, authenticates and runs agents. The SDK is \$500, CyberAgent Manager is \$300, CyberAgent Listener is \$50, Security Packs, available in an exportable and non-exportable version is \$35. FTP is cutting 10% of its full-time workforce and taking a one-time charge of about \$1m to \$2m against second quarter earnings to cover the layoffs. The company is making the cuts to return to profitability.

EUROPEAN STATES PROPOSE 'BIT TAX' ON INTERNET- BOUND INFORMATION TO "EQUALISE ON-LINE SOCIETY"

European governments are mulling over the possibility of introducing a "bit tax" on every piece of information sent across the Internet. The proposal, reported by *New Scientist* magazine, comes as part of a study of the economic and social effects of information networks. As a conclusion of the study, the panel of experts recommends that governments use the bit tax as a method of recouping a proportion of the industrial revenues lost as a result of the world's unstoppable transition to an on-line society. Currently, economists consider the impact of the Internet to be a part of the standard model, dealing with transactions based on the sale and exchange of hardware and software. But the First Reflections report to the European Commission predicts that taxing materials and goods relating to the Internet will not be sufficient to balance the lost revenues of international commerce and services directly in the firing line, such as telecommunications and postage. The claims are backed up by a recent report from the US Senate which discovered that inflation figures were overestimated by up to 2%. Fast-moving innovation in information technology and communications is already distorting governments' figures.

17.5% advantage

Most economists calculate national inflation figures by comparing the current year with a base year. But in many cases, industries exist now that were not even dreamed of in the base year, distorting the figures and preventing accurate comparisons. In Europe, where little or no account of technological change is registered, the effect is certain to be even higher. "A larger and larger share of our production and economic activity is focused on information and communication," economics professor at the University of Limburg in the Netherlands and chairman of the study group, Luc Soete, told the magazine. "We must make sure we have a national tax base which includes these activities." Soete has drawn the European Commission's attention to the discrepancies between postage and electronic mail. Companies using the postage system are charged some form of value-added tax based on the weight of the package. No such restrictions or liability affect electronic mail. By introducing a size-related tax to electronic data, this issue could be addressed, he said. International discrepancies are also hitting Europe. Companies based outside the European Community are under no obligation to charge their customers value-added tax and so have a 17.5% advantage over their European counterparts - a problem that has particularly hit Internet providers in Europe. As Peter Dawe, managing director and founder of the Unipalm Pipex Plc Internet service puts it: before the companies even start trading, "US service providers have a 17.5% price advantage." While Internet providers are cautious about charging per-bit rates (not least because counting bits could easily slow up a service that is under pressure already), Soete believes it is the only solution for governments who want to eliminate the off-shore tax problem. Firms would be taxed on the data they use, no matter where it comes from.

SILICON GRAPHICS FINDS IT CAN'T KEEP UP WITH DEMAND FOR ITS NEW PRODUCT LINE

Silicon Graphics Inc blamed the 22% slump in fiscal third quarter profits on its inability to keep up with strong demand for its workstations - and growth slowed to 17%, giving the company sales of \$677m for the period. The company warned that all was not well at the beginning of the year, but the 31 cents a share for the quarter still caught analysts on the hop - the average guesstimate was still 34 cents. Chairman Edward McCracken said orders for the quarter rose 34%, reflecting "strong acceptance" of new products unveiled in January. It said customer response to its new desktop product line had been "enthusiastic" and that desktop products had accounted for 64% of shipment revenue in the quarter. World Wide Web business grew, with nearly 70% of its WebForce business for the quarter involving sales into new customer accounts. The company completed its cash tender offer for Cray Research Inc after the end of the quarter, but the company's results should be consolidated next time. Cray said its backlog at the end of the first quarter was \$438m, up 55.3%; about 40% was T90s, 39% T3Es.

NETSCAPE TOUGHENS NAVIGATOR FOR INTRANETS IN RELEASE 3.0

Netscape Communications Corp duly introduced Netscape Navigator 3.0 yesterday. The new release includes corporate administration and security features, real-time collaboration and support for Java. A public beta release of Navigator 3.0 for Windows, Mac OS and Unix operating systems is available now for downloading from the Netscape Internet site, and the final version is due this quarter at \$50. Netscape reckons that its Java implementation is the first open implementation usable across Windows95, Windows 3.1, Mac OS and Unix. The integrated multimedia capabilities of the new Internet client software include support for Internet telephony using CoolTalk from InSoft Inc, acquired by Netscape earlier this year, and new video and audio capabilities. The new Internet client also supports VRML Virtual Reality Modeling Language 2.0, and has enhanced Mail and News readers. The company also signed with Apple Computer Inc to make the core QuickTime and QuickTime Conferencing technologies available in Netscape's LiveMedia cross-system multimedia offering. Key features of the new release are designed to appeal to corporate users building intranets, with improvements in security and performance. A new Enterprise Kit enables data processing managers to customise Navigator to stop their users doing undesirable things; digital certificates and Version 3.0 of Secure Sockets Layer provide client authentication and better encryption of the network link. First word from the field is that the beta release is already solid.

INTERNET TERMINALS: ORACLE REFUGEE GOES ONE CHEAPER

Move over, the Internet Access Device, make way for the Information Appliance. It seems the guy that headed Oracle Corp's Network Computer design effort until last October, Farzad Dibachi, believes that Oracle's device is still too complicated and expensive, so he resigned his post as senior vice-president, moved up the road to Belmont and formed Diba Inc to put his ideas into practice. All is due to be revealed this week, but what has come out so far is that he is designing a family of single-function products that could be given away like cellular telephones, with the cost bundled into the usage fees for whatever service they come with. Cirrus Logic Inc is a key chip supplier to Diba and reports that its personal computer graphics display controller with TV-out, the CL-GD5425, which converts computer formats for a television, will be used in Diba's low-cost Internet browser, which uses the television for display and a remote control for user interaction. It notes that in addition to the Internet browser, Diba plans to use Cirrus Logic chips in an integrated telephone and electronic mail device, which is designed to make sending mail as easy as making a phone call. A third device is Diba Kitchen, designed to mount under a kitchen cabinet and provide access to recipes and nutritional information. The electronic mail and kitchen products use a liquid crystal display. Diba's business model is to design a hardware reference platform and create the operating environment and tools for a family of Information Appliances, and then licence the designs to others to make - it claims three or four Asian firms have signed to make devices. The target price is under \$300. Diba has reportedly been funded by desktop publishing specialist Quark Inc, which looks to Diba to develop devices that enable users to read multimedia documents created using a new Quark software product.

NETSCAPE HAS CHANNEL PARTNER PROGRAMME TO IMPROVE TRADE RELATIONS WITH DEVELOPERS AND RESELLERS

Netscape Communications Corp is attempting to improve its relationship with developers and resellers through a series of new channel partner programmes. The company has launched its Netscape AffiliatePlus Partner programme, the Netscape Commercial Application Partner programme and the Netscape Education Partner programme. Netscape has often been criticised for its lack of responsiveness to potential partners. Partly, this is understandable - the world and its spouse has been clamouring to have a special relationship with the company, ever since it incorporated. All the programmes are aimed at strengthening Netscape's channel presence and to help Netscape become more responsive to developers, integrators and the like. The AffiliatePlus programme offers technical and marketing support for resellers of Netscape's software - partners get access to a private Internet site providing sales and support information. The Commercial Application Partner programme is for resellers, systems integrators and consultants. It authorises systems integrators to sell, install and service Netscape Commercial Applications, in return for which partners receive marketing and technical support material and get access to Netscape's professional services organisation. The Education Partner programme confers on distributors, training organisations and individuals authorisation to resell and give training on Netscape products.

IBM OFFERS INTERNET-FRIENDLY AIX 4.2

IBM Corp's AIX is the latest of its operating systems to get an Internet overhaul with the release of version 4.2. At the same time, the RS/6000 division announced an entry-level Internet/Intranet server package, enhancements to the RS/6000 43P workstations and new graphics adapters. The new AIX server will come with a free Internet Bonus Pack on a separate CD-ROM that includes a Java development environment, based on Sun Microsystems Inc's Java developer's kit, Netscape Communications Corp's Commerce server, IBM Internet Connection Secure Server, a Netscape Navigator client, IBM Ultimedia Services for AIX and Adobe Systems Inc's Acrobat Reader. The client Bonus Pack has all of this minus the IBM and Netscape server products. It also supports X/Open Co Ltd's Single Unix specification, and files larger than 2Gb, as the company aims to push the RS/6000 into the data warehousing market. As for future AIX plans, IBM was non-committal on further integrated products such as firewalls or HTML editors, which "may or may not be in our plans." AIX 4.2 will ship on May 17, costing \$1,700 for the entry-level servers for up to 16 users and \$3,000 for unlimited use. The entry client goes for \$500 with the workgroup client costing \$900. The entry-level RS/6000 E30 server based on a 133MHz PowerPC 604 processor with up to 960Mb RAM is the follow-up to the 100Mhz E20, and is intended for use as a multi-user, workgroup, Web or database server. Available now, the E30 costs from \$12,000. The 43P series workstation base hard disks have been upgraded to 1.2Gb from 540Mb previously. The new Power GXT250P and 255P 2D graphics adapters use IBM's Softgraphics capability to display 3D images, and are the successors to the GXT 150 family. Available from the end of this month they cost \$1,700 and \$2,500 respectively.

HP TEAMS WITH GRADIENT AND OPEN HORIZON TO EXPLOIT PRAESIDIUM

As Hewlett-Packard Co's Praesidium Authorisation Server began shipping last week, the company announced two deals exploiting the access control engine. HP has teamed with Gradient Technologies Inc to combine Praesidium with Gradient's WebCrusader desktop-to-database security software, with WebCrusader's components on the desktop providing access control for distributed Internet/Intranet-based environments. And in a separate announcement, HP and Open Horizon Inc are working to integrate Praesidium with Open Horizon's Connection middleware product. The addition of Praesidium provides added security for Connection, which already uses a secure single sign-on and HP's Distributed Computing Environment Security and Directory Services. Connection enables users to incrementally add support for network security services, centralised directory services, transaction processing monitors, and other tools across distributed computing environments, and with the integration with Praesidium, applications will be able to use the access control engine transparently. The two have already combined to enhance Open Horizon's Connection Application Broker's access to Encina/9000 and Tuxedo transaction managers from desktop applications.

TGI HAS NEW VERSION OF ENROUTE UNIX FAX SOFTWARE

TGI Technologies Ltd, of Vancouver, Canada has announced the latest release of its Enroute fax software for SunSoft Inc's Solaris 2.x and Sun OS 4.1.x. Enroute 2.2 works over local and wide area networks, supporting TCP/IP connections between a Unix server and Unix, Windows 95, NT, or 3.1 clients. New features in this release include 32-bit APIs for Windows 95 and NT, and an API for Unix and all the Windows clients for third party developers to integrate applications into Enroute. The other main improvements to the new release are performance enhancements, according to the company. File transfer speed between Enroute clients and Enroute servers and also between server modules has been increased, and on the fax receive side a routing daemon has been added to support automatic fax forwarding, electronic mail to fax forwarding, remote archiving, Direct Inward Dialing, and automatic fax printing. In addition, a routing user interface has been added to simplify the viewing and operator distribution of received fax messages. Enroute starts at \$800 for the server and one client licence and is available now. TGI has also introduced Messenger, which connects Enroute to a T1 analogue or digital line, and it also supports Direct Inward Dialing routing.

CANDLE EVANGALISES IBM MQSERIES

Candle Corp, Santa Monica, California is going to resell IBM Corp's MQSeries middleware for use with its Candle Command Center management software as the first step toward it becoming a full value-added supplier of MQSeries messaging middleware services. The deal is US only for now, but Candle plans to strike similar agreements with IBM abroad. Candle says many firms understand little about how they could manage their systems using MQSeries and the company says it will form strategic partnerships with integrators - possibly including Logica, Level 8 or AFSC - to promote its use. Candle will add new OS/2 and AIX support in Command Center this summer, other HP-UX and Windows NT versions will follow before the end of the year with AS/400, Sun, Tandem and DEC revs due by next July. Its goal is to support 95% of the market.

920 TO GO IN DISMEMBERMENT OF BULL

In the wake of its "merger" with Packard Bell Electronics Inc, the Zenith Data Systems acquisition of Compagnie des Machines Bull SA looks very close to being a total loss for the company. Last week, a bloodbath was announced in the US as a result of the merger, with the Buffalo Grove, Illinois headquarters being closed with a loss of 350 jobs, and the manufacturing, logistics and operations base in St. Joseph, Michigan closing with a loss of 570 jobs. The surviving parts of the company include the server business, which was created after the acquisition and is housed not in a Zenith location but in the old Honeywell Information Systems minicomputer base in Billerica, Massachusetts. Also spared were customer services in Montgomery, Alabama, ZDS Federal Systems office in Herndon, Virginia, and the Swan Technologies subsidiary based in Marlborough, Massachusetts. Zenith's desktop and notebook engineering, marketing and support move to the main Packard Bell base in Sacramento, California and the service side transfers to Packard Bell's Magna, Utah base whence part of the company fled after the Northridge earthquake.

NETSCAPE FAR AHEAD IN BROWSER WARS, FOR NOW

Netscape Communications Corp's Navigator continues to command the high ground of the browser market with an 84% share, according to a study by market research firm Dataquest. However Microsoft Corp expects its user base to soar when agreements with America Online and CompuServe kick in mid-summer making its Explorer browser the default option for what it claims will be as many as 10 million users. Dataquest reveals that only 7% of net surfers are using Microsoft's browser currently, but Redmond expects Netscape users will have added reason to switch to use Explorer now that Netscape is charging for new versions of Navigator.

DIMENSION X CLAIMS FIRST JAVA TOOL FOR USERS

At Internet World in San Jose, California, last week, Dimension X was showing a pre-release version of what it claims is the first Java development tool for end-users. Liquid Motion, as it is called, enables users to create 2D Java animations from its drag-and-drop interface, according to the San Francisco, California company. Java code written to the Motion Engine API is incorporated into Liquid Motion's user interface. Liquid Motion features include sprite and audio sequencing, motion path control, content management and support for interactive behaviour. It generates an animation script and an HTML file for insertion into Web pages and takes advantages of all the features of the Java language, such as platform independence, object orientation, and multi-threading, the company added. Java co-architect Arthur van Hoff was fulsome in his praise of Liquid Motion: "Dimension X continues to demonstrate their lead in Java technology by making 2-D interactive animations easy to create", he said. No word yet on pricing or availability.

OBJECT DESIGN EMBEDS VERITY SEARCH ENGINE

Object Design Inc has licensed Verity Inc's Topic text retrieval engine for its ObjectStore database. Embedded in Object Design's Extended Object Manager, Verity's Topic will enable text to be indexed automatically and word searches to be performed. Object Design's Extended Object Management Suite is squarely aimed at Web site developers. The Extended Object Management Suite comprises six object modules, called Object Managers, that provide native support for video, audio, image, text, HTML, and Java applets. Verity's topic search engine is embedded in the Text Object Manager.

BELL LABS DEVELOPS OS FROM HELL; JAVA BEWARE

By Maureen O'Gara

Scott, don't look now but there's a 500lb gorilla on your tail... Bell Labs ace developer Dennis Ritchie, one of Unix' fathers and inventor of C, sure left a lot unsaid back in February when he revealed the existence of Inferno, his newest project, and touched off reports that it would rival Java. Comparisons to Java may be misplaced since - despite all the hype - Java's only a programming language while Inferno's a whole new network operating system and programming environment. At the alpha stage, granted, but with things in the can, so to speak, that Java still has to do. It has its own type-safe language, a thing called Limbo, and a virtual machine named Dis after the god of the underworld that will run Inferno programs. It also has a communications protocol named Styx, continuing the classical motif, after the mythological river over which the souls of the dead are ferried to Hades. The names Inferno, Limbo and Dis are now all trademarks of Lucent Technologies Inc, the newly public AT&T spin-off that's Bell Labs' new home.

Third parties

Lucent or rather its Network Systems arm is prepared to consider ways of using Inferno and is willing to talk privately to third parties about business propositions. We should warn you that under Lucent this appears to be a new reconstituted Bell Labs whose first words out of its mouth are refreshingly, "We want to make money." Amra Tareen, Inferno's commercial contact, says Lucent is currently negotiating Inferno source code licenses. CDs could be in outside hands by May 1. Terms are currently on a client-by-client basis hinged, it is suggested, on the project involved. Later this year a demo version of the Inferno beta could find its way to the Internet to attract application developers. Some kindly provisions are also expected to be made for universities. Apparently Bell Labs and Lucent have targeted initial applications and cosied up with network service providers, the RBOCs, client device makers, server guys and ISVs. Currently there are no Inferno applications other than the e-mail system, browser and a media player Bell Labs has built. Ritchie and his team, including lead developers Sean Dorward, Phil Winterbottom and Rob Pike, who happened to be reading Dante's Inferno when the question of a name came up, describe Inferno as an operating system for delivering interactive media in a heterogeneous client/server environment.

Buff Paper

The eight-man team has just put out what it calls in its own whimsical vocabulary a "Buff Paper," meaning no doubt a white paper yellowed by the fires of Hell that can be found at www.bell-labs.com if one looks. The four-page overview, learnedly entitled Inferno: la Commedia Interattiva plainly spells out some of Inferno's possibilities. All are in emerging network environments, to wit, the set-top boxes, phones, handheld devices and inexpensive network computers that are exactly the terrain Sun Microsystems has mapped out for Java. (Though Bell seems to scoff right now at Java's ambitions and calls it "insecure and difficult," who's to say one day Java might not find itself mounted on Inferno). The Bell Labs team also envisions Inferno being used in conjunction with traditional computing systems. According to the Buff Paper, Inferno is a small portable distributed OS written largely in standard C that already runs on Intel, Mips and AMD 29k architectures and can be made to run elsewhere. It runs standalone on PCs and as a user application under NT, Unix, Windows 95 and Inferno's linear antecedent, Bell Labs' own still-uncommercialized Unix- update, Plan 9, many of whose basic ideas are repeated in it. Ritchie and company say Inferno runs useful applications standalone on machines with only 1MB of memory and requires no memory-mapping hardware. Inferno applications are written in the C- and Pascal-informed Limbo language designed specifically for Inferno.

"Ye that are of good understanding, note the doctrine that is hidden under the veil of the strange verses!" - Canto IX, 61

Limbo

Dennis Ritchie and his team, veterans of two previous operating systems, imagine that their new one, Inferno, and its Java-like programming language Limbo can be used to invent applications that work in text mode over a POTS modem, show still pictures over ISDN and video clips over digital cable. Limbo supports the standard data types common to C and Pascal as well as higher-level ones such as lists, tuples, strings, dynamic arrays and simple abstract data types. It also supplies several advanced constructs integrated into Dis, Inferno's virtual machine. For instance, a communication mechanism called a channel is used to connect different Limbo tasks on the same machine or across the network.

Limbo also supports multitasking directly. The Buff Paper claims that by building channels and tasks into Limbo and Dis, communications are made safe and easy. Like Java applets, Inferno applications are small and flexible. They are built out of self-contained dynamically accessible modules with a well-defined interface containing functions, abstract data types and constants.

Dis

Sounding all the more like Java, the Bell Labs boys say that Limbo programs are compiled into byte-codes of instructions for Dis. Under Dis is the Inferno kernel containing the interpreter, on-the-fly compiler, memory management, scheduling, device drivers, protocol stacks and file systems including the name interpreter and code that turns file system operations into remote procedure calls (RPCs) over communications links. There are apparently several standard modules built into Dis including systems calls (Sys), a basic graphics library for raster graphics, fonts and windows (Draw), facilities for images and text inside windows (Prefab), numerical programming procedures (Math) and a graphics toolkit with a Limbo interface (Tk). There are several versions of the Inferno kernel, Dis/Limbo interpreter and device driver set depending on the environment Inferno is implemented in. As a native operating system, the kernel includes all the low-level glue.

Machine-independent

As a hosted system, it's apparently machine-independent adapting to the resources presented by the OS it's running under. The Buff Paper describes Inferno as secure against "erroneous or malicious applications" though exactly how deep that runs in laymen's terms is unclear. It explains at one point that "unlike Java, we do not claim our virtual machine enforces security. Instead, Dis files may be signed by trusted authorities who guarantee their validity and behavior." Inferno is said to provide communications security and key management and can handle encryption. Like Plan 9, which can be got easily enough from Bell Labs, Inferno applications treat devices as files and device drivers as small directories. La Commedia Interattiva says the OS design is based on three principals. First, all resources are named and accessed like files in a hierarchical file system. Second, the "disjoint hierarchies" of different services are joined together into a single private hierarchical name space. Third, Styx uniformly accesses these resources whether local or remote. Team leader Ritchie writes that the Inferno kernel implements a "mount driver" that transforms file system operations into RPCs for transport over a network. The server at the other end unwraps the Styx messages and implements them with local resources. The Buff Paper says that means it's possible to import resources from other machines. Styx lies above and is independent of the communications transport layer. It is carried by TCP/IP, PPP, ATM and other modem transport protocols. Like Java, Bell Labs is looking for experienced developers to work on Inferno. Java's hype machine is running so fast it may be impossible to catch it, if that is Lucent's game. On the other hand, the race has really just begun.

...MEANTIME, ON THE OTHER FRONT

When is an operating system not an operating system? JavaSoft COO Jon Kannegaard, raising suspicions he's unwilling to run the Microsoft blockade, says Kona won't be positioned as an operating system when it comes out. (Do you suppose we should stand-by for the birth of a new buzzword?). He also seemed to suggest Kona would emerge piecemeal. Whatever happens it won't be officially tagged with the Kona code name, Kannegaard said, because the Hawaiians wouldn't like it.

ELLISON'S NETWORK COMPUTER VISION

Oracle Corp chairman and network computer evangelist Larry Ellison confirmed last week that he expected the first low-cost devices to be available from September this year. He added that the manual accompanying the thing would comprise just eight pages. Speaking at Internet World in San Jose, California, Ellison said the cheapest network computer, for which Oracle has farmed out the manufacturing and will be sold by third parties, would cost less than \$300 to make, and might even be offered for free by network operators, in a similar way that cellular telephone providers sometimes entice customers with free phones, he predicted. The basic machine with a keyboard, mouse 8Mb RAM, and using a monitor or standard television will retail for around \$500, with a portable version, weighing less than two pounds, going for about \$600.

ORACLE POWERBROWSER WITH JAVA BETAS THIS WEEK

Oracle Corp is shipping the Oracle PowerBrowser 1.0 World Wide Web navigation tool and development environment for data access and publishing: PowerBrowser provides access to Oracle databases and supports Visual Basic environments. A 1.5 Java cut betas next week. Meantime Oracle InterOffice, its updated OracleOffice groupware product for the Web, which it claims is the only groupware built from the ground-up with the Web in mind, is in beta and will provide email, calendaring and scheduling, document management and workflow. It ships in the summer. Oracle's added Isocor Inc's Isoplex X.400 message transfer agent gateway for OracleOffice and InterOffice providing access across cc:Mail, Lotus Notes and HP OpenMail messaging services. Meantime, Oracle Web Server 2.0 starts at \$2,500 including a Java runtime and PL/SQL agent.

ETI PUSHES BACK HP-UX, AIX VERSIONS OF DATA CONVERSION TOOL

Version 3.0 of Austin, Texas-based Evolutionary Technologies Inc's ETI-Extract data conversion and integration toolset is supposed to automate the retrieval, transfer and transformation of data from any database or file format to any other. ETI had to push 3.0's September 1995 debut back to year-end after the work it was doing with Object Design Inc to build the MetaStore database proved more troublesome than it thought (UX Nos 547, 568). Now it's pushed HP-UX and AIX ports back to the second quarter. MetaStore supports metadata versioning and conversion specifications. ETI says the HP-UX port has been resolved and is in final testing. It's still plugging away at AIX and won't commit to a date. The software, which includes an Exchange Library and report generation is already up on Solaris. MetaStore is part of Version 3.0's metadata facility and the Library allows metadata imported from and exported to other sources. Prices go from \$200,000 depending on configuration. ETI's got licensing agreements with Informix, Sybase and Oracle. Meantime the 130-strong company has opened subsidiaries in Canada and Germany.

D&B JAVA APPLETS ELIMINATE PAPER REQUISITIONS & EXPENSE REPORTS

As reported (UX No 583), D&B Software Inc is writing hooks to link its SmartStream Procurement software to Portable Software's Xpense Management Solution. The link, which should be ready in June, will let employees file expense reports electronically over the 'net. They'll be reimbursed by electronic transfers direct to a bank account. D&B's also doing the same thing for corporate requisitions. It's writing a Java applet to replace paper requisition forms with electronic requests that will go directly to SmartStream Procurement. The applet, which should be ready by the end of this month, needs only a Java-capable browser to work. Using a browser makes it possible for a company to hyperlink directly to suppliers' catalogues to get information for the requisition forms.

SGI DRESSES CHALLENGE SERVERS FOR WEB BUILDING

Silicon Graphics Inc has introduced a WebForce Media Server based on its Challenger server hardware and Cosmo MediaBase software. WebForce is a system for storing, managing, retrieving and delivering streaming digital video content. The company is aiming WebForce for use within corporate intranets, by service providers for network-based delivery of video services including cable and telecommunications companies, and by content creators developing video-enabled streaming applications. WebForce Media Servers are due out in July, starting at \$30,000 for the basic package based on the Challenge S platform including the Cosmo MediaBase software and a Netscape Communications Corp server. The WebForce DM Media Server, based on the Challenger DM server starts from \$80,000, while the WebForce L Media Server, based on Challenger L goes from \$250,000. The top of the range WebForce XL Media Server, centered on Challenger XL, supporting up to 500 simultaneous MPEG streams, starts at \$545,000.

CENTURA BEGINS THREE-TIER ROLL-OUT

Having metamorphosed from Gupta Corp on April 15 in the US, Centura Software Inc, puts Centura Team Development and Centura Ranger, the first two components of its 32-bit Centura second generation client/server development environment, into production this week (UX No 571). General availability is expected by the end of the month. It's a month or two behind its planned March release date, it concedes, but no doubt the pain of seven consecutive quarters of losses, the rumours of acquisition by Oracle Corp and Computer Associates International Inc and the resignation of its auditor Arthur Andersen, suggests its at pains to get its makeover right. Centura Team Developer, the core computer aided design component includes support for two-tier or three-tier applications, a Java-based Internet application or individual OLE components, an object compiler, object repository and a set of internet Quickobjects for access to net data and services without the need to write code. OCX generation will be included in a later release, according to the Menlo Park, California-based company. It's supported by Centura Ranger for data replication. The Centura repository supports Oracle, Sybase, SQL Server or its own SQLBase database. It provides links to Rational Software Inc's Rational Rose and LogicWorks ErWin CASE toolsets, and is managed through a Team Object Manager. Code is generated through its QuickObject technology. Team Developer prices start at £5,000. Upgrades are available from SQLWindows and SQLBase. Ranger prices go from £500. The Application Server component, due in the fourth quarter, will use Microsoft's DCE-based RPC with Open Environment Corp's DCE Entera middleware. Centura Web Publisher is due in the third quarter. Meantime it will rev SQLBase to 6.1 at the end of May adding support for replication, 32-bit applications and TCP/IP networking. An SQLWindows rev due in the summer - code-named Cyclone and described by Centura as a companion product to its new development environment - will include support for SAP, a revamped object compiler and a new object library for faster run-time performance. SQLWindows is 16-bit with some 32-bit features.

CSA OFFERS SILVERRUN MODELING TOOL FOR INFORMIX NEWERA

Woodcliff Lake, New Jersey-based Computer Systems Advisers Inc's shipping a Silverrun business process and data modelling tool for use with Informix Software Inc's New Era 2.0 Windows-based graphical application development toolset, an arrangement that mirrors the alignment of PowerBuilder with S-Designer (UX No 566). Silverrun has a Windows-based interface from the Silverrun Relational Database Modeller (RDM) module into NewEra. It enables developers to create SuperViews for integrating data from multiple tables into single view tables for user access, it says. Silverrun for NewEra is priced from \$3,500 per user. It also provide a bi-directional interface between Silverrun and Informix-SE and Informix-OnLine Dynamic Server. CSA reckons the release of NewEra 3.0 - delayed until June (UX No 579) - will cane opposition offerings with its new application partitioning features. It discounts criticism that NewEra has cumbersome painting capabilities and points to the 70,000 plus seats which Informix claims for the toolset. CSA expects to gain most momentum by providing automated solutions for migrating from Informix4GL to NewEra 3.0. Informix will recommend Silverrun as 'best of breed' for the NewEra development environment.

SUNSOFT TAPS FIRST FLOOR FOR WEB MONITORING

SunSoft Inc has licensed First Floor Software's Smart Bookmarks 2.0 Web monitoring product and will bundle it with its PC-oriented Solstice management products later this year. Smart Bookmarks monitors information published on the Internet and corporate intranets at user-selected locations and alerts the user when something has changed, and provides a link to the changed information, saving a copy of the old information. Privately-held First Floor, headquartered in Mountain View, California, has already licensed the software to IBM Corp, Netscape Communications Corp, Yahoo! Inc, and America Online Inc.

BRADMARK REVS DATABASE MANAGEMENT

Database tool supplier Bradmark Technologies Inc's Object Manager PC software for managing Oracle clusters and tables running on HP-UX from Windows PCs, has added support for AIX, Solaris, DEC Unix and NT (UX No 566). Prices go from \$2,000 to \$9,000. The Houston, Texas-based company also says version 2.0 of its re-architected Performance Monitor real-time monitoring and alarming software has a new distributed agent for Oracle and Sybase and is up on AIX and HP-UX from this week.

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The weekly information newsletter for the UNIX™ community worldwide

Ever cautious, **Hewlett-Packard Co** is only now confident enough to switch off its last mainframes, and confirm to the world that it can run its global businesses more effectively without mainframes altogether. The last round-up will take place in mid-May after which the company will rely on its own HP 9000s Unix machines and the proprietary HP 3000s.

Want to cash in on the year 2000 effect? In many cases it may be too late, because according to the *Wall Street Journal*, since the start of the year, **Computer Horizons Corp's** share price has doubled, to \$52, **ViaSoft Corp** has tripled, to \$38, while software house and consultancy **Data Dimensions Inc** is up sevenfold, to \$42.

Well the tug of war between Cahners Publishing and CMP Publications over 39-year-old *Electronic News* looks to be over with Cahners buying it last week on undisclosed terms. Cahners is owned by Reed Elsevier Plc, London. Terms of the sale were not given but we gather it's buying out the piece CMP recently took.

Alex Osadzinski has turned up at **Be Inc**, the start-up with the contrarian if jazzy BeBox, as VP sales and marketing. Osadzinski is late of **Sun Microsystems Inc**, very late. He left there two or three years ago, when he was VP, market strategy, to go outside the industry but he just couldn't stay away.

ICL Plc claims Dais customer UK Immigration Service is the largest ORB user in the world, having processed ten million passports across 150 sites.

Centerline Software Inc, Cambridge, Massachusetts has added C++Expert to its QualityCenter family of software testing tools. At compile time, C++Expert scans source for suspect code and provides hypertext links to C++ guru Scott Meyers *Effective C++* and *More Effective C++* books. Pricing is from \$1,000 per seat and ships begin in sixty days on SunOS and Solaris. It'll add additional Unix ports and NT platforms later in the year, it says.

Apple Computer Inc's QuickTime is quickly becoming the de facto standard for viewing multimedia clips and last week **Netscape Communications Corp** announced it has licensed the technology and will bundle it in its Navigator 3.0 web browser which is now in beta. Apple has also created a QuickTime virtual reality extension which will provide 360 degree views within Navigator.

Companies which deploy data warehouses can expect an average return of 401% over three-years, according to a survey by **IDC**. One quarter of the sixty-two organizations interviewed by IDC reported returns of more than 600%. The research confirms the results of a customer survey conducted by the **Meta Group** in February that revealed spending on data warehousing could reach \$13bn by 1998.

Sequent Computer Systems Inc says one in five of the systems it shipped last year were NT.

Hewlett-Packard Co's pitching cross-platform technologies through a new IT Collaboration Program aimed at mixed Unix, NetWare and Microsoft environments. First up is OpenView IT/Administration for Workgroups, a cut-down version of OpenView IT/Administration for managing up to 250 NetWare and Microsoft desktops from HP-UX, with support for NT Server promised. Prices start at \$2,600 in the summer.

Mark Benioff, **Oracle Corp's** much-travelled VP Web and workgroup systems is to become senior VP marketing, but not before he takes a 10-week sabbatical to celebrate 10 years with the company. Benioff will not be replaced, and his 50 or so staff will be spread across other divisions in Oracle. His new responsibilities will reportedly include crafting an internal Intranet and Web strategy and explaining new technologies to customers and partners.

Sybase Inc VP marketing Tom Herring - formerly VP marketing at PowerSoft - is leaving the company to become president and CEO of a start-up company somewhere in Massachusetts near his home, as he has had enough of commuting out to Sybase's Emeryville, California headquarters. Mitchell Kertzman, the executive vice president of sales and marketing will take over temporarily. Sybase has not decided yet what do after that and declined to name the company he's gone to.

We can trace **Sun Microsystems Inc's** decision to axe its SparcPrinter line in favour of **Xerox Corp** and **Lexmark International** offerings as far back as 1994 in *Unigram* (UX No 515).

Sequent Computer Systems Inc says it's at a loss to understand how **Santa Cruz Operation Inc** will support multiple ccNUMA implementations in UnixWare following the agreement SCO supposedly reached with vendors some weeks ago (UX No 587). To its mind SCO still doesn't understand that it's lost the low-end battle to NT and says that whilst it'll support a UnixWare interface it believes its own Dynix/ptx to be some six years ahead of where UnixWare is today.

Object Management Group's supposed to reveal a CorbaNet Web strategy at ObjectWorld East this week.

Maxm Systems Corp, McLean, Virginia, is going to distribute **Micromuse Plc's** NetCool/Omnibus network management technologies alongside its own Max/Enterprise event management software. There's little integration at present but the two are working on common APIs.

Word is **Microsoft Corp** now sees **Tandem Computers Inc**, rather than **DEC**, as its route to the enterprise. Meantime Tandem, which had its eyes firmly on benchmark figures from **HP** and **DEC**, was apparently knocked speechless by **Sun's** Ultra Enterprise TPC-C numbers.

NeXT Software Inc has an add-on visual development environment for its WebObjects product line called Tsunami which enables developers to create and manage WebObjects applications on the server. It ships as part of WebObjects Pro and WebObjects Enterprise this summer.

Axent Technologies Inc and **Banyan Systems Inc** have got together to bundle the latter's StreetTalk directory services with Axent's OmniGuard/Enterprise Sign On network security offering. OmniGuard, which is currently in beta, provides central use administration, network security and single sign-on across a variety of operating systems.

Santa Cruz Operation Inc's offering a SCO Doctor systems management product for OpenServer at \$500. SCO Doctor for Networks, which can manage small networks or large installations over a LAN, WAN, or dial-up costs \$900. Client license packs start at \$500 - \$2,200 for five.

Prism Solutions Inc says it's got around 180 data warehouses installed at some 140 customers sites. About half its customers have operational data stores running alongside their corporate warehouses. It's got around 35 sites using the Prism Directory Manager meta-data manager which shipped around a year ago. New technology in the wings due in the third and fourth quarters include an automated front-end design and development environment which will incorporate Microsoft documentation tools, operations management (for data and usage monitoring) and encryption for networked data access, analysis and mining.

We're reminded that **Oracle Corp** isn't shipping **Visual Edge Software Ltd's** ObjectBridge just yet as Sedona doesn't beta until November (UX Nos 586, 587).

Sybase Inc's offering a Unix version of its currently Windows NT-only entry-level database package; SQL Server 11 for Workplace Unix is \$1,000 per server and \$200 per user.

Iona Technologies Ltd's contribution to the ObjectWorld East festivities in Boston this week include a new relationship with **IBM Corp** that'll see Orbix providing OLE interoperability for IBM System Object Model users. It hopes to have snagged another significant partner by showtime but was still negotiating the deal as we went to press. Its promised OrbixWeb implementation for building Corba objects in Java will be available from its web site this week. Its also opened an office in Perth, Australia, to service the Pacific Rim and support its Japanese distributor which is claimed to have been shifting boatloads of Orbix.

Rod Canion's recent reminiscences about the old ACE Initiative (UX No 582) stirred other memories and **SCO** VP Scott McGregor called to say Canion's version of events didn't mesh with his. This is all water over the dam now but McGregor told us something we never knew at the time. It seems concerns that the **Mips R4000** chip would be late, a worry that proved prophetic, brought **HP's** PA-RISC chip into the game for a while - at least as a stalking horse - and **SCO**, one of ACE's founders backed the idea and took it to **Microsoft** who fancied Mips. ACE was never intended, at least initially, he said, to have the wide-scale backing that it did after it took out of control. It was originally conceived purely as a Unix workstation initiative with heavy anti-**Unix System Labs** overtones.

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FUJITSU TO OVERHAUL HAL AFTER WORKSTATIONS FLOP

After what it admits has been a sales and marketing disaster since it introduced its Sparc64-based workstations in October last year (UX No 556), Fujitsu Ltd's Hal Computer Systems unit is withdrawing from the general purpose workstation market and is currently being sliced and diced into a bunch of separate divisions by new president and CEO Yoshiro Yoshioka. The Fujitsu Ltd executive - also chair of the Hal board - replaced former president and CEO Scott Metcalfe and executive VP Art Goldberg last month. Hal says it'll relaunch the company and re-position its 64-bit Sparc V9 architecture-compatible product line at the Design Automation Show in Las Vegas next month. It's not clear whether there will be any layoffs at the 500-person Campbell, California-based concern, but it's also supposed to reveal a plan to get into profit. The company admits it's sold just a few hundred HalStations since their introduction - which was two years late - and is set to reposition the 100MHz Model 330 and 118MHz Model 350 for specialist mechanical and electronic design markets as well as web-serving. It's beefing-up the high-end model with 3Gb RAM as the Model 353. Servers aren't expected this year. Hal's got more than 100 engineers working on its 64-bit Sparc64 CPU. The microprocessor group is funded through this year and will apparently remain unaffected by changes. It's says it's got four projects underway including the promised Sparc64+ and third-generation revs. Its Fujitsu cousin ICL Plc is already selling HalStations into niche markets in Europe. ICL's got Metrologie International SA as a master distributor after its own Technology plc unit "bottled it," apparently after pressure from Sun, whose systems it resells. ICL, which has 20 people on the Hal line is also putting them through its Middle East and South African operations. It's got a lot out on evaluation but wouldn't comment on revenue ships.

SYBASE OBJECT STRATEGY: BETTER LATE THAN NEVER?

Sybase Inc finally unveiled its object strategy, a sizable ways behind rivals Oracle and Informix, to a largely lukewarm reception at its International User Group's 1996 North American Conference held in San Diego last week. Though making it clear that for now the company is only talking up its object vision and product road map, not actual product releases, Dennis McEvoy, president of Sybase's Enterprise Business group, stressed the "end to end" nature of the vendor's approach to the object technology conundrum. This embraces not only a new object-relational database, a variant of SQL server 11, known as Adaptive Server, but also draws heavily on the company's existing Object Connect middleware and its Powersoft family of tools (Powerbuilder 5.0, Optima++ and Watcom ++). "We've done a pretty good job in the industry of providing objects for clients with VBXs and OCXs," says McEvoy. "But we have neglected the application layer and the database." Sybase, you may remember, spent several years investigating whether to build its own pure object-oriented database codenamed Brahms, but abandoned that attempt late last year. Its other object-oriented project, known as Lego, will become productised as Object Connect for OLE. The C++ release of the object middleware already out in the market is derived from Persistence Software Inc's object-to-relational mapping and code generation technology. As for Adaptive Server, it apparently represents the object relational evolution of SQL Server 11 and will incorporate complex structured data types, such as text search, time series, geo-spatial and HTML, either within the body of the database or as specialty snap-ins. Sound familiar? Well, Sybase had to fight off copycat comparisons with what Informix is attempting to do with Illustra and its DataBlades. It differentiates itself by the aforementioned spread of focus, i.e., not database-myopic, and the fact that its partners who will supply some of the specialty snap-ins won't be contracted a la Illustra, but will be "real" long term partners. David Hsieh, the newly-hired VP enterprise marketing contrasted the Illustra DataBlade for geo-spatial data with what Sybase plans as a spatial snap-in with its partner Vision International, a division of Autometric of Alexandria, Virginia. He claims Illustra's offering doesn't conform to any of the 20 different geo-spatial standards out there, taking its measurements from the Equator, meaning accuracy can be off by as much as 46%, while Vision's special query server asserts accuracy to the nearest foot. McEvoy was even more forthright, dubbing Informix's idea of taking body parts from scalable and non-extensible Informix and extensible and non-scalable Illustra and trying to stitch them together "a Frankenstein approach." He claims that both Informix and Oracle with its Oracle 8 database will be forced to re-write all levels of their databases at once in order to obtain their Nirvana of a Universal Server. "Incremental extensibility is the right approach", he says in justification. "Our component-based approach to the problem is consistent with the way that object technology is supposed to work." Sybase claims it doesn't believe in dumping every kind of data type into Adaptive Server which can compromise performance, explaining, that while the object-relational database will support video and audio clips, it will not handle unstructured data such as video and audio streams which will continue to be dealt with by Sybase's Intermedia server. The vendor says it wants to ensure relational quality performance in objects and that users will be able to join specialist and relational data in the same query. Sybase plans to incorporate the SQL 3 standard into Adaptive Server over time, but doesn't expect it to play a large role in defining re-usable business objects, which it says will better be developed in existing programming languages such as PowerBuilder, C++ and Java. It expects to debut the first group of its snap-in products this summer.

SUN GETS INTO DEDICATED NFS SERVING WITH WEBNFS

It already offers the box as a Netra i 150 Internet server and Ultra Enterprise 150 workgroup server, and Sun Microsystems Inc's now dressing-up its 167MHz UltraSparc tower form factor server as a dedicated Network File System server called Netra NFS 150. Sun positions the long-overdue solution against well-established NFS server offerings from Auspex Systems Inc, which uses HyperSparc, and Network Appliance Corp which builds Intel Corp systems. However both believe Sun's low-end solution is actually designed to play more against relative newcomer Invincible Technologies Inc and its hot Alpha boxes than their higher-end offerings (UX No 561). Long overdue because NFS is Sun's own creation and a dedicated server removes all the Unix hair users have had to struggle with to carve NFS servers out of standard Sun servers. Key attraction is the Web-enabled version of NFS Sun will bundle on the server. WebNFS - demo'd at Connectathon as Public NFS (UX No 584) - allows users to transfer files over the world wide web using NFS rather than the Hyper Text Transfer Protocol (HTTP) standard and to edit, manage and administer files from within a browser. NFS makes remote files appear as if they are local. Sun, which says WebNFS will work across firewalls, claims WebNFS can handle three times the user load of pure HTTP sites and is up to ten times faster than HTTP. It's trying to get the W3C Web consortium to pick it up and roll it back into its Web standards. Interestingly Sun's not offering the mechanism to the public or to anyone for that matter just yet and its SunSoft unit from whence the software comes isn't saying dick until it can do its own launch of the software. WebNFS is bundled as part of the Netra NFS SmartServe which is based upon Solaris 2.5 and also includes tuning, backup, PC-NFS authentication, a single NFS-tuned file system, web browser GUI and support for NFS version 2 and 3 clients. A base Netra NFS 150 configuration that supports up to 100 clients includes comes with 64Mb RAM, 2Gb disk, RAID 5 support, integrated UPS and SmartServe 1.0. A tower or rack-ready configuration costs \$25,300 - \$55,000 fully-stacked. Up to four servers can be housed in a rack. Install options include 512Mb RAM, up to 12 disks and 100Mb FastEthernet. Sun claims 1,323 NFS operations per second with an average response time of 14.5 milliseconds. It compares that to NAC's F330 at 1,310 and 13.2 with RAID 4, the Auspex NS7000/150 at 1,805 and 17.3 with no RAID, DEC's AlphaServer 2000 at 1,815 and 15.7 with no RAID, the NetApp F220 at 754 and 18.6 with RAID 4. Sun estimates the whole NFS market at \$3bn and the dedicated NFS sector at around one third of that. Ships begin in July along with competitive trade-in and upgrade programs. Support for 4Gb disks and SparcStorage arrays, plus WebNFS and SmartServer enhancements are slated by year-end with higher-end configurations due in the first quarter of next year.

BMC EYES BUSINESS PROCESS MANAGEMENT

"Once you can manage business applications it's a logical step to manage business processes," is how BMC Software Inc describes the new set of opportunities being presented to it through the ~~continued evolution of its Patrol hardware, database and application management environment~~. It's an opportunity also being eyed hungrily by systems integrators who'd love to be able to go into customer sites and manage the whole enchilada. We suspect it's just this kind of demand and the prospect of latching on to high-flying solutions like SAP AG that's leading BMC to create knowledge modules for Patrol that'll allow a company to manage its business processes right alongside and with the same tools and repositories as the applications they support. To broaden its appeal and keep up with times the company's also stepping up to embrace the internet and is close to delivering early versions of new Patrol knowledge modules for managing web servers and for managing distributed applications across the net. They'll ship in the summer. It's not got to the point of putting a browser front-end on to the Patrol console as such but will enable Patrol applications to be called from browsers. BMC's also reported to be working on a general purpose management console through which users can view and manage their mainframe and open systems. It stresses that it's not talking about going up against the likes of CA-Unicenter, SunNet Manager and OpenView directly, which it already integrates with in any case; "we don't want to reinvent the wheel," although Patrol is being extended in many areas, for application monitoring and beyond.

Reposition

BMC has already organised itself into functional business units from technology platform groups and there are reportedly nine new strategic initiatives underway for enterprise backup and recovery, enterprise applications management, database administration and space management, enterprise replication and data transport, performance optimization, network performance, IMS, DB2 and Security. It says it's got more than 80 products slated for introduction during its fiscal 1997 which began last month; it got 52 away last year. Morgan Stanley's technology group expects there to be 30 for Patrol, 30 for open systems, eight for DB2, five for networking, four each for IMS and internal, three each in parallel and recovery management and two for compression. As the company turns the heat up under the brand equity in the Patrol name it will gradually rename all of its 70 or 80 mainframe products accordingly. As Morgan Stanley notes, it will also reposition the Metasuite database administration tools as an extension to Patrol and rename them Patrol DB. It's also got a new release of MetaManage in the pipe which will address issues such as database schema change dependencies. Meantime, BMC's also introduced the first open systems versions of its Patrol Recovery Manager backup and recovery software, for Oracle and Sybase. Console prices go from \$3,500, server components start at \$350. It's also offering DataTools Inc's SQL-BackTrack database backup software as Patrol SQL-BackTrack knowledge modules for Oracle and Sybase at from \$350.

Scaled down

The investment bank expects BMC will begin to see revenues from its DEC relationship in the July timeframe. Every Alpha server will ship with a scaled down version of Patrol as part of the operating system installation routine. Its Hewlett-Packard Co relationship is just coming on stream; HP is bundling a Patrol component in its Measureware product. Sequent Computer Systems Inc has also written a knowledge module for Patrol that is the exclusive management system for their clustered machines. Morgan Stanley says Sequent, also a reseller of the Patrol product line, contributed around \$2m to Patrol revenues last quarter. BMC says it's aiming to have 500 Patrol accounts in Europe by the end of its fiscal 1997, up from 300 now. It has 700 world wide now running across 100,000 servers. BMC recently reported fourth quarter net profits up to \$38.8m, after a \$0.50 per share charge for purchased research and development, on turnover that was up 33.2% at \$128.3m. Net profits for the year to March 31 were up 36.2% at \$105.6m, after a similar \$0.44 per share charge, against a period that included a \$0.50 per share charge, on turnover that was up 24.3% to \$428.9m. Net earnings per share rose to \$0.74 in the quarter, from \$0.07 last time and 32.9% to \$2.02 in the year.

HASTA LA ALTAVISTA

Digital Equipment Corp is exploiting the shiny new franchise created by its AltaVista Internet search engine to launch a new family of Internet-related software products under the AltaVista name. The software family includes versions of the AltaVista Web search service ~~customised for corporate and personal use, plus firewall, tunnelling, electronic mail and workgroup software~~. Available in Enterprise, Workgroup or Personal editions, the new - or newly-named - AltaVista products are designed to enable users to apply the same quick indexing and search capabilities AltaVista provides on the Web to their own corporate databases and internal networks. The products are AltaVista Firewall; AltaVista Tunnel; AltaVista Mail; AltaVista Manager; AltaVista Forum, and AltaVista LAN Browser.

IBM HAS LICENSED MAC OS ON TO TATUNG, DATATECH

IBM Corp and Apple Computer Inc duly - and extraordinarily belatedly - kicked off last week with the announcement that IBM has licensed Mac OS. But the company has carefully ring-fenced the operating system from its core products, and it is at present only in its IBM Microelectronics unit, which is the part that markets chips and other OEM products to the outside world. It is being made clear that the IBM Personal Computer Co is now a PowerPC-free zone - iAPX-86 or nothing. Under the deal, IBM is simply free to license Mac OS on to any company buying PowerPC chips, although Apple will still certify each computer system built to assure compatibility. The agreement covers Mac OS 7.5x and the forthcoming Copland releases. Most licensees are expected to be in the Far East: in the US and Europe, the attitude is likely to be "if IBM does not believe in it enough to add the thing to its own product line, we'll get it from somebody that does believe in it." Accordingly, the first sublicensing deals are with Datatech Enterprises Co Ltd and Tatung Co Ltd, Taiwan. Datatech has operations in China, Taiwan and Europe. The two also confirmed that they are working together on a sub-notebook computer family to the PowerPC Platform specification, but only third parties and perhaps Apple will market the new machines. Umax Computer Corp took the opportunity to launch its SuperMac S900 desktop system, claiming it provides Unix workstation-class performance in a system fully Mac OS-compatible for as low as \$3,100. The SuperMac S900 mini-tower is based on a single or dual 150MHz PowerPC 604 processor, and will ship in volume next month. VLSI Technology Inc also said it will support IBM's Mac OS programme by supplying its Gold Eagle PowerPC Platform support logic components, currently in the final stages of development and testing, to third parties; and FirmWorks Inc, Mountain View, California said that its Power Firmware software is now available to people developing systems designed to run Mac OS on PowerPC.

PLATINUM CLAIMS TO BE AHEAD OF OBJECT INTEGRATION SCHEDULE

Platinum Technology Inc has announced the first phase of an integration programme which will lead its object-oriented tools coming together in Paradigm Plus, ObjectPro and Platinum Process Continuum. Paradigm Plus is an object design and analysis tool the Oakbrook terrace, Illinois acquired with Protosoft Inc late last year. It supports the Enterprise Component Modeling software development strategy, generating code in Java, C++, Ada, Smalltalk, PowerBuilder and Forte. It can also reverse engineer C++, Smalltalk and PowerBuilder, and publish model components on the Web as HTML documents. ObjectPro is Platinum's 4GL application construction tool which is said to aid re-use of objects by providing a run-time environment for testing, debugging and deploying applications. And Platinum Process Continuum is the process and project management tool. They come under the umbrella of Platinum's Application Lifestyle Solutions division. The division's director of marketing, Linda Friezsche claimed the company was ahead of schedule with its object-oriented integration programme. Next up is the integration of the AionDS construction tools and Final Exam three-tier testing tool. The rest of the business, greatly expanded since its plethora of acquisitions over the last couple of years are systems management, databases, data warehouses and business intelligence. Paradigm Plus and ObjectPro are available now bundled for \$5,600. ObjectPro currently supports Windows 3.1, 95 and NT and SunSoft Inc's Solaris and Paradigm Plus 3.01 supports those minus Windows 95. Support for that will be added, along with SunOS, HP-UX, OS/2 Warp, and Irix this quarter.

POSTMODERN ADDS ACTIVEX SUPPORT

Visigenic Inc's new object request broker arm that's still currently known as PostModern Computing Inc is just getting around to adding support for Microsoft Corp's Distributed OLE (now ActiveX) into its C++ ORBeline and Java BlackWidow request brokers. An IDL compiler in both products will generate OLE Custom Controls (OCXs) allowing C++ clients to access Corba objects and will generate an OLE automation server for OLE objects. Client applications written in C++ or Visual Basic will be able to call Corba objects; client application objects can be downloaded and run within Microsoft Explorer and Netscape Navigator. PostModern will ship a new version 2.1 of ORBeline with ActiveX support by the end of this quarter, a BlackWidow version will follow. BlackWidow is built on top of ORBeline and uses a compiler to generate client and server Java code which can run over the OMG's Corba 2 Internet Inter-ORB Protocol (IIOP) which is implemented in ORBeline. ORBeline licences are \$5,000 on Unix and \$3,000 on NT. Runtimes are \$250 on Unix, \$150 on Windows. BlackWidow is \$100 per CPU for commercial users. The BlackWidow Internet server supports unlimited Internet client connections and is priced at \$5,000 for commercial servers. Additional Corba services are sold as add-ons.

Unpack IIOP

PostModern's IIOP implementation was used by OMG to demonstrate Corba interoperability between different ORB implementations at last week's Object World East show in Boston and the company is using this as evidence its technology is becoming the reference IIOP against which other object vendors test their technologies. It looks as if it'll put its money where its mouth is too, preparing to unpack its IIOP implementation from ORBeline and sell it to other ORB companies. Although the PostModern products are generally regarded as more advanced than say Iona or Expertsoft in some areas, the company's admits its focus on technology and lack of marketing lead it to seek a suitor prepared to bankroll its future. Although it claims thousands of licences for its products the company only had eight employees when it went over to Roger Sippl's Visigenic Inc last week. It also claims it had a bevy of potential suitors knocking on its door but decided to go with Visigenic rather than a hardware, operating system or database vendor to maintain its independence. We're not so sure about that, but the combined unit is put at a \$12m concern. In meantime the TPBroker transaction-based ORB PostModern's developing in conjunction with Hitachi Ltd OMG's transaction service goes to beta this month. PostModern claims 200 sales of the three-week-old Black Widow over the web and at just \$99 a pop.

SGI SETS UP SECOND SILICON STUDIO FACILITY IN LONDON'S SOHO

Silicon Graphics Inc has set up its second Silicon Studio training centre in London's Soho, an investment of £2m, in the hope of boosting the UK digital authoring and production industry. SGI, which set up the original Silicon Studio in Los Angeles, made around £20m worth of UK revenues from this market last year, and says that Soho houses the greatest concentration of creative talent outside of Hollywood itself. Effects for films such as Toy Story, Golden Eye, Pocahontas, Casper and Babe were sourced from Soho on SGI equipment, along with thousands of commercials. The new facility, in Soho Square (just a stones throw away from the Unigram.X London offices) is intended to act as a focal point for the industry, and will offer training courses for students, re-skilling courses for professionals, and act as demonstration facilities for SGI software partners such as Discreet Logic. Application areas such as real-time on-air animation and virtual sets for broadcasting companies are set to explode, says SGI. The centre includes a total of 25 Indigo2 High Impacts, an Indigo2 Maximum Impact and an Onyx2 Reality Engine. There is also a transatlantic 1.544 Mbps T-1 link with the Los Angeles facility for collaborative working, provided through Global One's Drum's network.

JAVASOFT ADDS 2D, ODBC APIS, HOTJAVA

Sun Microsystems Inc's JavaSoft unit is offering a new version of the HotJava browser that runs version 1.0 applets; the older version only ran alpha versions of applets and was superseded by Netscape Navigator 2.0 which supported beta applets. JavaSoft' also created a two-dimensional graphics API extension using the PostScript-based Bravo 2D imaging model which it's licenced from Adobe Systems Inc. The unit is also adding Atlanta, Georgia-based Intersolv Corp's ODBC API to its Java Data Base Connectivity (JDBC) API. It's claimed to be compatible with all ODBC drivers and will allow developers to create applications that access databases. Betas and test suites are due in June.

X/OPEN ADDRESSES COMMERCIAL SECURITY...

X/Open Co Ltd this week introduces its first set of specifications which define security standards for commercial products through the new-fangled Open Group (UX Nos 548, 576). The standards body says security - primarily internal network security against accidents and errors - is now the number one concern amongst its customer members. The initial release includes specifications for Baseline Security Services and Secure Communications Services which are designed to be implemented in multiple operating systems, not just Unix. Vendors currently gain recognition for security by formal evaluation against lengthy and expensive defence procurement requirements such as the US Department of Defense Orange Book. The first spec, productised as Baseline Security 96, includes identification and authentication, system entry, audit functions, access control, security management, start-up, recovery and privileged operations. The second, Secure Communications Services for distributed authentication, is an implementation of the existing DEC and Internet Engineering Taskforce-derived GSS (Generic Security Service) API. It's designed to protect communications between distributed applications and is designed for use between pairs of communicating peers in a direct on-line client/server or message-passing environment. It's one of several components described by X/Open's 1994 Distributed Security Framework. Open Group says Open Software Foundation's Distributed Computing Environment 1.1 release already conforms with the Secure Communication spec via a DCE-based mechanism that's been included in GSS-API and the Kerberos security service. Baseline Security 96 licensing costs \$45,000 per product family for initial registration and \$10,000 a year thereafter. Secure Communication Services is \$10,000 per product family. Open Group couldn't say when products might be branded by.

Stepping stone

Individual security specs for a Posix-derived single sign-on mechanism, cryptographic services, an Internet and Intranet firewall, distributed auditing, secure backup and restore with systems management, public key encryption and digital signature support for electronic commerce will follow as they are defined. A Generic Cryptographic Services (GCS) spec is almost finished, and at least one supplier is said to be preparing a product for release into the market based on the unpublished specification. IBM, which was responsible for the development of the DES encryption algorithm, has been involved in the development of the spec along with NIST, the National Security Agency (NSA), RSA, Trusted Information Systems (TIS), HP, ICL, Fischer International and others. In addition to being made available for separate and independent branding, a Baseline Security 98 spec will be including all of these security services into one standard. X/Open believes its specifications can be used as a stepping-stone for companies seeking to also provide government-level security in their products, which Open Group reckons typically require 20% more security than the commercial standards it's working on. After security, Open Group says users' chief concerns (in no particular order) are distributed systems management (where it expects to define specifications for distributed and shared print services and NetWare Directory Services in the short term), interoperability between all clients and all servers; architecture and the information superhighway (integrating public and private networks).

IONA DISTRIBUTES IBM SYSTEM OBJECT MODEL, DSOM LOOKS DOOMED

The distributed version of IBM Corp's object request broker, DSOM, is teetering on the brink now that big blue's gone off and got Iona Technologies Ltd to provide a distributed capability for its System Object Model (SOM). IBM and Iona are integrating the Dublin, Ireland company's Orbix distributed object request broker to work with the non-distributed SOM. Iona's already got Orbix running on MVS. As well as its anticipated alliance with IBM, Iona's also extended its relationship with Apple Computer Inc to get Orbix working with OpenDoc-based applications. OpenDoc has already been adopted by the OMG as its Compound Document Facility but it's based on SOM and SOM isn't distributed. Iona will ship Orbix 2.0 for MacOS 7.5 in the fall. Iona is also now offering an OrbixTalk implementation of the OMG's Corba Events Services which provides for asynchronous messaging between distributed objects. A TalkStore extensions adds persistence and multicast functionality. OrbixTalk is based on the UDP/IP (User Data Protocol/Internet Protocol) Multicast standard. Iona has added its own OrbixTalk Reliable Multicast Protocol (OTRMP) to UDP Multicast which it says ensures any number of messages can be published to all listening applications in the correct sequence. Persistence ensures messages are delivered to OrbixTalk clients even if the client or server fails. OrbixTalk ships on May 21.

COMPUTER ASSOCIATES GETS RELIGIOUS ABOUT OBJECTS

By Peter White

Computer Associates International Inc used the keynote speech at Object World in Boston last week to well and truly come out of the closet. CA has got religion and has joined the purist object camp. And the overall tone of the show was that objects are back in the mainstream, fired up once again by the interests of major players, IBM, Apple, CA and others, and that the rabid focus on the Internet is giving objects generally and Corba 2.0 specifically, a chance to come of age. ~~The choice of CA as keynote had to be questioned when upon asking for speech notes the press office~~ said: "I don't think he's decided what he's going to say yet," but upon hearing the words of Sanjay Kumar, chief operating officer for CA it has to be said they rang true (as far as they went) as the words of a genuine object enthusiast. The words of the speech probably differed not at all from previous keynotes, but his position as one of the leaders of one of the world's top software companies made the message all the different in the hearing. Kumar's thoughts came from his company's failed development effort to produce a hybrid of the Ingres relational database and extend it into the world of objects. "By adding objects to relational products it ruins the fundamental foundation of the relational product. You lose SQL's simplicity as people bastardise the beauty of a complex query language. If the compromise is on the dbms side, these relational engines have no clue how to handle complex objects. If they try to manage, optimize and keep secure complex data then the product's stability will suffer." Kumar underlined his message with a stern warning. "We have tried it, it doesn't work and all vendors that continue to try it will fail. He pointed out that polymorphism and multiple inheritance were simply not found in hybrid products, and urged everyone that "The right solution is to embrace objects in code, in data, in appearance and take it into the heart of mission critical computing." Failure to do this he said would mean that object technology would die. That speaks volumes though for the future of CA-Open Ingres once expected to drag CA into the hybrid world of object relational and to act as a focus for CA-Unicenter. The rest of his keynote turned into an advert and demonstration for CA's own object efforts, underpinned by the Fujitsu Ltd object database, ODB II, now at the heart of its lead CA-Unicenter systems management product line in its new TNG release. And for the first time in memory a senior CA executive praised a software effort that he didn't own, in the form of Fujitsu's input not just to CA-Unicenter, but also to Jasmine the new CA multimedia development kit and object oriented application development environment, also based on ODB II. "We recently asked 150 CIOs all from the Fortune 1,000. They said that a significant number of their future applications were still planned as client server applications, but they said that 100% of them would be web enabled. The majority of all future applications will be web enabled." That was to be a theme for the entire show. Almost every announcement promised new Java, Active X or Web extensions, or had them on show. But CA took it further than most, delighting in not just objects, but also spoke in support of the pending VRML virtual reality Internet standard, and Kumar launched into a demo of its Sense8 virtual reality-based system management interface that will ship with the TNG Unicenter any day. CA alluded to, but did not back up with names and places, installations where over 10,000 objects were being managed, and at least a dozen partners that had built application extensions using Jasmine and JADE (Jasmine applications development environment), "without knowledge of the guts of our applications." Although cynics wondered openly how sincere the CA conversion to objects is, at least they were there in heart, mind, body and soul, whereas with the usual predictability Microsoft bore the brunt of all object jokes, conspicuous only by its absence at the show. But despite the CA talk being about the best attended part of a generally under-attended show, cynics there were and one pointed out openly that Kumar had managed his entire speech without one use of the C-word. In the world of objects that word is Corba, or more appropriately Corba 2.0, and if CA missed it out, presumably because it has no entry in this long-awaited, but prized middleware market, few Corba adherents were silent at the show.

DEC SKETCHES OUT ALPHA ROADMAP TO THE YEAR 2003

Digital Equipment Corp has a little Alpha roadmap it draws for customers showing the 15 million-transistor EV6, aka the 21264, that's now supposed to come out next year, as being capable of 500MHz. There's already been speculation that it should be able to do 800-1,000 SPECint92 (UX No 564). Then there's a three-year interval on the map between the EV6 and the next generation, broken, it's expected, at the 18-month mark by an EV6 shrink, the EV67, that revs the clock speed. The 100 million-transistor EV7, the first Alpha based on a 0.25-micron process, is due in the year 2000. DEC seems to be a little more conservative these days predicting it'll do 500MHz-750MHz rather than the 800MHz we first heard. DEC watchers say it should be good for 3000 SPECint92. Then there's another three-year hiatus, again with an intervening EV78 shrink, before the next-generation 250 million-transistor EV8 makes its appearance. It's supposed to be done on a 0.18-micron process that yields chips worth 750MHz-1000MHz. EV6 could turn out to be the first chip with an eight-way instruction issue. The EV7's supposed to be 16-way and the EV8 32-way. We imagine that whatever operating systems they run the compilers will have to be adjusted to optimise for those features.

JOINT ELECTRONIC PAYMENTS INITIATIVE

Efforts to standardise electronic commerce activities on the Internet took a leap forward last week, when most of the top players in the worlds of banking and technology joined forces to announce the Joint Electronic Payments Initiative. The Electronic Payments project represents a badly needed alliance between CommerceNet, a 140-strong consortium of leading financial, computing and information service companies and the World Wide Web Consortium, which oversees the development of common protocols and reference codes for the evolution of the World Wide Web. The project will address the growing need for a standardised way of negotiating payment methods between browsers and servers on the Web. The international Electronic Payments' team will develop a negotiation protocol it plans to demonstrate in September both in Europe and the US. Core participants include CyberCash Inc, the Financial Services Technology Consortium, GC Tech Inc, IBM Corp, Microsoft Corp, Open Market Inc, Verifone Inc and the Open Software Foundation. Other interested parties include British Telecommunications Plc, Netscape Communications Corp, Citibank Corp, Novell Inc, Oracle Corp and Nokia Oy. Within the next six months, the Payments Initiative's targets are to build a standard mechanism for Web clients and servers to negotiate payment; pilot the negotiation process in a live market environment; publish results as an open standard and then hand over the results to a recognised standards body for change control. "As much as we would all like to see a single payment solution for Web commerce, the reality is that we are going to have several," said Tom Wills, senior programme manager for CommerceNet and co-chairman of the Payments Initiative. "Web browsers and servers will have different capabilities, so when it comes time to make payment, they will each have to figure out which methods and protocols the other can handle - then they will be able to synch up and complete the transaction. Electronic Payments' will make this process easier by building a standard mechanism that the browser, server and payment middleware can plug into." Participants are divided into three project teams, each with its own specific project areas. The teams and their projected offerings break down into browser and server vendors that will refine mechanisms for connecting to payment middleware; payment vendors that will test payment middleware in a real-world environment and merchants that will test alternative user interface designs to study customer acceptance. Participating browser, server and payment systems vendors will incorporate the Electronic Payments protocol into their respective products to enable end-to-end payment. Merchants will run the enabled software at their Web sites and accept payment for a subset of the products or services they offer.

GARTNER FINDS SURGE IN SALES OF UNIX, PERSONAL COMPUTER SERVERS

Gartner Group Japan, which recently absorbed Dataquest Japan in line with the rest of the corporation, has reported that sales of both Unix and personal computer servers in Japan grew strongly during 1995. Shipments of Unix servers totalled 74,800 units, an increase of 51% in unit terms. Shares were divided with Sun Microsystems Inc in top place with a 22.2%, Hewlett-Packard Co and NEC Corp neck and neck with approximately 18% share and Fujitsu Ltd in fourth place with 14%. Sales of personal computer servers increased by a total of 135% over 1994, to 66,800 units, and 192% increase in value terms to \$537m, with Windows NT servers taking a 53.2% share and NetWare 41.9%. Next year, Gartner Group expects sales of personal computer servers to outrun Unix servers, at 137,000 units (growth of 105%) against 104,000 Unix server units (39% growth), and the ratio of NT servers to NetWare servers at 68% to 30%.

INFORMATION BUILDERS READIES FOCUS FUSION MULTI-DIMENSIONAL DATABASE

New York City's Information Builders Inc will this week take the wraps off its Focus Fusion multi-dimensional database which it believes will boost its presence significantly in the data warehousing, decision support and EIS markets. ~~Focus Fusion is the multi-dimensional On-Line Analytical Processing (OLAP) element of the company's data warehousing programme.~~ It incorporates Information Builders own Over-LAP technology that enables Fusion to server as a multi-dimensional database front end for relational and legacy databases. It is different from other multi-dimensional databases, said Dave Sandel, VP and general manager of the company's Open Systems Division, because of its highly scalable architecture, so-called intelligent partitioning and other performance enhancements. Fusion sits under the company's EDA/SQL middleware offering, supporting any SQL database and any ODBC client. Sandel claimed most multi-dimensional database only scale up to about 5Gb and other OLAP servers have problems getting past 20Gb. Sandel said Fusion will be tested to 100Gb by the time of the full roll-out in mid-summer, and will be able to handle up to 1Tb of data. Information Builders' so-called intelligent partitioning means that data can be stored horizontally or vertically across multiple hard drives on the fly. The separation of the index from the data makes for easier incremental update of data and faster data storage, as internal indexes cause systems to drag, said Sandel. The data does not have to be stored in the order of the dimensions. Fusion includes a tool to build indexes. The general advantages of a multi-dimensional database over the relational model apply here. A relational database requires SQL queries to retrieve require data from its tables, and have to be coded usually by MIS staff. Multi-dimensional databases present a more friendly face to non-technical users, with business rules linking the dimensions. The targets for Information Builders are users of relational databases on mainframes or Unix platforms looking to convert to a multi-dimensional client-server model on Unix, and later NT. The company was prepared to talk about two customer sites - names will be revealed on May 15. The first is a "major New York insurance brokerage firm" running an EIS application that accesses a Unix server with the company's EDA/SQL middleware. It translated a "commercially available" relational database to Fusion and reports ran between five and 10 times faster, according to Dan Ortolani, director of the Fusion programme. In a shift in its sales strategy, Information Builders is not only touting Fusion through its traditional direct sales channel, but also through OEMs who will take Fusion, customise it and sell it into their respective vertical markets. The insurance company is doing this as is the other customer, a healthcare provider in the Washington DC area which held its data on a mainframe and accessed it through batch reports. Sandel claimed the company converted the database to Focus Fusion, ported it to Unix and converted it to a client-server system under Focus 6 in the space of 24 hours. Naturally, the reports ran faster - about five to seven times, claimed Ortolani. Fusion has been with around 10 customers for a while and will enter beta testing at the end of this month. It will be released on all major Unix platforms around July/August time and on Windows NT in the fourth quarter. The Focus Fusion server, administrator's kit and parallel query licences starting at \$37,500 for 16 users through \$110,200 for up to 128 users, with an additional 64 users for \$39,800.

PLATINUM ADDS WEB CAPABILITIES TO APRIORI HELP DESK SOFTWARE

Platinum Technology Inc's Answer Systems division has added Web-capabilities to its Apriori help desk software with its latest version - Apriori Hands Free. The software allows for fully automatic help support system to be set up either via a Web site or via email. Web users can access Apriori from their own Web home pages in real time, downloading the relevant documents. Email users submit a message describing their problem and receive back a message listing the most relevant documents. If no matches are found, the problem is routed through to support desk staff. The product is likely to find more favour with intranet users once Internet security issues are more fully resolved, but Answer Systems founder Louise Kirkbride thinks that all help desk implementors will eventually move towards Web-based systems. The Apriori Web server is priced at \$15,000, and a ten-user Problem Resolver engine costs around \$100,000. It currently runs on most Unix platforms, but an NT SQL Server version is due in around six months time. Any client running a browser can be used. Answer is busily integrating its software with other tools in the Platinum portfolio under the code name Vitality Suite, specifically Viatic's Auto Discovery asset management tool and Softtool's Harvest application change management product. The Gartner Group claims that the help desk/support automation software market is growing at 100% per annum, and will be worth \$600m in five years time.

MOTOROLA UNVEILS NEW EMBEDDED POWERPC EARLIER THAN EXPECTED

Motorola Inc was forced to announce the follow-up to its MPC821 embedded PowerPC processor last week as one of its supporters is due to announce a digital imaging platform that uses it any day now. ~~The MPC823 will be at the heart of a hardware reference platform~~ designed by Motorola and a "leading software company" according to Ken Edwards, product marketing manager for Portable Systems Operations, but he wouldn't name it. Edwards said the system will enable users to read images captured on a camera on a standard PC, and ISVs will be able to write software for it to compete with Adobe Inc's Photoshop. A Personal Digital Assistant will also be launched at the end of the month using the MPC823. It will offer a direct wireless connection to the Internet, but no further details were available. The Motorola MPC823 won't actually begin sampling until the end of the year, with roll-out due in the first quarter of 1997. Like the MPC821, the new processor comprises three modules: the embedded PowerPC core, the System Integration Unit and the Communication Processor Module, each interfacing to a 32-bit internal bus. There are a couple of technology differences with the new chip from its predecessor in that it adds a 24-bit LCD controller that supports interlacing, enabling pictures captured using a camera with the processor to be shown as a slide show on a television. The other new thing is a Discrete Cosine Transform, or DCT algorithm that's used for colour imaging compression. But the main difference, according to the company, is the price and power consumption. The price has halved to \$35 in 100,000 quantities and it consumes 30% less power: just under 200mW at 25 MHz, compared to just under 300mW with the MPC821. It is claimed to deliver 66 MIPS at 50MHz using the Dhrystone 2.1 benchmark. "This moves us out of the commercial and into the consumer space," commented Edwards.

SYBASE WEB.SQL ARRIVES FOR SOLARIS, NT AND HP-UX TO FOLLOW

Sybase Inc's web.sql, part of its web.works middleware solution is finally with us. The company has been slipping out parts of its web.works architecture piecemeal over the last few months, but it has now put a price on web.sql, which is available on SunSoft Inc's Solaris. A version for Silicon Graphics Inc's Irix is currently in beta and versions for Windows NT and HP-UX will follow, later this year, according to David Hsieh, vice president of enterprise product marketing. Sybase's web.works encompasses the company's database, middleware and tools products to use information stored in Sybase databases on the Internet (UX No 576). Sybase's web.sql enables users to insert SQL database requests into World Wide Web pages and can also maintain multiple connections between Web pages and databases. The Emeryville, California company claims that current Web systems require a connection to be immediately broken after each individual query. And Hsieh said Oracle Corp's similar offering works the other way round, requiring stored procedures to be called which then serve up HTML pages. He added that here other "Internet initiatives" in web.works that have yet to be announced. Some of these will be in the area of database connectivity to the Internet and native support for additional data types and video data snap-ins. Hsieh said the company's object strategy is "a stepping stone to the Internet." Sybase web.sql can supports the Netscape Application Program Interface (NSAPI) and the Common Gateway Interface (CGI) interface, so it is compatible with all major Web servers. It costs \$700 and is available on a 90-day trial from www.sybase.com.

MEMCO APPOINTS FORMER ICL MAN

Memco Software Inc is a company that last year almost fell prey to Platinum Technology Inc's voracious appetite. Platinum managed to get its claws into six-year-old Memco, which is headquartered in Tel Aviv, Israel. But Memco wriggled free and Platinum's had to make do with a seat on the board and an undisclosed small stake. Now Memco has appointed Dan Woolley from ICL Inc where he was responsible for partnerships and strategic marketing for advanced software technologies in the US. He's heading Memco's business development organisation. The company is looking for technology partners to add to Platinum, IBM Corp's Tivoli Systems Inc and CyberSafe Corp, whose Challenger its integrated with Memco's Unix SeOS B1 secure access control technology. It is expected to announce the first of this next phase of partnerships in the next two weeks.

CRAY SUPERSERVER UNIT ON THE BLOCK

First fallout from the deal that made Cray Research Inc a subsidiary of Silicon Graphics Inc has hit the ground. SGI is getting shot of Cray's high-end Sparc-based Superserver 6400 line, either by spinning it off or finding a buyer for the technology. The Superservers, which come under Cray's business systems division don't fit into the pairs' plans for the future which involve a unified scalable architecture based on SGI sibling Mips Technologies Inc's processor technology by 2000. An obvious suitor for the Superserver line is Amdahl Corp, which takes the stuff OEM and also takes low-end symmetric multi-processor Sparc boxes direct from Sun Microsystems Inc. The Sunnyvaler said "there is interest there, but we're unable to say anything more at this time." Amdahl is known to have a sizeable war chest available to purchase technology or companies. The other natural home for it would be Sun Microsystems Computer Co (UX No 576). SGI made a \$745m tender offer for the loss-making Cray back in February (UX No 576), and it will be a wholly-owned subsidiary by the end of June. But it was apparent from the start that the 6400 line was something of an anachronism. The timetable for the spin or sell-off is likely to be short, and an announcement is expected in the next few weeks. This is despite the fact that the 6400 line was and still is a fast growing business for Cray. The two companies will begin by merging their software offerings and continuing with Cray's Digital Equipment Corp Alpha-based machines, before eventually migrating everything to Mips Technologies Inc RISC processors. SGI has also unveiled enhancements to its Power Challenge 1000 and the Cray J90 and T90 supercomputers and Cray was insistent that the top end vector processors will not be abandoned. The T90 will have a faster memory system for three and a half times the bandwidth of the current T90 system memory, which the company claimed would improve performance by up to 40%. A new processor option for IEEE floating point compliance has been added and both the T90 and J90 now support Cray's GigaRing scalable input-output and networking system. It can store and move data into and out of systems such as the T90 supercomputer at speeds of up to 38.4Gbps per second.

MICROSOFT HANDS OVER THE CASH AND THROWS TANDEM AN NT LIFELINE

In the latest of its NT-boosting alliances, Microsoft Corp is handing over \$30m to Tandem Computers Inc to enable it to convert Tandem's NonStop ServerWare middleware and ServerNet clustering technology from its massively-parallel Himalaya NonStop architecture to Windows NT, in an attempt to ride NT into the higher-end marketplace on the back of Tandem's impressive but dwindling reputation. For Tandem's part, NT - standing for 'New Tandem', as president and chief executive Roel Pieper quipped - will provide the glue between its ServerNet clustering technology, which will be split into components, in the same way that the proprietary Guardian system software provides the glue for Himalaya according to Pieper. Selling high-availability NT servers will provide a much-needed revenue boost, even by the end of the year, he said. All the NT servers Tandem builds will be based on Intel Corp processors. Tandem will support Microsoft's Wolfpack clustering technology by the first quarter of 1997. Microsoft will put ServerNet drivers into NT so that any application built under NT using the Wolfpack Application Programming Interfaces will run on ServerNet-compliant hardware from Tandem or Compaq Computer Corp, which also chipped in with its intention to have NT servers available this year. Microsoft will get to include the ServerNet drivers in its clustering stuff for free, not surprising considering the level of its cash injection. Steve Ballmer, Microsoft's executive vice-president said the Wolfpack clustering extensions will be out in the "first part of next year." By the second quarter of next year Tandem will begin shipping NT servers complete with the ServerWare middleware, with a full roll-out by the third quarter, promised Pieper. ServerWare for NT Server will include Tandem's SQL database, its clustered transaction processing environment, supporting Tuxedo and CICS APIs and Tandem's distributed messaging and object management environment. The only mention Digital Equipment Corporation got at the announcement was an abstruse reference that unlike Tandem, it has no software business. Digital has committed itself wholeheartedly to Microsoft and NT, and until Tandem rode into town, was seen as Microsoft's route into the enterprise space. Regarding the deals with Digital and Tandem, Microsoft's lead Windows NT Server product manager Mark Wood said "neither has pre-eminence", pointing out that both are involved in the Wolfpack work and both will be touting NT Server to its respective customer bases. The main winner, of course, will be NT.

LUCENT TOUTS INFERNO OPERATING SYSTEM AS "DIALTONE FOR INFORMATION SERVICES"

Lucent Technologies' Bell Labs took the lid off its Inferno network operating system and programming environment last week with high hopes it'll become established as the "dialtone for information services." It's touted as the answer to regional Bell operating company and PTT prayers and is designed to glue network infrastructures together (UX Nos 587, 588). It's also supposed to prove a boon to content providers since it incorporates the security and automatic billing that they need. According to its creators, Inferno is designed primarily to support applications written for non-Internet networking environments, including cable and satellite television, telephony and private networks. However the company spent much of a call last week explaining how Inferno differs from Java, a space it would surely go after if Java weren't already there. And, whilst Sun Microsystems Inc and Microsoft Corp are its admitted competition, it also plans to support both Java and ActiveX and yet at press time has no apparent involvement in Sun and Oracle's plan to define some common standards for so-called network computers and their operating environments on May 20. Mike Skarzynski, general manager of a 20-strong Inferno team, says Lucent's aim is to become one of two or three dominant players in what it expects to be a \$200m market.

Hard stuff

Inferno is a small portable distributed operating system largely written in C that runs standalone on PCs and as a user application under Unix, NT, Windows 95 and Bell Lab's uncommercialised Unix update Plan 9. It will run applications on machines with only 1Mb memory. Bell Labs says there will be a "small licence fee" plus a per device or server charge for Inferno, which is currently in alpha release. An SDK and binaries will be freely available this summer. Inferno includes the C- and Pascal informed Limbo language and Dis virtual machine. Components can supposedly be broken down into services which can run locally or remotely and supported even on "very very low-cost devices." Lucent says the interface could run on a local client whilst "hard stuff," like conversion, security and URL processing can, unlike in Netscape, be done run remotely. An example it describes is an Inferno application being used as a point-of-sale network system to order and pay for broadcast services, such as a film or news, which then automatically switches over to a satellite-based network to deliver the service. Lucent hopes the network service providers will put Inferno in their system design plans, however with no customers it still has to overcome hard-core skepticism that it can commercialize the thing.

WHY THE HOLY GRAIL OF DATABASES COULD TAKE "YEARS" TO REACH

Morgan Stanley people at the recent Very Large Database conference in Chicago say the most provocative presentation at the conference was by a professor from the University of Wisconsin. He's a recognized industry guru with credentials stemming from early parallel database design work that was later used in several major commercial products (Tandem Non-Stop SQL, DB2 V2, Informix XPS, and Sybase Navigation Server). The essence of the professor's pitch was that all the database companies were greatly underestimating how difficult it would be to merge parallel database technology with object relational technology. He claims all the database vendors have separate code streams for parallel processing and object-relational extensions (e.g. Informix On-line and Illustra, Oracle 7, and Oracle Media Server). Merging the two technologies is problematic, he claimed, because parallel technology relies on uniform partitioning of the data across all disks. The industry has not figured out how to uniformly partition images, video, audio, and other abstract data types to get predictable performance. Data skew (non-uniform partitioning) is a major cause of performance degradation in parallel systems. He also highlighted other issues such as messaging between nodes, which becomes less efficient with object relational technology. The professor told Morgan Stanley it took 15 years to figure out relational database technology, and it could take years to merge all the dissimilar technologies and data types to form a universal server; query processing is completely different for parallel database and object relational technology. He says the research community has just started to think about these problems and that the vendors are ignoring it, and he predicted that most vendors will keep parallel database products separate from their object relational technology for some interim period of time. Because of the fairly recent move to object relational technology, the professor's presentation was one of the first in-depth analyses of the implied technology transition from a credible third party, the investment bank reckoned.

SYBASE FORECASTS A RETURN TO PROFITABILITY

Clare Haney reports from the company's user group meeting in San Diego.

Sybase Inc CEO Mark Hoffman revealed at last week's International Sybase User Group 1996 North American Conference in San Diego that his company has spent between \$20 million and \$30 million on abortive research projects. We're talking build and enterprise momentum, and more recently, abandoned object-oriented database investigation, Brahms (UX No 575). He says prosaically, "We're going to have some failures and we'll have some more ~~as we go forward. I'm not losing sleep about our products and product cycles any more; that wasn't the case a year ago.~~" He concurs with analysts' expectations that Sybase will return to profitability in its second quarter. Hoffman predicts bad times ahead for the other database company that had to issue a profit warning for its most recent quarter - Informix. "They would've been in trouble last year if it hadn't been for SAP and SNI, and now SAP is slowing down. Informix is the third database for price/performance. They're bottom of the pile compared to our benchmarks and Oracles."

Kertzman calls for show of support

Mitch Kertzman, former Powersoft CEO and recently appointed executive VP, sales and marketing at Sybase, reckons that pride is what his new job's all about. "Users should be able to stand up and proudly say they're Sybase users, instead of whispering it in a backroom." In a somewhat desperate plea, he urged all the attendees to, "Please communicate to the rest of the world that you can place your confidence in Sybase." Explaining that users had told him that they felt the supplier/customer relationship often felt as adversarial and hostile as being sold a used car, he promised that in future Sybase would stand for truth in advertising. He mocked those checklist features ads, much beloved of all the relational database players, including Sybase, quipping: "Six characters in their name? Sybase, yes, Oracle, yes; Informix, can't get there!"

Sybase and Baan cosy up

On the applications front, Sybase Inc and Baan NV pledged their eternal love for each other. Expect SQL Server 11 to at long last be supported by the Dutch vendor's applications by the end of this year. But what about SAP's R/3 and the small problem of it still not running fully on Sybase's database, while Microsoft Corp claims its recently-announced dynamic locking technology does away with the row-level locking blues still affecting its former database bosom buddy? President of Sybase's enterprise business group, Dennis McEvoy, snaps angrily, "Microsoft's Dynamic locking is a bit of a kludge. At its technical conference, they advised their own developers against using it. It's table slicing, it's not row-level locking. It's an example of Microsoft's immaturity." So, when will Sybase solve the row-level locking bugbear? Mark Hoffman, Sybase's CEO, told us it should be early 1997, or possibly by the end of

this year. "I wish I could throw more bodies at it. I've got 25 people working on it. It takes time, it touches a lot of code in the database. There's no question that not supporting SAP is hurting us", he admits.

Next Sybase MPP release will support SQL Server 11.1

On the massively parallel side, Sybase Inc says it's looking at having the next version of its parallel database finally coming into sync with releases of SQL Server. The current release of Sybase MPP incorporates a combination of SQL server functionality from version 4.9, 10 and parts of 11. According to Pat Mullin, Sybase MPP product manager, the next major release of MPP will support Gryphon, the code-name for SQL server 11.1, which will have parallel querying capabilities, as well as application queries and buffer caches. The new MPP release, still in the planning stage, will implement backup server APIs and triggers. It will have improved enterprise systems management and automated data movement transformation. On the replication front, users will be able in future to replicate data out of MPP and into, say, Sybase IQ. No new platforms are planned for MPP in the near future, although Mullin says, "My gut feeling is that we will have MPP on NT eventually."

More Orbware expected

Next up for Sybase's object middleware, ObjectConnect, is more Corba object request broker functionality and more support for ODMG-compliant object databases. In the near future we can also expect to see some remote three-tier user-designed object methods with distributed ObjectConnect, the GUI language binding and more object-relational mapping styles. Sybase may well decide to use IDL (Interface Definition Language) instead of ObjectConnect's GUI repository language.

BEA BUYS ITS WAY INTO EUROPE BY ACQUIRING USL FRANCE

New Tuxedo owner BEA Systems Inc launched itself into Europe last week by acquiring the largest supplier of Tuxedo on the continent Unix System Labs France SA, based in Paris, from Novell Inc. Financial details were not revealed, but the firm inherits 70 sales and support employees. Off the back of the acquisition, BEA offices in London and Munich will also be opened. Novell has now completely sold out its Unix interests (UX No 574), but the firm retains the right to develop the Tuxedo for NetWare platforms. BEA is sovereign of all the rest, including Unix, NT and MVS. On a four day tour of Europe, ex-Sun VP Ed Scott and ex-Novell VP Joe Menard sketched out the company's plans for Tuxedo. Menard, who is relocating to Brussels to become senior VP of Europe, is keen to break Tuxedo out of its on-line transaction processing monitor hole. The idea is to position the technology as middleware for OLTP for those that want it and, more importantly, as a messaging manager for applications in distributed computing environments. In these clothes it envisages Tuxedo competing with HP OpenMail and IBM MQSeries. Tuxedo has message buffers for applications to exchange information, name services that enable transparent connections between application logic and its infamous transaction capabilities, which guarantee message delivery.

CICS personality for Tuxedo

But Tuxedo is not what's all on offer from BEA. The company is also developing BEA CICx, a CICS personality for Tuxedo, which will give users a complete CICS look and feel compatible monitor. For management there is BEA Manager, which enables application logic to be monitored across distributed environments; and BEA Connect that integrates Tuxedo with legacy systems using bi-directional communications, TCP/IP and LU.62 protocols. On the application development side, BEA Systems is offering BEA Builder, a component-based middleware framework. This, according to the company, enables ISVs to embed Tuxedo in distributed applications development and says Tuxedo will work with products from Dynasty, JYACC, Borland Delphi and Microsoft Visual Basic. For the future, Menard says BEA R&D is currently working on advancing security and administration capabilities and improving connections to CICS and IMS applications.

EUNET RESTRUCTURES, GAINS FUNDING

European Internet services provider EUnet is to consolidate its currently disparate operations into a single new company, EUnet International, and has won venture capital funding of around \$12.5m to help it through the transition. The new company is expected to have a turnover of \$44m in 1996, and some 225 employees, under the control of current EUnet Communications Services (CS) managing director Wim Vink. EUnet grew out of the Europe-wide network of Unix user groups then known as the EUUG (European Unix User Group), and was formed in 1982 as a loose association of Internet infrastructure providers. Although now the largest provider of Internet backbone services across Europe, EUnet has remained only the sum of its parts, despite some consolidation in the early 1990s, when the EUnet CS headquarters was set up in Amsterdam. Cracks began appearing last June when The University of Kent sold its 85% stake in the UK's EUnet Ltd to PSInet Inc, of Herndon, Virginia for the extremely low price of £2.5m. And in November, UUnet Technologies, the owners of Unipalm Pipex and now itself part of MFS Communications, took a 40% stake in EUnet Germany for a similarly small price tag. The consolidation should help prevent further piecemeal sell-offs, and allow EUnet to compete with the US majors more effectively. Through share swaps, individual EUnet companies will gain a stake in EUnet International, a UK registered company which will seek a listing on the US Nasdaq. EUnet affiliates in Austria, Belgium, Czech Republic, Finland, France, Luxembourg, Norway and Switzerland have already agreed to the move, with others still under negotiation. The venture capital money comes from Advent International, which already funds four Internet-related businesses in the US.

SGI CLAIMS VRML 2.0 LEAD

Silicon Graphics Inc claims its Cosmo Player is the first Virtual Reality Modeling Language (VRML) 2.0-compliant browser to run on Windows 95, NT and SGI platforms and the first to implement the widely supported Moving Worlds VRML 2.0 standard for 3D imaging (UX No 569). Cosmo Player works with SGI's libraries and applications, and enables developers to put up sites with interactive 3D content that can be viewed with any VRML 2.0-ready browser. It is downloadable free now at <http://vrml.sgi.com> and as a plug-in to Navigator. It is part of SGI's Cosmos development tool suite, along with Cosmo Code, Cosmo Create and Cosmo MediaBase. All are now available with the exception of Cosmo Create, which will ship in the next couple of weeks.

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For a change of pace, **Mips Technologies Inc** is gonna try marketing and this time has hired Derek Meyer as director of marketing, replacing departed VP Ed Muir. Meyer's been at **Philips Semiconductors** but before that was director of Sparc marketing for what has become **Sun Microelectronics**. Small world, isn't it?

Netscape Communications Corp is picking up **Sun's** standards guru Carl Cargill as its own this week.

The PowerPC NFS servers **Auspex Systems Inc's** supposed to be developing in conjunction with **Compagnie des Machines Bull SA** remain very firmly on the back burner (UX No 516).

Zona Research says that total internet revenues will be at least \$9.6 billion this year, up from \$4.8 billion last year, \$18 billion in 1997 and \$31.6 billion in 1998 but it's unhappy with these numbers, which it's published, and it's reworking some of them upwards. Server software will grow tenfold from \$236 million last year to \$2.6 billion in 1998. Browser software growth will be stunted, however, rising from \$48 million last year to only \$133 million in 1998 because the **Microsoft-Netscape** duel has spiked the market.

JBS Open Systems Division, a part of Houston, Texas-based **Jones Business Systems Inc** is to distribute **Pixel Innovations Ltd** line of terminal emulation products. Pixel, a UK company based in Hemel Hempstead, Hertfordshire has so far focused its efforts in Europe, centered on its Terminate PC to Unix terminal emulation system.

Business Objects SA, the Paris-based, Nasdaq-quoted company with the eponymous set of decision and analysis tools has appointed Tim Harmon as vice-president of marketing for the Americas. Harmon is an software industry veteran, having spent time with Sybase Inc, McDonnell Douglas, Equitable Life Insurance and Data Systems Corp, among others having also spent three years as an analyst with **The Meta Group Inc**. Harmon will report to Dennis McCann, president of Business Objects Americas at the company's Cupertino base.

Another part of **Digital Equipment Corp** is leaving the nest, or rather, fluttering up to the great computer museum in the sky. Sadly, but inevitably, the 16-bit PDP-11 family is being put out to grass after 25 years. The systems will continue to be sold until September next year and be supported for another five years after that. The system software is unaffected, as it is owned by Dubliner Mentec Computer Systems Ltd.

Magna Software Corp has moved its Magna X development environment from CICS/6000 to CICS/ESA for the IBM Corp mainframe

O2 Technology SA and **Iona Technologies Ltd** have come together to develop an integrated development environment combining O2's Object Database Management Group-compliant database and Iona's Corba-compliant Orbix request broker. The results of the collaboration are available now for free to O2 and Orbix customers, who can now choose between O2's client-server object distribution model and the Orbix Corba model.

Software AG of North America Inc has announced the successor to Michael King as president of the Darmstadt, Germany company's US subsidiary. He is Daniel Gillis, a 49-year-old who had been senior VP sales for the US subsidiary since April last year.

TRW Inc's reportedly the largest database site in production in the US with 1.9 terabytes of data housed in **IBM's** DB2 on an **Amdahl Corp** machine. It also has a smaller data mart using Oracle (140 million row database). TRW told Morgan Stanley the task of handling large databases is still a challenge for the database vendors, and claimed none of the vendors currently meet all the criteria spelled out in its 1993 request for information. However TRW believes it can take Oracle to one terabyte of data but wanted to see the company add data partitioning and a fully integrated backup/recovery system. It reckons it's adding 500Gb data a year.

IDC's rather surprising find after surveying 750 consumers and businesses is that one-third of those which use the Internet shop while on-line and spend more than \$50 and \$500 per month respectively. IDC says the amount of cyber shopping it found is surprisingly high, but that actual spending is still relatively low. It wasn't able to say what kinds of products and services the electronic shoppers are buying.

Object World tittle tattle has **IBM Corp** taking out new found ORB chum and fast-growing **Iona Technologies Ltd** before it could get to an IPO. Although it's thought to have been looked over by a bunch of ORB wanna-bes (UX No 588), Iona says it's not in play. IBM says just because you go to lunch doesn't mean it's going to pay.

NT is winning the hearts and minds of corporate America over Unix according to **Sentry Market Research**. Of 700 sites in North America surveyed, it says half the respondents say NT is likely to become their strategic server operating system, up 12 points on last year, and 49% say they will use NT as their network operating system as well as their client system. 44% will also use NT as a strategic Web application server, and although 48% of respondents now use Unix strategically within their organisations, this is down a wrenching 26 points from last year, and nearly a third of the respondents were undecided.

Fielding complaints that the new 32-bit 5.0 version of its PowerBuilder development environment is a RAM-guzzler and that its new native code compiler has achieved little performance improvement, **Sybase Inc's** Powersoft unit says 5.0 actually delivers more than was originally promised, including extra distributed computing features, and that its database drivers have been fine-tuned to increase performance. It promises a reduced "footprint" the next time around.

Hewlett-Packard Co this week puts a commercial spin on the HP 9000 K-Class clusters it offers Enterprise Parallel Servers (EPS) line, rolling out configurations of the Fibre Channel-linked configured for business use. HP puts its 64-bit PA-8000 into play on June 4 in Boston; servers are expected to ship in the fall.

Open Group VP worldwide marketing and sales Peter Shaw says that for the first time the organisation has begun to provide a business case for its projects to sponsor members and has four staff servicing those accounts. It's doubled its spending on marketing and research.

By July **Fujitsu Ltd** will have stripped the volume products unit from its **ICL Plc** sibling and tossed it into a new venture owned 80%-20% respectively by the two companies (UX No 581). The unit, which will include ICL's Unix business, is supposed to delineate a new common product line at that time.

Open Group's got ten European chief information officers coming to this week's meet of its executive inner circle of CIOs; the get together is being chaired by **Barclays Bank plc** IT supremo Joe De Feo (UX No 582). A Paris meet in October will be open to US CIOs too.

There have been discussions going on between **Sun** and **IBM** - apparently for some time - about Sun licensing OpenDoc and putting it into Java creating another stumbling block for ActiveX.

Although it claims it's down to a shortlist of three candidates from three continents in its search for a permanent replacement for acting president and CEO Jim Bell, **Open Group** now says it might not appoint anyone until the end of the year. It says most of the candidates came with "too much baggage." It doesn't expect **Open Software Foundation** and **X/Open** to go away as legal entities anytime soon either. Open Group regards itself as a \$60m concern with 240 staff. Consolidation of the OSF and X/Open marketing groups is expected to be complete by July; Open Group's establishing a new facility in Tokyo. It claims the merge of OSF and X/Open has only trimmed \$500,000 from membership contributions from companies that were formerly sponsors of both organisations.

Oracle Corp achieved 6,056 tpmC and \$223 per tpmC running its 64-bit version of Oracle7 on a four-way 400MHz AlphaServer 4100 5/400.

Looks as though **Hewlett-Packard Co** is beginning to overcome its shyness. Last week it admitted to us the modular 3D Architecture Summit 64-bit Unix kernel it's building with **SCO** for Merced does indeed use UnixWare's Unix SVR4.2 kernel as its source base.

Turns out core software technology for **Visigenic Inc's** Open Channel ODBC access technology has been licensed from **Working Set**, whose DataRamp ODBC client/server technology serves as the base technology for the communications component of the NT version of OpenChannel 1.0 DataRamp Secure Server costs for \$2,500; Windows clients are \$40. Unix versions are due.

DEC's new mid-range 4100 Rawhide AlphaServers on to which DEC has moved its Very Large Memory database-in-RAM option costs from \$55,000 with Unix.

We hear that **IBM Corp** has made overtures to **Sun Microsystems Inc** over the last few weeks but that it was no go.

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APPLE, IBM, NETSCAPE, ORACLE AND SUN TEAM ON NETWORK COMPUTER STANDARDS

Monday May 20 of course is the date of the great Oracle Corp-driven announcement that's supposed to change the face of computing by defining the minimal standards that make a generic network computer a Network Computer or NC. Companies that build them can of course add frills. In fact implementations can vary widely. The guidelines are so broad practically everything existing becomes an Internet device and critics already charge that the perpetrators of the new standard, called the NC Reference Profile, learned nothing at all from their Unix experience. Sun Microsystems Inc, however, promises the mistakes they make this time will be "a new set of mistakes." Anyway, that at least is part one of the announcement - an industry event akin to endorsing motherhood and apple pie backed by IBM Corp, Sun and Oracle as well as Netscape Communications Corp and Apple Computer Inc, both of whom joined the fold by the middle of last week as key endorsers. Who else will join by the time this thing lifts off Monday morning in San Francisco - Sun had counted as many as 30 walk-ons as we went to press - is anyone's guess since everyone's calling everyone else and the event is starting to take on the aura of the old ACE Initiative. Interested parties like chip houses DEC on behalf of StrongARM and Motorola Inc for the PowerPC are supposed to be there along with some very interesting Internet providers. No one is barred - even Microsoft Corp was asked to participate, according to IBM - and you can join after Monday. The sponsors say they want this thing to work and attract the big applications and they figure they've got the timing for standards setting as right as they can make it. Part two of the announcement is Oracle's exegesis of its own Network Computer complete with licensees who will make it and big accounts who will pledge to buy it. Oracle CEO Larry Ellison last week was waving around a list of 15 purported companies, almost all of them offshore and many of them low-profile, that are supposed to manufacture the things. The list is said to include Acer, Tatung, Nokia and a lone American, SunRiver. Oracle promises more impressive names will eventually sign up. IBM in its guise as IBM Microelectronics, maker of PowerPC chips, and not IBM, corporate sponsor, will also be playing this game. It's supposed to turn up with a family of prototype NCs for the business market based on the PowerPC - and later on the iAPX-86 - that it will try to hawk to any manufacturer who's interested. IBM and IBM Microelectronics - please note - will not be building the devices themselves. It wants to be in volume by the end of the year. The generic specs, which fill two pieces of paper, are so inoffensive and aimed at the least common denominator as to be "boring;" so that people can say "hey, I already support it," Sun says. Right now there's only one Reference Profile; others are to follow. Remember they want this stuff to apply to everything from cell phones on up, a variation on Bill Gates' Information at your Fingertips, if you will. The specs include the HTML and HTTP protocols, SMTP, IMAP 4, POP 2 and 3 for mail, MPEG, JPEG, WAV and GIF for graphics, Boot P, UDP, SNMP, TCP/IP and NFS as well as the all-important Java byte code and class libraries. Security's still up in the air since Crypto API and ISO 7816 aren't really accepted standards yet. Provision's been made for the MasterCard/Visa scheme. NC designs are supposed to be agnostic on the subject of operating systems and the hardware's underlying chip - which of course raises questions about just how standardized these standards are and whether the concept doesn't immediately create fragmentation - but this particular agnosticism is very much the point of this anti-Microsoft exercise, according to Oracle, getting folks out from under the monopoly. For their part, IBM and Sun claim this thing isn't as politicised as Oracle is trying to make it. Sun CTO Eric Schmidt volunteered that with Java, support for Windows would be applicable. Soothing standards will doubtless unleash a new round of in-fighting. *Continued on page 2.*

ICL TO PUT VME ON INTEL ALONGSIDE UNIX AND OTHERS

As if following the furrow already ploughed by Unisys Corp and its mainframe/Unix/NT-enabled ClearPath systems (UX No 585), ICL Plc is set to unveil its own heterogeneous multiprocessing (HMP) strategy towards the end of June that'll deliver multiple operating system support on one system. It'll use commodity parts, presumably Intel Corp. Officially ICL refuses to either confirm or deny it, but the UK systems and services company, 84%-owned by Fujitsu Ltd, has substantial presence in vertical markets for which the systems are said to be ideally suited. The company is also understood to have been casting around for a non-uniform memory architecture (NUMA) story. ICL's said to have had increasing difficulties persuading ISV's to write applications for its Series 39 mainframes and coupled with the proprietary nature and expense of mainframe chipsets sees convergence between systems as inevitable. It may also go some way towards recouping the operating loss of £31m it reported for last year which pushed pre-tax losses to £188m, against profits of £28m in 1994. It recently undertook a radical restructuring putting its volume products business, which sells personal computers and iAPX-86 and Unix servers into a separate joint venture with parent Fujitsu (UX No 581). It's planning a £200m rights issue in June, completely underwritten by Fujitsu. *ICL adds Pentium Pro and HyperSparc, see page 7.*

POLESE'S TUNE HAS VCS SCRAMBLING

So we threw people off the scent when we reported how delegates at a recent New York Java conference thought former JavaSoft luminary Kim Polese's start-up is developing Java BackOffice-style applications? (UX No 585) Well, nobody else seems to know anything to the contrary just yet. All Polese would say at yet another Java Developers' Conference in New York City last week - that's YAJDC - was the product or products the company is working on are "in the area of building and deploying Java applications across the network." But what else would a Java start-up do? She added that the company is "getting ready to send out alpha versions pretty soon," and a Web site would be up by the time of the announcement on May 29 at JavaOne in San Francisco. Polese said it would not be a product announcement, just a company structure briefing. The name of the company has been a closely-guarded secret and Polese had the conference playing Hangman by suggesting that it started with the letter "M." Congratulations Marimba? Polese said she is having to fight off venture capitalists desperate to throw money at the company: they're probably staked out in her car park right now hoping for a piece of the action. Polese said that by not releasing the company name, or announcing the nature of the products the company is "going against the grain" of hyping Java-related stuff through the roof. And we always thought less is more.

DG HELPS SCO'S NUMA EFFORT; CANS DG-UX-ON-ULTRASPARG;

Data General Corp says its commitment to the Santa Cruz Operation Inc's "Big E" rah-rah certainly doesn't extend as far as tossing out its own well-regarded 64-bit DG-UX for UnixWare. It says it'll offer UnixWare 2.x as a third option (it's selling NT too) on its new line of Intel Corp-based AViiON servers. Seems DG will also provide technology that'll allow SCO to support the ccNUMA implementation it's creating with Dolphin Interconnect Solutions/DG in future UnixWare releases and in OEM products built upon the modular 3DA Summit Unix kernel SCO's creating with Hewlett-Packard Co (UX No 587). However DG won't say whether it's actually inked a development agreement yet. It plans to describe its future relationship with SCO and plans for DG-UX in two or three weeks' time. At the same time DG has abandoned its plan to productise an implementation of DG-UX for Sun Microsystems Inc's 64-bit UltraSparc RISC it's got up in its labs. It says talks with Sun had the effect of convincing it the step is unnecessary. DG's now shipping eight-way Pentium-based AViiONs. It's promising Pentium Pro models in the summer and Intel-based ccNUMA by year-end.

NETWORK COMPUTER STANDARDS RALLY

Continued from page 1. The upshot of the part two announcement will likely pit Sun's anticipated Kona-based NCs, internally called JavaStations, against the NCOS-based ones designed by UK-based Acorn Network Computing for Oracle and the manufacturers it's managed to rally to its banner. Kona, to ~~debut at the JavaOne Developers Conference the following week, will also be~~ competing with Lucent Technologies Inc's Inferno. Oracle's spinning off a wholly-owned subsidiary called Network Computer Inc to market NC software. Sun has said it would announce JavaStations before the end of the year which last week meant not in the next 30 days. Sun has already said that JavaStations will be built initially with MicroSparc chips, graduating to Java chips when they're ready next year. No one last week seemed able to confirm or deny whether Intel would turn up Monday. IBM has x86 intentions but apparently hasn't decided on an operating system. Whether an Intel-based NC will be done with Intel's connivance remains to be seen. Its spokesman said it would cooperate. However, Intel CEO Andy Grove, speaking in Hong Kong earlier this month, was quoted by *Reuters* as dismissing NCs as a niche product. The future of personal computing, he predicted, will be based on powerful machines that seamlessly combine online and built-in data.

INFERENCE TAKES THIRD-GENERATION CBR TOOLS ON TO THE WEB

Inference Corp this week unveils the third generation of its case-based reasoning (CBR) problem resolution software as CBR3 Content Navigator which now includes support for Web-based HTML and other Internet/Intranet documents, SGML, Microsoft Word, ASCII and rich text format. Inference applies CBR - in its case derived from research work at Yale University - to expert system-type environments that help solve problems by pointing to a collection of similar problems, or cases, that it stores in its brain. It's a technique tailor-made for help desk software; indeed Inference's CBR engine is embedded as an enabling technology in Bendata Inc, McAfee Associates Inc, Scopus Technology Inc, Utopia Partners Inc, Vantive Corp and Workgroup Systems Inc products. Others, such as Clarify Corp and Remedy Corp will provide CBR to customers if required in place of their own problem resolution engines - at a premium of course. Inference is offering Verity Inc's Topic text retrieval engine for use with CBR3 for an additional charge; CBR3 also includes intelligent question generation, automatic document splitting and a wizard. All of the CBR3 APIs are available to ISVs, allowing, the company claims, its help desk OEM partners to implement the new real-time authoring feature in their call tracking products. It also allows developers to build applications that can generate a search from a network alert. Inference now offers products that at the very basic level store details of experiences, such as how to fix a printer; summaries and extracts, such as technical notes and product specs; personal and corporate libraries, reference manuals; and public domain and subscription information available on the web and from email. CBR3 Content Navigator for content acquisition, navigation and management includes CasePoint search and retrieval applications which are up on Solaris, NT and OS/2, and content maintenance tools called CBR Express. It also comes with an Internet search engine, Lotus Notes integration and a URL indexing and clustering. CBR3 runs on Windows 95, NT, Solaris, OS/2. HP-UX and supports Oracle, Sybase, SQL Server, Informix, DB2/2 and Raima. General ships begin in the fourth quarter. CBR3 comes in at the same price point as the two-year-old CBR2 release - which supports the automatic indexing and generation of cases from documents - at around \$1,000 per seat. A help desk implementation of CBR, such as in Clarify Corp costs around \$3,500.

Help desk

Inference competitors at the high-end of the CBR market include Boston, Massachusetts-based Cognitive Systems, Acknosoft and ISoft. Esteem Software, Astea International and TechInno have CBR products that play lower down. It says it also expects to see more of start-ups such as Molloy and PhD. Looking at the help desk market, Inference says the majority offer a core set of modules with similar functionality plus a set of specialist add-on techniques on which they compete. Companies such as Astea still require a sales automation module, it observes, which it expects the company to buy rather than build. Inference says the much-hyped process of disintermediation, or cutting out the middleman by providing sales, support and help services on-line, by-passing switchboard operators and sales people, will happen much more slowly than is currently envisaged, given that many customers don't have web or keyboard access. Public since June 1995, Inference Corp posted a profit of \$3.8m on a turnover of \$29.4m in the year to January 31. Wall Street figures it should do \$40m this year. Its partner and OEM business accounts for 27% of revenue, joint sales 30% with direct sales accounting for the rest. It does half of its business in Europe, an operation built around the acquisition of Expertech around five years ago.

I-KINETICS MOVES UNIVERSAL DATA

ACCESS INTERFACE TO DEC OBJECTBROKER

Burlington, Massachusetts-based object component house I-Kinetics Inc has an early version of its Database Component Server 3.0 database access mechanism up on the beta version of DEC's ObjectBroker 2.6 object request broker. The component server, now being positioned as what's called a universal data access (UDA) mechanism for getting at any data available to Corba environments, in Corba IDL is already up on Iona Technologies Ltd's Orbix ORB and the company is still promising a version for use with SunSoft Inc' Neo ORB implementation early next year and is eyeing HP ORB Plus and IBM's DSOM. The software currently supports Oracle and Sybase access from Corba and OLE clients - it's got an unnamed object database vendor waiting to come in stream anytime now. I-Kinetics believes vendors like Sun Microsystems Inc are actively investigating the availability of UDAs that can retrieve information to a user's desktop over C++, Java, Smalltalk ORBs, object-relational links and other mechanisms without the user having to know or understand what those mechanisms are. It's a concept akin to Microsoft Corp's data access objects system. I-Kinetics describes its component server as an interface to UDAs and is kicking ideas around with Sun. I-Kinetics' ObjectPump, which puts an object wrapper around non-Corba code to make it available to the component server, is now expected to beta in November, with NASA's Jet Propulsion Labs expected to get an early cut in August (UX No 565). ObjectPump creates metadata objects which point the component server to pieces of code, which could be pieces of legacy applications, protocols, or database rows. Other features planned for ObjectPump include the ability to dynamically add Corba object services, including security and events, and to selectively partition or replicate components. I-Kinetics is also developing a virtual application warehouse which it says will store objects as business components which can be shared as OCXs. Development of ObjectPump is being funded by a US government grant to the ComponentWare Consortium of which I-Kinetics is a founder member. The consortium's goal is to package data and applications as standard, reusable software components using Corba, OLE and its member's technology. On the horizon, I-Kinetics and ComponentWare Consortium partners will offer horizontal and vertical industry components and component assemblies. I-Kinetics is to focus on technology for finance, defence and NASA markets. Siemens AG is a recent addition to the consortium's ranks. Privately-held I-Kinetics says it'll be up to 60 people by year-end from 45 now and expects to do \$5m next year, more if a large defence contract bid that it's part of is landed.

NETBUILD START-UP TARGETS INTRANET DEVELOPMENT

Nine-month old start-up NetBuild Inc, Foster City, California, wants to build a company around its WebWorkshop Intranet development environment product with the corporate ethics of Hewlett Packard Co, the partnership capabilities of Microsoft Corp and the competitive paranoia of Intel Corp. Tall order for a start-up, but NetBuild insists it has a technology like no other. The product is WebWorkshop, an environment which allows developers to stitch together Intranet objects into applications using multiple toolsets, including Microsoft Front Page with Adobe PageMill, Symantec Cafe and Adobe Photoshop. Developers can run it on Windows 95 and deploy the applications anywhere. NetBuild founders Robert Bolt and William Daniel - who both have applications development experience and long industry resumes that include Oracle, Platinum Technologies and Intel - claim that with a first-of-its-kind product, \$300,000 of their own money, 15 independent investors, a \$1.5m R&D budget and an industry that currently laps up anything with the word "Intranet" in front of it, they can't lose. Or can they? NetBuild will have to do a lot of missionary work just to explain to customers what WebWorkShop can do - a challenge in the noisy Internet market. And it won't be long before companies with the muscle of Microsoft or Netscape create a similar offering. But Bolt insists that IT managers would rather have NetBuild's independent product which won't lock them in to using just one vendor's products and that large vendors tend to move slowly, giving them a window of opportunity. The firm is in talks with SHL Systemhouse Inc and wants to get KPMG, Andersen Consulting and about 10 to 20 integrators and training firms on board to sell and support the product. The firm is committed to placing a NetBuild staffer at each large WebWorkShop beta site. NetBuild hopes to sell multiple thousands of its products by the end of 1997, but isn't banking on making a profit until its second year. The WebWorkShop basic edition costs \$900, the team version is \$4,000. NetBuild is already looking at developing other products to complement its development environment, such as authoring tools and application component types.

TNG TO COST A THIRD MORE THAN CA-UNICENTER: LACKS UNIX 3D INTERFACE

Computer Associates International Inc claims development and quality assurance testing of its next-generation CA-Unicenter TNG systems management environment has been completed around six months ahead of the schedule it set internally and that production versions will be generally available later this year rather than the beginning of next. Base price for TNG will be around 30% higher than the current CA-Unicenter release, which costs around \$48,000 on HP servers, \$7,200 on Pentium servers, \$52,000 on an RS/6000 36T, \$40,000 on a SparcServer 1000 and \$66,000 on SparcCenter 2000 servers according to its \$400 per power unit price at the entry-level. However CA does not yet have a Unix version of TNG's 3D Real World Interface console which is built upon virtual reality technology from Sense8 Corp, Mill Valley, California. A Unix version of the currently Windows NT-only workstation console environment will follow in some unspecified timeframe. TNG also includes the Jasmine version of Fujitsu Ltd's nine year old ODB-II object database enhanced with CA's availability and data integrity technology which is used as the TNG repository, and the AgentWorks SNMP manager, GUI and toolkits inherited from Legent Corp. CA says around half of its existing CA-Unicenter customers are on maintenance programs that will lead them onto TNG with some upgrade charges, a fifth of installed sites are described as "leading edge" users that will jump immediately. CA expects at least 5,000 licences to move over in time, though others won't want to pay the extra or to have to port their current applications across. Although CA has lined up a slew of backslappers for TNG, there is little detail on exactly which companies are actively developing products to it and where they are with them. CA maintains its once-fanfared relationship with Sun Microsystems Inc is still on track but the promised packaging of CA and Sun management products hasn't yet materialised. CA says there are six third-party products now integrated with TNG and it claims there will be a dozen more by general availability. It believes 250 customers with proprietary management systems will have integrated their systems by that time and that it will have at least four of the big six integrators peddling TNG. CA says Gartner Group, which takes CA-Unicenter to task believing it is focused almost exclusively on large server sites, is "totally biased against it."

HP CLAIMS BIG EDGE OVER IBM SP

Hewlett-Packard Co duly came out with HP 9000 Enterprise Parallel Servers configured for commercial applications, offering the Model 21 (EPS21) and the Model 30 (EPS30). Big difference from the existing FDDI interconnect-based EPS20, which accommodates up to eight of HP's four-way K420 technical servers, is the much-anticipated 266Mb per second Fibre Channel switch, which will reach 1Gbps as the Fibre Channel standard evolves, plus adapter cards. The switch currently supports up to 16 nodes; the EPS21 is built from four-way 120MHz PA-7200-based K420 servers, the EPS30 can accommodate up to 16 fourteen-way 120MHz PA-7150-based T520 commercial servers. At 17,826 tpmC (\$396 per tpmC) running Oracle Parallel Server, and 243.2 QppD power, 121.5 QthD throughput and \$13,230 QphD price/performance as measured by the TPC-D decision support benchmark, HP is still way short of DEC's 30,390 tpmC result. It claims that with PA-8000 - due in August - and future support for 64 K-Class servers and 54 T520s it'll more than double its tpmC figure. The HP channel adapter card uses HP's Tachyon chip. Enterprise Switch Model 266 Fibre Channel Fabric can support 16 nodes up to 6,000 feet apart. The HP will grow it to support 128 nodes. The firm claims the EPS30 attained 17% more power, 44% more throughput and 60% lower total cost of ownership than an IBM Corp RS/6000SP running Oracle Parallel Server. EPS21 prices start at \$86,200, additional four-way nodes are \$81,700. Additional CPUs are \$15,000 each. Ships should start in July. The EPS30 costs \$119,000 and up to 13 additional processors can be added per node at \$25,000 each, \$20,000 each for four or more. Ships start in September.

DG AT TOP OF SPANISH UNIX TREE - IDC

According to IDC, sales of mid-range Unix systems in Spain grew 15% in 1995 to notch a total of \$53m. Provisional forecast for 1996 is growth of 21% to \$64m. The leader of this segment of the Unix environment is Data General Corp with a market share of 22%, closely followed by NCR Corp with 20%. This pair is followed by Hewlett-Packard Co, 14%, IBM Corp, 10%, Siemens Nixdorf Informationssysteme AG, 8%, Tandem Computers Inc, 7%, Ing C Olivetti & Co SpA, 5%, Silicon Graphics Inc, 3%, Fujitsu Ltd, 3%, ICL, 3%, and Digital Equipment Corp, 2%. Spain's healthy-looking growth figures for the Unix market are overshadowed by those reported by the market researcher for other European countries - Germany: 26%, Switzerland: 26%, the UK: 21% and Belgium 19%, for example.

SUNRIVER WILL CAN SOLOMON IF ORACLE NC TAKES OFF

SunRiver Corp, Austin, Texas, is covering all the bases when it comes to Internet terminals. The company is one of those that will build and rebadge Oracle Corp's much-hyped network computer but will also ship its own Java computer - codenamed Solomon - by mid-year (UX No 587). SunRiver didn't want to wait for Oracle's Network Computer - which won't ship until at least 1997 - and designed its own terminal with a \$1,000 Java Virtual Machine on top of a Mach microkernel-based OS that resides locally in flash memory and can be upgraded from the server. Solomon can access Windows applications and includes IBM Corp 3270 terminal emulation. But if the Network Computer proves to be more popular, SunRiver says it's prepared to drop its own line. Both machines will be built at SunRiver's Long Island plant, which can churn out one million units a year. SunRiver's terminal may get overshadowed by Sun Microsystems Inc's similar offering, but the company believes that its customer base and sales channels will provide equally strong sales in the corporate market, its sole focus. SunRiver also released its first quarter financial results yesterday. It reported first quarter net profits of \$360,898 which fell 80% due to last year's figures including a \$1.2m contribution from certain discontinued operations and high levels of expenses and interests drove profits down. But the company managed to double its revenues to \$38.4m. Net earnings per share fell to nil this time, from \$0.04 previously. The company has filed to issue 11.2 million shares held by existing shareholders which includes 568,000 shares which may be issued upon exercise of certain warrants and approximately 1.7 million shares which may be issued and offered from time to time by the company.

UNISQL WORKS ON INTRANET TECHNOLOGY FOR YEAR-END

Six-year-old object-relational database company UniSQL Inc, Austin, Texas, will debut a web-based environment for Intranets by year-end it claims will provide access to all data in all formats across the network from a single server using its UniSQL/X database and tools. It'll be more than an HTML forms engine, the company claims. The base technology is a proprietary system developed by its Japanese NTT Data backer to run on the UniSQL database and sold only in Japan. UniSQL will add its own technologies and productise the software for sale in the US and elsewhere. Far from being squeezed by those relational vendors which are developing their own object strategies or other players in the object-relational linking space, UniSQL claims the marketplace is now just about intersecting its technology and believes its "time has come." The 85-person, privately-held concern will be up to 100 staff by next month and is currently working through a plan to go to an IPO. The company, which claims 600 seats, excluding those from its OEMs such as CinCom Systems and NTT Data sponsor, says it is in profit and is currently sitting on a four-year, \$10m licence it's sold to a unnamed Korean company. Meantime, UniSQL this week unveils version 3.5 of its database for use with the SQL3 syntax which supports the definition and management of complex objects, the adoption of which, by ANSI and ISO, has been shepherded by UniSQL. 3.5 also includes improved scaling and support for larger database sizes. It supports C++, Smalltalk, C, Visual C++ and VisualWorks/SmallTalk APIs. Prices go from \$12,000 for a four-user Unix licence - from \$10,800 on NT.

SEQUENT'S NUMA-Q GETS FIBRE LINK TO RAID FROM ANCOR

Sequent Computer Systems Inc's taking Minnetonka, Minnesota-based Ancor Communications Inc's Fibre Channel switches and integrating it with its next-generation ccNUMA-Q based systems. Sequent's developing a SCSI-to-Fibre Channel bridge for accessing RAID storage devices and will retain exclusive rights to sell the bridge product under its own name. Ancor values the deal at up to \$30m over the next two years. Key to Fibre Channel's performance, says the company, beside raw transmission speed - it claims its Fibre Channel systems deliver available per-node bandwidth of up to one gigabit per second, and aggregate network throughput of nearly a terabit - is the use of a flexible circuit/packet switched topology to connect devices. Through the switch, Fibre Channel establishes multiple simultaneous point-to-point connections. Devices attached to the switch do not have to contend for the transmission medium as they would in a network using intrinsic flow control and acknowledgment capabilities. Ancor's switching technology is already used by the likes of IBM, Hewlett-Packard and AT&T.

UNISYS OFFERS NEW LINE OF PCs AND SERVERS

Unisys Corp last week rolled out its Aquanta brand of PCs and servers - the first offering from the company after it split its PC and mainframe division - as part of its plan to return to profitability this year. It plans to invest \$10m in PC marketing this year. Unisys' PC sales grew 73% last year up from 68% the previous year and aims to climb four positions on the vendor ladder from about 17th place this year.

~~The company is better known for its mainframe business, but having swapped around staff in the PC division so that it now has 200 engineers and 50 marketing people instead of its previous 500 to six ratio, it hopes to change that.~~ The firm has reseller agreements in 114 countries, but says it needs to bring VARs on board to cover some geographic holes and will attract them with new business strategies, such as keeping ownership of PC kit before resellers move the hardware. The firm also boasted about its "personality servers," customised servers

with Internet capability, as well as a new manufacturing process which allows it to track orders every hour. Unisys claims its PC division was profitable last quarter but doesn't split up its results, saying it's concerned with building partnerships this year, not volume. Maybe it should be. Unisys as a whole reported first quarter net losses of \$13.4m on turnover that fell 2.9% to \$1,423.1m. The Aquanta line of PCs are targeted at corporate users and include desktop servers and notebooks. They are available now and the machines make use of the Unisys built-to-order manufacturing capabilities to enable users to custom-order hardware and software as they become available. The Aquanta ES mid-range tower comes with one or two Pentium or Pentium Pro processors with an EISA bus, a PCI bus and SCSI interface. The ES is aimed at LAN applications with 25 users or more. Prices start at \$4,000. The two-way Aquanta DS server can be configured with two 166MHz Pentium or two 200MHz Pentium Pro processors. The DS has nine PCI slots and can accommodate up to one Gb of RAM. The EISA bus-based DS is priced from \$8,800. The Aquanta QS uses up to four 166MHz Pentium or 200MHz Pentium Pro processors. The EISA and PCI bus system with 10 PCI slots and up to one Gb of RAM costs from \$8,900. The tower form factor servers are also available as rack mounts. Prices start at \$12,000. There are one slot, three slots, five slots and mini tower form factor desktops. The Aquanta SC uses a 75MHz to 133MHz Pentium and is priced from \$1,200. A floppy drive is optional.

RATIONAL ADDS JAVA SUPPORT

Continuing to broaden its tools support away from its traditional Ada programming base Rational Software Corp, Santa Clara, California, has added a Java module to its Rational Rose software engineering family. Rational Rose/Java is claimed to provide support for what it calls round-trip engineering, the generation of Java source code from object designs, the editing of Java source code and the reverse engineering of code to update the design. It's also added a Java-ready extension to its Rational Apex C/C++ environment, integrating Sun's Java Development Kit with the Apex C/C++ compiler for mixed language development and high-end configuration management for large-scale Java applications. Apex formalises and enforces relationships between software components and Java classes during compile time. Both Rational Rose/Java and the Java-ready version of Rational Apex C/C++ betas in August and will ship in November. Rational Rose/Java prices go from \$2,400 on Windows; Apex C/C++ goes from \$7,500 to \$12,500 depending on configuration and bundling. Rational claims it has a 30% market share of the Ada market, a market share it expects to remain stable, while its Rational Rose family which comes in vanilla, Ada, C++, Visual Basic and SmallTalk variants derives over fifty percent of revenues from the telecommunications industry. Rational reported fourth quarter net profits up 155.9% at \$3.8m, on turnover up 31.3% at \$25.7m for its year to March 31. Net losses were \$4.0m, after acquisition-related charges totalling \$14.5m, against profits of \$4.7m last time, on turnover that rose 25.0% to \$91.1m. Net per share rose 90.9% to \$0.21 in the quarter.

SUN PACKAGES INTERNET SOFTWARE FOR TELCOS

SunSoft Inc has released a clutch of Internet connectivity and messaging products aimed squarely at its growing telecommunications market. Products include Solstice PPP 3.01 enabling Solaris to act as an internet router, Frame Relay 2.0 for interconnecting remote LAN's across a WAN, Solstice X.400 for electronic data exchange, Solstice X.500 Directory Products for distributed storage of data objects and Common Management Information Protocol (CMIP) 8.2 for development and deployment of Telecommunications Management Network applications. CMIP supports TCP/IP and comes Internet-ready, says Sun. It's dished up as two versions, CMIP Standard Development Environment (SDE) including X/Open's XMP/XOM API's for developing management applications in the Open System Interconnection and a runtime Solaris RT for low cost deployment of applications using CMIP SDE. Solstice PPP goes for \$1000, Frame Relay is \$1,300, X.400 and X.500 for Sparc and Solaris x86 prices are \$4000. CMIP SDE goes for \$5000, CMIP RT is \$2000.

Entry-level desktop

The Aquanta DL entry-level desktop is a three slot PCI bus system using a Pentium clocked at up to 166MHz and is priced from \$1,200. The mid-range Aquanta DX uses a Pentium clocked at up to 166MHz, telephony software and a Universal Serial Bus. Prices start at \$2,000. The Aquanta DM mini tower is the DX in a mini tower configuration with seven expansion slots. Prices start at \$2,200. The Aquanta DM/6 supports a 200MHz Pentium Pro with up to 512Kb L2 cache. It's aimed at high end business and technical markets and starts at \$5,400. Aquanta MN notebooks with 120MHz Pentiums start at \$2,100 in various configurations. The Aquanta QS tower server and Aquanta DX mid-range desktop model are rebadged versions of existing machines, but the other four servers and five PCs are either newly designed or newly configured. The family supports Windows NT, Windows 95, Netware, SCO OpenServer and OS/2. Already a Solaris x86 licensee, Unisys expects to sign a further agreement with SunSoft Inc within the next 90 days to sell Solaris and possibly other shrink-wrapped SunSoft products on its new line of Aquanta PCs and PC servers. Unisys expects to phase out its existing line of PCs and PC servers within the next 60 days. If Unisys sticks to its pattern of lowering prices every 88 days, expect to see cuts in late June.

ARACHNID SPINS OUT WEBPOWER AUTHORIZING TOOL

At the end of the month Menlo Park, California-based start-up Arachnid Software will send to beta a WebPower HTML authoring suite and server application, which it says includes an object layer running above Oracle's 7.2 relational database. WebPower consists of a set of Web authoring and content management tools including an authoring engine for interacting with authoring clients, plus an HTML generator. Arachnid is positioning WebPower as a new generation standard for CGI applications, extending existing HTML editor limitations. Typically HTML editors understand HTML 2.0 tagging, it argues, but include a whole host of menu items to enable tagged documents. Some of the more advanced editors provide palettes which can be configured to enable such things as hyperlinking and image placement. But that's where it stops. With WebPower, says Arachnid, an author connects to WebPower's authoring server which recognises the user and the users details such as e-mail, telephone, fax and phone. These values are attached to all directories and documents owned by that user. Authors are able to add attributes to documents, and these attributes are used in conditional statements, substitution variables or list elements where substitution variables are extensions to HTML, so that when a variable is referred to, only the name of the variable is inserted into the text. Once an HTTP server requests a document, the HTML generator compiles the document, replacing variables with appropriate values, and then sending it on its way. As many substitution variables as needed can be created, claims Arachnid, with variables inherited down the document hierarchy. The server knows what documents are owned by whom and are checked as they come in and go out. WebPower extensions to HTML are only visible to the authoring side and replaced by the appropriate text during the document compilation process. Arachnid claims typical document compile times tend to be 0.05 seconds. The company will sell WebPower direct and attract VAR's and international distributors by offering up to 40% off its list price. WebPower is compatible on all browsers and supports most Unix, NT, MacOS and OpenVMS. Prices start at \$600.

HDS NETWORK COMPUTER WILL "CONNECT TO ANYTHING"

As IBM Corp, Sun Microsystems Inc and Oracle Corp promise to change the world as we know it this week with their network computing standards announcement, King of Prussia, Pennsylvania-based ~~HDS Network Systems Inc~~ believes it can offer a different perspective. The X terminal specialist company will launch its \$750 network computer on June 11 to anybody that cares to listen (UX No 578). The company believes the trio of heavyweights and their friends are cooking up what will prove to be a proprietary spec, whereas HDS' offering is a totally open system. HDS' executive vice president of marketing Michael Kantrowitz said the thing can run applications on any server platform: mainframe, Unix or PC. It runs HDS' own Posix-compliant HDS NetOS on the network computer, which includes a Spyglass Inc Web browser and a Java Virtual Machine to support Java applets. The company hopes to get some OEMs for the operating system and the device itself. It has an Intel Corp i960 RISC processor at its heart - "a real screamer", according to Kantrowitz, and comes with 4Mb RAM, upgradable to 128Mb. He believes the network computer has every angle covered in terms of platforms. It has built-in Internet access with a choice of service providers via a TCP/IP stack with a Point-to-Point Protocol driver. The operating system can run on an optional hard drive, and floppy drive is also an option. Kantrowitz was positively evangelical about the device's openness. It can run any legacy application, he claimed, including IBM 3270 and 5250 terminal emulation, Digital Equipment Corp VT320 emulation, X for Unix and PC applications using the ICA 3.0 protocol developed by Citrix Systems Inc, previously used for communications between servers and X terminals. Microsoft Corp has licensed ICA for future versions of Windows. HDS will show a prototype of the network computer at JavaOne in San Francisco at the end of the month. The kit comprises the box, a 17" grey-scale monitor, keyboard and a mouse. Any HDS X terminal built since 1991 can be upgraded to a network computer for \$50, with software downloaded from HDS' Web site and have all the capabilities of the network computer, said Kantrowitz.

QUALIX ACQUIRES AUTOMATED NETWORK TECHNOLOGIES

San Mateo, California-based Qualix Group Inc, which makes the QualixHA monitoring, high-availability failover and recovery system has acquired three-year-old Automated Network Technologies Inc, an Englewood, Colorado-based software development company on undisclosed terms. Automated's technology is said to enable users to distribute, migrate and copy files across networks, mirroring data across a wide area network. More specifically, users can define multiple migration levels simultaneously for data archiving and duplication to tape back-ups, optical jukeboxes or RAID devices in real time. So, at the end of the day, a virtual back-up can be made of the data, which is spread across the various back-up devices simultaneously. End-users can then access the data as if it were local, when it still resides on the remote back-up device. Privately-held Qualix is five years old and was originally funded by venture capitalists. The acquisition was through a mixture of cash and shares - the company will not say what the split was or how much was involved - and was funded from operations as the company has been cash-positive for some time. QualixHA supports a number of RAID products and is up under IBM Corp, Hewlett-Packard Co and Sun Microsystems Inc Unices. By the third quarter, Automated's stuff will be available as an add-on to QualixHA, which is available now.

FORCE ADDS SPARC 20 CLONE

Sparc cloner Force Computers Inc has added a new Sparcstation 20 compatible CPU-20VT box including a dual MBus synchronous processor bus to support up to four Ross Technology 150MHz HyperSparc processors, dual SCSI and Ethernet interfaces and ECC (Error Correcting Code) memory. It comes with what the San Jose, California-based company claims is the highest 64-bit VMEbus performance, a dedicated I/O co-processor for handling tasks such as VME data transfers and direct SBus interconnection based on Force's FGA-5000 ASIC. It enables the VMEbus to reach speeds of up to 40Mbytes/sec, claim Force. It ships with two SBus slots for graphics and I/O expansion. The CPU-20VT goes from \$20,000 and ships in July.

INFORMATION BUILDERS RE-JIGS RELEASE DATES AND REVEALS CACTUS DEVELOPMENT TOOL

Information Builders Inc has revised a few of its product releases and added a new one. The New Yorker's work with IBM Corp's Tivoli Systems Inc ~~will spawn an EDA Tivoli Management agent and server engine at the end of the third quarter.~~ It was originally slated for the second quarter. The company has also been working with Visgenic Software Inc to add more ODBC drivers to EDA/SQL and they will be out on June 30. Information Builders has development tools for three-tier client-server systems called Cactus that will be released on June 12. It will have its own 4GL scripting language and will offer support for Java from the fourth quarter and will run on mainframes, Unix and Windows. It's embedding Momentum Software Inc's X*IPC message-oriented middleware, a message switch, hub and server in EDA/SQL, also due in the fourth quarter. EDA/Exchange, eliminates the need to access databases, according to the company, transferring meta data and other design data between repositories and CASE tools. The EDA catalogue on the EDA server will be out in August, having also been originally slated for the current quarter (UX No 568).

ART TECHNOLOGY CLAIMS FIRST DEVELOPMENT ENVIRONMENT WRITTEN IN JAVA

Art Technology Group Inc claims the race is over to release the first application development environment written in Java with its announcement of Dynamo 2. Coming five months after the first iteration, the Boston, Massachusetts company has re-engineered the inaugural Dynamo for Java standards, having written the thing in the language itself (UX No 566). Four and a half year-old Art is made up mainly of Media Lab and other Massachusetts Institute of Technology graduates and has been internally funded thus far. The development environment includes Dynamo Engine that ties together an object-oriented database, server-side objects, an application framework and the programming environment. It is compatible with all the major HTTP servers, supporting Netscape Communications Corp NSAPI standard, and the Common Gateway Interface. Support for Microsoft Corp's ISAPI is scheduled for June. The SQLgate internal object database is merely an interim solution, admitted chief technology officer Joe Chung. It has an ODBC gateway, and this will eventually be replaced by a JDBC one, he predicted. Art is also planning support for the Versant object database. Dynamo Gears are a set of reusable components that have not changed since the first release. They include things like Session Tracking, Web-O-Grams, Activity Monitor and the like. By June, Discussion Thread and Dynamic Advertisement gears will have been added. Art has written an electronic commerce application for Stream International, which provides technical support for Microsoft products and IBM Corp's Lotus Notes, among others. The Art stuff is an Internet site for sale, distribution and support of products. And over in Japan, NTT Data is using Art to put up an entertainment site to satiate the current Japanese need to prove you are something on the Internet. It will be up by mid-July, said Chung. Art is selling Dynamo direct at the moment, but is actively seeking marketing and distribution agreements. Available now for SunSoft Inc's Solaris 2.3, 2.4, 2.5, Windows NT 3.51 and Irix 5.3, it costs \$5,000 per licence, which includes everything mentioned and one year's support.

STARWARE BECOMES STARQUEST; LAUNCHES STAR PIPES

StarWare Inc, a developer of data communications software for connecting IBM Corp mainframes to PC and Unix systems, has changed its name to StarQuest Inc and introduced a couple of new products. The Berkeley, California company has unveiled StarPipes, a TCP/IP to SNA gateway that enables IBM midrange, Unix or DB2 mainframe databases to be accessed via TCP/IP networks. It works with the company's StarSQL Pro, which is a rev of its flagship StarSQL ODBC-to-Dynamic Relational Database Architecture (DRDA) driver for remote access to IBM DB2, midrange or Unix systems from Windows-based PC applications. StarPipes is up under Windows NT 3.51, Hewlett-Packard Co's HP-UX, IBM's AIX 4.1, OS/400 3.1 and 3.6 and SunSoft Inc's Solaris 2.5. It costs \$2,500 and is available now. StarSQL Pro is also out now for \$230 for a stand-alone client; \$3,000 for StarSQL Pro server for one to four connections and \$12,500 for a StarSQL Pro 100-user licence. Meanwhile, the company's work with IBM to develop Unix-to-AS/400 connectivity software will bear fruit in July with StarQuest's release of CA400 for Unix, slightly later than planned. It will cost \$400 per licence. IBM's version, saddled with the lengthier Client Access 400 OS for Unix moniker will be released in November, no price yet.

MOTOROLA OFFERS 200MHz POWERPC 603e AT JUST \$360

Motorola Inc used Apple Computer Inc's developers conference to announce pricing and availability on the new PowerPC 603e RISCs for desktop machines. Clocked at 200MHz, 180MHz and 166MHz and fabricated in 0.35 micron CMOS, it costs \$360, \$256 and \$254 respectively when you order 1,000 or more - which compares with \$498 for a Pentium clocked at 166MHz - and they are available next month. Apple plans to use the 200MHz PowerPC 603e in systems out before the end of the year. At 166MHz, the 603e operates in the 3.0W power dissipation range required for portables; the 200MHz version is over three times faster than the original PowerPC 603 announced in October 1994 as a result of doubling caches and raising the clock; die size is 80 square millimeters. IBM Corp and Motorola also announced that the PowerPC 604e design in 200MHz, 180MHz and 166MHz versions was also now complete.

HP AND NETSCAPE GENERATE A LOT OF NET AIR

Attempting to raise its profile in the corporate Internet/Intranet world, Hewlett-Packard Co last week made a big noise about what everyone and their dog seems to be doing already; creating net-based Unix and NT solutions using Netscape Communications Corp products. There were some references to enhancing printing and publishing for the Internet, including the creation of a customized version of the Navigator browser for use with future HP LaserJet printers, but the only real development appears to be in the direction of allowing HP OpenMail, Netscape Mail Server and Netscape News Server to exchange traffic and the integration of HP OpenView network management with Netscape servers. It's some way short of the comprehensive alliance covering technology sharing and product development, as well as joint marketing, sales, support and training HP promised, and as far as we could understand from the call, the only input Netscape will have is to "train the [HP] trainers." Netscape president and CEO Jim Barksdale said each of the relationships his company has with major vendors, including those with IBM Corp and Sun Microsystems Inc, address different sections of the industry, however, he could only characterize the latest one as important for HP's cross-platform and end-to-end Unix solutions. HP will also resell Netscape SuiteSpot and FastTrack on HP-UX and NT-based NetServer systems.

NETSCAPE UNVEILS ON-LINE PAYMENT PLANS

Netscape Communication Corp yesterday unveiled its plans to market on-line payment software for merchants and consumers later this year. The company has stripped the security and transaction software it already uses in its Commercial Applications line for use in a LivePayment component for its SuiteSpot Web server software. The company says it has the support of CyberCash Inc, First Data Corp, GE Capital, MasterCard, Verifone and Wells Fargo Bank for LivePayment, which it calls an Internet cash register allowing companies to accept credit card payments from customers over the Web. It'll ship in the fall. It includes templates to build payment-ready applications and can receive payments from Secure Sockets Layer-enabled clients. Netscape says it'll support the emerging Secure Electronics Transactions protocol in LivePayment. The consumer portion, due by year-end, will include a so-called wallet technology bundled into the Navigator browser that will allow consumers to use their credit cards to buy products over the net. Credit card and other electronic payment details would be stored on a user's hard disk and accessed every time Navigator is used to buy products and services on-line. Netscape is short on detail but *The Wall Street Journal* believes the client software used will be an improved version of the wallet software CyberCash and others already ship using additional technology being created by Netscape and Sun Microsystems Inc based around a payments standard all three are working on. Very few companies accept payment with Cybercash software, partly, the paper observers, because merchants are still waiting for a standard to emerge that will allow them to collect and forward encrypted credit card information to banks and get immediate information sent back on whether the user has credit. It says Internet merchants that currently accept credit-card payments simply ask for the credit-card numbers and phone it into the bank later. Given the seeming inability for banking, technology and Internet merchant industries to agree on a standard it's clear that consumer confidence in the security of on-line payment will also have to be raised.

BORLAND OFFERS \$64m IN SHARES FOR OPEN ENVIRONMENT

The root-and-branch reorientation and the recovery at Borland International Inc are so far advanced that the company now feels fit and able to start thinking about acquisitions rather than divestments, and the company has reached definitive agreement to buy Open Environment Corp for about \$64m in shares. Open Environment shareholders are offered 0.51 Borland share for each Open Environment share - or shares worth at least \$6.50 a time - as long as Borland shares don't fall below \$12.75 or rise above \$25 in which case the ratio will be reassessed. Borland will take a charge of around \$3m for the transaction against its second quarter. Open Environment's share price crashed last month after it issued a profits warning and it ended its first quarter recording a loss of \$4.05m against a profit of \$174,000 in the corresponding period the previous year on turnover that dived 31% to \$4.28m. Open Environment, based in Boston, a 1989 spin out from Cambridge Technology Partners Inc, admits it severely over-stretched itself, failed to close some large orders on time and was operating with an unfocused sales strategy. Borland hopes Open Environment's Entera client-server middleware will propel its Delphi, C++ and Java development environments into the enterprise space. Entera is used to link the elements used in application development, deployment and management across Unix, Microsoft and mainframe environments and runs on a variety of transports including Distributed Computing Environment (DCE). Open Environment has around 300 accounts and started life focused on DCE-based application development but re-positioned itself for three-tier development once it became clear DCE wasn't going to take over the client/server world. At one time the company touted the fact the majority of its users were running over DCE, now it says that's not the case. Following Open Environment president and CEO Nathan Morton's departure last month, Philip Copeland, founder and chairman of Australian repository and tools house Jarrah Technologies Pty Ltd which OEC acquired last August is acting CEO whilst VP and co-founder Adam Honig is interim president. Borland will retain all of Open Environment's 200-odd staff as well as its Boston, Massachusetts-based headquarters and research and development base even though it expects to eliminate the latter's computer-based learning, Internet products and central management groups. Open Environment has 77 people in sales and marketing, 60 in support, 64 in R&D and 23 in admin. 116 are based in North America, the rest in Europe and the Pacific Rim. Borland touts the worldwide marketing channels and technical support team it picks up in the deal. It's not clear how Open Environment's existing relationships with companies such as Business@Web and Centura Software will be effected. Borland shares closed almost a dollar down at \$15.12, Open Environment shares were down \$0.62 at \$7.50 on the day.

COMPLAINING IT HAS BEEN LET DOWN, IPC SELLS OUT OF BULL - AT PROFIT

IPC Corp Ltd generated considerable interest and attention last year when its name appeared on the list of contenders for a stake in Compagnie des Machines Bull SA, and many people had to rush to look the relatively obscure company up. By then much better known, it later bought a 3.27% stake in the second tender - and now it has sold the stake again. Moreover it must be one of a tiny handful of holders that have actually made money selling Bull shares in recent years - it cleared \$17m on the deal, having grossed \$27m from the sale. IPC and Bull announced a partnership in March last year to make and distribute personal computers made by Zenith Data Systems, control of which has since passed to Packard Bell Electronics Inc, in the Asia Pacific region. It also agreed a printed wire board plant in China and a Smart Card joint venture, and the two formed a joint Zenith Data Systems (Asia Pacific) Pte Ltd. But IPC says the sale to Packard Bell has altered the picture and the other Asian operations of the joint venture have not materialised. IPC will also sell its 49% in the venture.

MR SOKOL GOES TO WASHINGTON TO TELL LEGISLATORS THAT TIME IS RUNNING OUT

Ah - the year 2000 problem? I've got just the thing you want right here, Marc Sokol, vice president of advanced technology at Computer Associates International Inc, told Washington lawmakers last week. And lo and behold, it's a CA product. As the sands of time slip through our fingers there is no time left to fix this thing by hand, so automated software tools are the only answer, Sokol told a Congressional Committee hearing entitled "Solving the Year 2000 Software Problem: Creating a Blueprint for Success". "There's too much software code to change and too few weekends to do it", he said: three years and 230 days, to be precise. Every date field must be located and fixed, which means for large enterprises hundreds of millions of lines of code, at an estimated cost of \$0.30 to \$0.50 per code to do it manually," according to Sokol. And in true salesman fashion the CA solution will cost just a fraction of that, and to prove it works, CA have tried it on themselves! CA claims to have analyzed and updated millions of lines of its own code. The product is CA Discovery 2000 Solution.

ICL ADDS PENTIUM PRO AND HYPERSPARC

ICL Plc is adding Intel Corp's 200MHz Pentium Pro to its Fujitsu ICL SuperServer J600i-Series in the third quarter, as the single processor J650i, the dual J652i and the quad J654i. The J650i is rated at 8.7 SPECint95 and 6.68 SPECfp95. It delivers 78.1 SPECrate_int95 and 60.0 SPECrate_fp95, the J652i is rated at 153 SPECrate_int95 and SPECrate_fp95. ICL puts the J654i up against HP's four-way 120MHz K420 rated at 163 SPECrate_int95 and 248 SPECrate_fp95 and Sun's 167MHz Ultra enterprise estimated at 200 SPECrate_int95 and 255 SPECrate_fp95. It says its machine will do 292 SPECrate_int95 and 125 SPECrate_fp95. No prices. The J650i line comes in above the existing Pentium Pro 166MHz SuperServer J630i and the Pentium-based one, dual and quad SuperServer J500 Series. Meantime the long gestating 142MHz bin-end HyperSparc-based SuperServer Js with 1Mb cache are now said to be due at the end of June (UX No 582). ICL's also started shipping its Gi family of single and dual-way Pentium-based TeamServers positioning them for small to medium-sized departmental workgroups (UX No 580). It expects the servers to be used as mid-range file and print LAN servers or mid-sized application or database platforms. The models come as the 100MHz G530i, the 133MHz G550i and the 166MHz G580i with up to 4Gb of cache, 256Mb of RAM, four dedicated PCI slots, two EISA and one shared slot. A uniprocessor G580i is pegged at 4.15 SPECint95 and 3.16 SPECfp95 and delivers 37.2 SPECrate_int95 and 28.6 SPECrate_fp95. It hasn't got SPEC marks for the other models yet. Operating system options are SCO UnixWare 2.02, SCO OpenServer 5, NT and NetWare. The G530i goes from £5,000, the G550i is £5,600 and the G580i from £6,000.

MARKET REACTS HARSHLY TO BLIP AT HP

In these overstretched markets, it's not good enough simply to come out with superb figures quarter after quarter - your figures have to be pluperfect and exceed all expectations every quarter. So it was that shares of Hewlett-Packard Co tumbled \$8 to \$104.75 in opening trading on the New York Stock Exchange last week as traders latched on to the fact that the cost of goods sold rose to 65.8% of turnover in the February to April quarter, from 64.5% in the fiscal first quarter and 62.7% in the year ago quarter. The company blamed delays in workstation products and its product mix for the rise. And its earnings per share of \$1.37, up from just \$1.10 a year ago, was shy of Wall Street expectations, where the best guesstimate was \$1.45. Hewlett also said order growth in the second quarter was not as well balanced as it has been. Reasons for the slightly adverse trend included the workstation delays, also a delay in disk mechanisms, a greater proportion of low-margin personal computers and printers in its revenue mix, and competitive pricing pressures. Operating expenses increased 23% over the year-ago quarter and were 23.7% of net revenue, but that compares with 25.6% of net revenue in the same quarter last year but 22.6% in the first quarter of fiscal 1996. "We improved our operating-expense ratio compared with last year, but we didn't do as well as we had hoped," declared chairman Lewis Platt. Inventory was 18.7% of net revenue, compared with 16.6% in last year's second quarter, 20.3% last quarter. Inventory declined slightly during the quarter," said Platt. "But inventory still is higher than we want it to be in some areas," he added. The company nevertheless believes its growth rates in many parts of its business are outpacing overall market growth - and that is certainly the impression from the outside - despite the intense competition.

UNIGRAM TO SPIN OFF NEW INTERNET BOOK

Next week *Unigram.X* and its equally irrepressible younger sister *Client Server News* will be joined by a third sibling, *OnLine Reporter*, a new weekly newsletter dedicated to the Internet juggernaut and the power struggle that it's unleashed. If ever that overused phrase "paradigm shift" was apt it's now in connection with the Internet. There's not a company in the industry that's not worried over whether it'll still be standing after the deluge - and that goes for Internet leaders like Sun as well as Microsoft. We reckon it rates its own book and that we, with our experience and access, bring something to the party. *OnLine Reporter* is pledged to provide the same kind of strategic information and good honest gossip that *Unigram* and *CSN* are famous for. It will also partake of that same inimitable style, that touch of brashness that make *Unigram* and *CSN* so readable. We hope you will enjoy it, subscribe to it and make money off of it. *OnLine Reporter*, edited by Chris Rose, who made *PowerPC News* great, will launch Wednesday May 29 at the JavaOne Developers Conference in San Francisco. The first weekly issue will be dated June 10-14 and will be available to those who take it online on Friday June 7. Individual subscriptions will regularly cost \$595 online/\$695 paper for 52 issues but you can get it for \$495 or \$595 if you act right now. As with *Unigram* and *CSN*, it will be available online to groups, departments and companies at OEM prices. For your convenience, you will find a fax-back subscription form enclosed with this issue or you can use the one up on our miniWeb site, currently under construction, at <http://computerwire/online>.

X/OPEN REVEALS CORBA-BASED SYSTEMS MANAGEMENT AGENDA

X/Open Co Ltd has quietly re-positioned its distributed systems management specification programme around what it believes are some pragmatic goals predicated on the use of an Object Management Group Corba framework to implement them. Other specifications being created for network management will use the same Corba framework model. Within the framework X/Open specifies the use of Remote Procedure Calls (RPC) for systems management and SNMP and CMIP for network management tasks, though not any particular implementation. The standards group has already created an XMP API specification for consistent access of SNMP and CMIP protocols whilst application-level specifications are being developed using RPC as the underlying mechanism.

Managing objects

The systems management working group's common facilities management project is expected to advance its preliminary specification for managing instances of objects - a specification based upon Tivoli Systems Inc's original submission - to become a ratified Common Applications Environment (CAE) component by the end of the first quarter of next year. The spec's currently being put through its paces by OMG, which is also expected to adopt it; any changes will be fed back into the X/Open document. The standards group defines CAE specifications as stable specs designed to form the basis of X/Open-branded products. X/Open hopes the industry will then use its specifications for product development and procurement purposes. An event management service specification which extends OMG's event services by adding other management features is being worked-up into an CAE specification for year-end. It'll define an event management service for receiving events and a mechanism allowing applications to register to receive events in which it is interested. A preliminary topology management service supporting the interchange of topology information is due in the first quarter of next year. A CAE hierarchical storage management API based on Data Management Interface Group work is due this quarter. Multiple CAE specifications being developed for performance management in conjunction with the Performance Management Working group are due by year-end.

Print spec

A distributed software administration specification, originally based upon Hewlett-Packard Co submissions, also specifies DCE bindings to go along with an existing Posix software administration standard which will become a CAE spec by year-end. A preliminary backup services API is now being pushed to a full CAE spec by the end of the year. A preliminary distributed print spec which extends an existing Posix print standard is due in the fourth quarter. Systems management utilities specs that embrace the traditional Unix systems management commands will become a CAE spec in the fourth quarter. In conjunction with the Network Management forum X/Open is creating a management protocol translation spec for static, compile-time and dynamic run-time translation that'll allow ISO-, SNMP- and OMG-based network and systems management systems to work together. Two preliminary specification documents are expected, one this quarter and the other by year-end. Also with the Network Management Forum, X/Open is building C++ interface to ICO CMIP. A preliminary spec is due this quarter. Most of the above work is designed to operate at the server level. At the desktop level X/Open says it is just about to open a dialogue with Microsoft Corp about how it can best make use of what Windows and NT users already have in their systems to build management specifications for.

TADPOLE REDUCES ITS LOSSES, BUT PROFIT IS NOT IN PROSPECT FOR THE SECOND HALF

Tadpole Technology Plc is at least swimming in the right direction now. The Cambridge-based company is pinning its hopes on shipments of its Digital Equipment Corp Alpha 21066-powered Alphabook I announced in December 1995 (UX No 567), to bring it back to profitability "at the earliest opportunity". The company saw losses tumble to £1.7m from £5.9m for the same period last year on turnover that rose 14% to £13m in the six months to March 31. Tadpole has appointed Pioneer-Standard Electronic Inc as the first North American distributor of the Alphabook I, a distributor with 53 branches and a large network of value-added resellers, and believes this should boost sales of the product considerably. The company has also, it said, improved manufacturing efficiency and quality and improved component pricing, resulting in a four percentage point increase in gross margin over 1995. Chairman Richard King promised that Tadpole will continue to control costs and strengthen its distributor and value added reseller network this year. He says he looks for this strategy to result in a further reduction in losses in the second half of the fiscal year.

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Amdahl duly announced its EnVista clustered Windows NT servers last week; it says it expects there to be no decline in its Unix business. It's supposedly co-developing a high speed mesh interconnect designed to cluster NT servers in non-ccNUMA arrangements. It also claims it is working with **Intel** on the design of a future 64-bit chip, but wouldn't say whether that's Merced.

Hewlett-Packard Co's putting its optical jukebox robotic technology together with Quantum Corp's mid-range DLT4000 digital linear tape drives into a new family of subsystems that can store up to 2Tb data. The desk-side tape units can back up around 350Gb every eight hours and are designed for use with HP's 9000 series Unix servers. HP will support high-end DLT7000 drives in future Advanced DLT Libraries; initial versions ship in August.

Motorola Inc's embedded MPC860 PowerQUICC Quad Integrated Communications Controller, the PowerPC counterpart to its 68000-derived 68302, will be shipping in volume in mid to late June, but at reduced prices to those quoted by the company at its launch last September (UX No 555). Four out of five members of the MPC860 family will ship in June, with the high-end MPC860MH holding off until the year-end. The basic MPC860 was quoted at \$70 for 10,000 clocked at 25MHz and \$105 at 40MHz, but the final prices won't be out until the chips are shipped.

Tera Computer Co, formed back in 1987 to make supercomputers, but with no product to date, announced first quarter results reflecting the cost of building a prototype of its Multithreaded Architecture system high-level computers, which it is doing in conjunction with **Unisys Corp**. The Seattle, Washington-based firm ran up net losses of \$3.6m in the quarter to March 31, up from \$508,094 a year ago. These included a 136% jump in research and development to \$3.2m. There is obviously no turnover. The company said some \$1.5m of expenses were directly related to manufacturing the prototype, and are likely to "continue to be significant" until the thing is produced. The design is complete, it just has to put all the pieces together.

Dean Witter is saying that **Sequent Computer Systems Inc** Intel-based SHV Pentium Pro and NUMA products are ahead of schedule, and as we predicted the 200 to 300 NUMA-Q based quad boards are looking at a December delivery date this year (UX No 588). In addition, Dean Witter believes the IBM Corp 40 Mips CMOS mainframe, code-named Maestro is likely to be out this September.

IBM Corp's Advanced System Development Corp joint venture at China's largest university, Tsinghua University in Beijing's western suburbs, will begin delivering reusable object-oriented software components next month. The initial OpenDoc-compliant offerings will include objects such as tables, charts lists and address files, and more than 50 more will be added by the year-end, including an intelligent dialer for mobile agents, Java applets and VisualAge development parts. IBM is also pumping \$25m into 20 Chinese universities that will offer object technology on their curricula later this year.

Silicon Graphics Inc's Mips Technologies Inc claims its semiconductor partner companies have shipped more than 10m processors since the architecture began in 1985, with 80% of those coming in the last 18 months. They are manufactured by **Integrated Device Technology Inc**, **LSI Logic Corp**, **NEC Corp**, **NKK Corp**, **Philips Semiconductor** and **Toshiba Corp**.

Now why would a privately-held company like **Quark Inc** be hiring a CFO and a bunch of other VPs and executives with experience at public companies if it weren't planning to go public itself?

Object Management Group duly launched its CorbaNet strategy at ObjectWorld East (UX No 588). It's simply a vehicle for vendors to show their CORBA 2.0 conformance and a demo application can be found at <http://corbanet.dstc.edu.au>: the site of the Australian research organisation, Distributed Systems Technology Centre, which had a lot to do with the initiative. OMG's also appointed Jnan Dash, VP database technology at relational house **Oracle Corp** to its board.

Congleton, Cheshire-based **JSB Computer Systems** is adding three new products to its range of PC to Unix connectivity software; Multiview Desktop Lite, Desktop Pro and Multiview/X Pro. The products will enable Web browsing through Multiview Mosaic and Internet mail exchanged internally and externally. All the products in the Multiview range have been upgraded to use Windows TCP/IP stack and are Windows 3.1 and 95 compatible. Multiview is up on IBM, SCO and Sun. No prices.

Tivoli Systems Inc is adding **Memco Software Inc's** SeOS and **Securix Software's** BoKS B1 secure access technology to its Tivoli/Plus integration software (UX No 551). Prices for Tivoli/Plus for SeOS and BoKS go from \$9000.

"The Web's hard currency is attention span," Kim Polese observes.

It was **Sequent Computer Systems Inc** last time, but now the *PC Week* gossip column is hearing whispers that **Hewlett-Packard Co** may be sizing up its Precision Architecture RISC design win **Stratus Computer Inc** as a possible acquisition.

We're really impressed by the Web site that **Apple Computer Inc** has set up to disseminate far and wide the fruits - and the atmosphere - of its developers conference in San Jose to the wider world: one item relays the slogans on the T-shirts on parade, such as "Link me, embed me, but treat me like an object."

Every week now the company appears to be trying to save itself; last week **Apple Computer Inc** said it will cut its products down to 41 Macintoshes from the 82 it sells now and reorganise into four product groups. By the year-end all Macintoshes will be Internet-ready said chief executive Gilbert Amelio.

SunSoft Inc is now selling its new Solaris Internet Server software for \$795, which is 70% lower than the standard price, between now and June 30.

As we suspected **Sun Microsystems Inc** has stepped in for the Business Systems Division of **Cray Research Inc** which new parent **Silicon Graphics Inc** had put on the block when it acquired Cray a few weeks back (UX No 579). The division builds the SuperSparc-based CS6400 SuperServer line of commercial servers which obviously don't fit into SGI's Mips-based agenda. Cray's been putting back the announcement of an XFire (Crossfire) UltraSparc makeover for the CS6400s until SGI had decided what to do with it. Last week Cray was claiming Xfires would out-perform Sun's own Ultra Enterprise servers.

Red Brick Systems Inc's creating a leasing group to finance those expensive data warehousing installations.

Progress Software Corp says it will begin shipments of Version 8 of its Application Development Environment on Unix platforms in July (UX No 564).

Informix Software Inc has integrated the executive team from its **Illustra Technologies Inc** acquisition into its management structure, naming president and CEO Dick Williams senior VP of business units. Williams will run a datablade developers unit lead by David Cope, data warehousing under Krill Scheynkman; interactive sports and entertainment under Skip Glass; Internet/Intranet under Bill Ray; and workgroup solutions run by Brett Bachman. Illustra founder Michael Stonebreaker is now a corporate VP as well as Informix CTO. In addition Steve Sommer has been appointed VP worldwide marketing and Jeff Hudson is now VP business development and product marketing.

Eleven companies have formed the Gigabit Ethernet Alliance which, as its name suggests, aims to influence the development of the 1000Mbps Ethernet standard: the IEEE voted last month to develop a 1Gbps standard within its 802.z committee. While a finalised IEEE standard is not expected before the end of 1998, the Alliance is predicting pre-standard products within 12 to 18 months. The founder members are **3Com**; **Bay Networks**; **Cisco Systems**; **Compaq**; **Granite Systems**; **Intel**; **LSI Logic**; **Packet Engines**; **Sun Microsystems**; **UB Networks**; and **VLSI Technology**.

IBM Corp has chosen **Competitive Technologies Inc** to market its 280 patent dockets. The company was called in by IBM last year to review its vast patent portfolio and look for things that were exploitable and no longer central to IBM's core business.

We may be close to seeing the end of **Uniforum**. The Internet Expo that show managers **Softbank Comdex** put along side it to prop it up was yanked out from under it last week following an emergency meeting called by the news that **Mecklermedia** would be running its new Internet World extravaganza the same week down the coast in LA. Softbank is now going to move its Internet offering to Comdex Spring and Fall. Meanwhile, Softbank Comdex won't mind buying both Unix Expo and PC Expo off of **Blenheim**.

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SUN MICROELECTRONICS TOUTS \$445 NC DESIGN FOR 1997

Sun Microelectronics (SME) has defined a reference platform of technologies for customers with Network Computer designs. SME's minimum set of technologies for building Network Computer Reference Profile-compliant devices (NC) puts the cost of a first-generation device using the embedded microSparc IIep at between \$500 and \$1,000 with no maintenance against a \$2,000 PC which costs \$3,500 to maintain. What SME refers to as the zero administration client and NC (it doesn't like either name but can't think of a better one) would have 4Mb to 8Mb RAM, audio I/O, a network port and display, a browser and downloaded applets (plus a keyboard and mouse on a desktop device). A \$2,000 PC would include CPU, floppy, CD-ROM, hard disk, 16Mb RAM, audio I/O, network port, expansion bus, display, operating system and local applications. SME believes NC devices will ideally include flash ROM for quick booting of a browser and Java Virtual Machine, also allowing for different or new versions of browsers to be downloaded. The platform roadmap it's defined takes the PC model and simplifies it using a \$100 microSparc IIep as the JavaA1 model. A base JavaA1 platform would be priced at around \$615. The 1997 JavaA2 platform would use \$25-to-\$50 microJava processors and come in at around \$445 as Java-on-tin immediately reduces CPU power, flash and RAM requirements, SME says. \$445 would buy the \$50 CPU, \$70 CI video, \$60 Ethernet, \$10 super I/O, \$50 for miscellaneous logic, \$20 printed circuit board, \$40 for 3Mb flash RAM, \$80 for 4Mb DRAM, \$20 for the enclosure, \$15 for power supply and \$30 for audio. A microSparc IIep version requires the \$100 CPU - which supposedly performs 125 MIPS at 100MHz - 6Mb flash RAM at \$80 and 8Mb DRAM at \$160. SME observes that Java is just one way to get to the NC and that the JavaStations its Sun Microsystems Computer Co cousin will describe within 30 days are just one implementation of its vision. The company's talking about Net Portals as generic NC devices internally.

NORTEL TO BUILD INTERNET JAVAPHONES

Now we know why Sun Microsystems Inc boss Scott McNealy has been going around urging telecommunications executives to build Java into telephones (UX No 581). Last Thursday Sun announced it's snagged Northern Telecom (Nortel) to build a new generation of its PowerTouch screen-based telephones which will eventually be powered by Sun Microelectronics' PicoJava processors. Nortel says consumers will be able to access the Internet using the client/server telephones. Prototype versions due in the summer will use an embedded microSparc, as will field test models used in conjunction with Nortel's Personal Communications System digital cellular services in the first half of next year. PicoJava processors will be available for the screen phones in the second half of next year. Nortel is Sun Microelectronics' first public licensee and will target the Javaphones for residential, enterprise and wireless applications. Nortel's now establishing relationships with PTTs for Internet access over public networks and has already won the endorsement of BellSouth. It's also seeking application support from ISVs and service developers and claims it'll be able to provide customised services and Web applications for end users and differentiation for services providers. It's especially keen to foster the development of protocol converters to allow Web applications to go wireless. The phones are not being designed to support Web surfing. The example Nortel provides is of a realtor using a Java-driven wireless or deskphone to call into an Internet database and retrieve a description, price and photo of a property. Sun and Nortel will also target travel reservations, directory services, e-mail, fax, and voice access. The APIs are not related to last week's NC Network Computer Reference Profile and should not be regarded in the same camp as NCs or PDAs, the companies say. Sun promises a rash of other telco licensees over the next couple of weeks. Nortel says it's currently evaluating Lucent Technologies Inc's Inferno network operating system for the back end.

UNIFY READIES WEB DEVELOPMENT TOOLSET

We understand that Unify Corp hadn't actually planned to go public with its plan to file for an IPO until a little later than when the news first broke (UX No 587), perhaps until it had got early versions of its new Java-based development environment for the World Wide Web into the field. According to US sources, Unify, the San Jose, California-based relational database developer-turned database tools designer, sent what it's calling VisionWeb into beta a couple of weeks ago. Although VisionWeb, which will ship in the fall, has a browser and HTML editor, Unify's aim is to bypass both HTML and Common Gateway Interface (CGI) as far as possible - "screen-scraping" technologies in its opinion - and allow developers to create high-performance transaction-based applications. VisionWeb will be available as part of a 3.0 cut of the company's Vision 4GL development environment, which will include additional support for business rules in the repository, a new application architecture, OLE 2.0, and if it is completed in time, multiple inheritance. The company is also working up a Corba story and will offer an object request broker in a dot release alongside the proprietary request broker currently used by the Unify environment. As Web development watchers such as the Seybold people note, CGI will be used far less when a combination of server APIs and Corba implementations becomes the preferred method for application development. The combination of Java as the client environment and Corba as the vehicle for managing object interactions across LANs and WANs is the most likely future direction for corporate development, they believe. Meantime Unify's application partitioning server, currently sold separately from the development toolset, will be bundled back into Vision with release 3.0.

SCO HAS NEW VISION FOR APPLICATION ACCESS

After some months of keeping its head down, Santa Cruz Operation Inc's client integration division has lifted the lid a little on a slew of new Vision technologies that are designed to better support a user's desktop working environment whether that be X, character, Java, Windows or Web from wherever the user needs to get at it. It's similar to the technique Network Computer vendors are developing that store details of a user's desktop preferences on a credit card and have any NC device bring that up when swiped by the card. In SCO's case it's minus the card of course and includes asynchronous application access from any geographically located device. SCO says it'll allow a user to suspend communication with the back-end Unix server without losing the session. A mobile user could carry on work whilst unplugged and have the same session updated when reconnected to a network; it'll also support lost links and unanticipated disconnects. If it all sounds a bit vague then that's because SCO's still trying to refine the message it wants to get across when the products are announced in July. Initially the company has unveiled SCO Server OLE which provides developers with a Remote OLE technology for integrating Unix applications with Windows. Essentially a proxy dupes Windows applications into thinking they are dealing with other Microsoft applications when in fact they are accessing applications on Unix servers. It's the reverse of the SCO/IXI Wintif technology which dupes Motif applications into thinking they are interacting with other Motif applications when in fact they are performing actions on Windows applications. SCO Server OLE, now available for evaluation on the Web for Sun, HP, IBM, DEC and SCO Unices, grew out of SCO/IXI's Eye2Eye technology and is part of the company's Highwayman strategy to provide access to Unix applications from Windows. SCO says it allows Visual Basic and other Windows developers to implement remote OLE automation in Unix applications written in C, C++, Cobol and Tcl, allowing direct calls to internal functions on the Unix server from Windows applications. Micro Focus has already announced support for it. SCO says its main competition is not from the likes of Software AG which will be eons porting Distributed COM to Unix, or the Wabis of the world, but from Microsoft itself when it gets Network OLE out, and the Mainsofts and Bristol Technology's which have licensed Network OLE; the difference being they still require Unix applications to be re-written for OLE, SCO claims. SCO's seeking to overturn conventional X server providers such as Hummingbird Communications Ltd. Further plans for the Vision line include embedding the TermVision Unix emulator in Web pages, Vision FS for file transfer and Vision Communication modules. To date, Microsoft has been unable to deliver its promised distributed OLE technology.

THOMSON'S OBJECTADA UP ON ULTRASPAC

Thomson Software Products SA have its ObjectAda 6.2.1 development environment up on Sun Microsystems Inc's UltraSparcs running Solaris 2.5 at the end of this month. The company is working on a version for ~~Hewlett-Packard Co's HP-UX for later this year and will have the fully~~ Ada-95 compliant version, ObjectAda 7.0 out in the summer. Thomson has licensed Intermetrics Inc's AdaMagic compiler front-end for version 7.0 (UX No 561). So far that product has passed the Ada83 tests and a "large percentage of Ada95's object-oriented features", according to Jennifer Beckwith, Ada product manager at Thomson. Purchasers of version 6.2.1, which costs \$8,000 per licence will get a free automatic upgrade to the fully Ada95-compliant version, which will also be available on HP, Sparc and Windows.

MOTOROLA AND BULL SCOUR THE VALLEY FOR POWERPC PORTING CENTRE SITE

Motorola Inc's Tempe Arizona-based Motorola Computer Group and Compagnie des Machines Bull SA are to open a 'porting centre' somewhere in Silicon Valley - a suitable location hasn't been found yet - that will offer programs to aid migration to the PowerPC Platform. It is intended to complement IBM Corp's two similar centres in San Mateo, California and Waltham, Massachusetts. The centre's efforts will focus on Windows NT, seen by many as the PowerPC's best chance of a real breakthrough, but will also advise on migration to AIX, Solaris and MacOS. The centre will offer technical support, system loans and on-site and remote consulting. The support takes the shape of assistance with application porting using Microsoft Corp tools, performance tuning and benchmarking. Despite not finding anywhere yet, Motorola said it will be open by the end of June.

UNIKIX ADDS MQSERIES AND JAVA SUPPORT; REVS WEBKIX

UniKix Technologies Inc's synonymous transaction software will add support for release 2 of IBM's MQSeries messaging product in the summer. The Billerica, Massachusetts company said the support offers customers immediate response through UniKix OLTP system, asynchronous or delayed response through MQSeries and scheduled or batched responses through UniKix's Extended Batch Manager. Currently in beta, the MQSeries version 2 support will be included in the UniKix version 5 release due in July or August. Support for Java applets connected to UniKix has also been added to the HTML support already available. The company has also enhanced its Webkix server software and prettied up the front end. It provides Internet access to CICS transaction applications supporting 3270 terminal emulation on mainframes, or in UniKix applications on Unix boxes. The first release last year was basically a 3270-to-HTML translator and the user had to be familiar with the application to get some value out of it. This time, Webkix is a Java applet sitting on the client so the information can be shaped into more useful applications, the company said. Webkix is said to be used in various business scenarios, including home banking, on-line student registration, and in automotive dealer networks. Its in beta in July for two to three months and then will cost \$40 to \$100 per user.

HDS NETWORK SYSTEMS CEO QUILTS; SEEKS SUCCESSOR THROUGH ACQUISITION

HDS Network Systems Inc's president and chief executive Mark Gelberg resigned unexpectedly last week, just as the King of Prussia, Pennsylvania company prepares to launch its version of the Network Computer. Gelberg founded the predecessor of HDS, Human Designed Systems Inc way back in 1977, which was acquired by Information Systems Acquisition Corp last year, which, as the name suggests was set up to buy technology companies. It then changed its name to HDS in order to go public. The company claimed Gelberg had been discussing the move for a while, but with the company floated, it claimed his work was done and he is off to pursue other interests. The move "works well for him and for the company", it said. Chairman Arthur Spector has assumed the role for now, but his tenure is expected to be temporary. Spector's other job is director of acquisitions at Safeguard Securities, a "significant" shareholder in HDS, which contributes three of HDS' board members. He is looking to replace Gelberg "either through an acquisition or otherwise." The company confirmed that a reverse takeover is "certainly one possibility," but it would also look at individuals. HDS launches its network computer offering on June 11, claiming it will connect to absolutely anything: mainframe, midrange, Unix or PCs (UX No 590).

ROSS TO DO SPARC PLUG-IN UNITS FOR PENTIUM TOWERS

Fujitsu Ltd's majority-owned Ross Technology Inc in Austin, Texas wants to offload lots of its Sparc chips onto personal computer users that want to ~~add some Sparc oomph to their existing machines. The company is~~ promising to preview what it calls the Sparcplug system at Comdex/Spring in Chicago next month. The Sparcplug is an add-in workstation module for tower personal computers which requires a full-height drive bay, which when fitted means the user has complete Sparc workstation and a full Pentium system in a single box, with cut-and-paste Windows interoperability. The module will be available with up to 256Mb of its own memory and can be configured with up to 4Gb of disk. Such configurations usually only really appeal to developers, and Ross suggests you might want to create Java applets under Solaris and immediately test them with a Windows browser. It reckons Sparcplug will deliver performance superior to Sparcstation 20-class machines at entry-level workstation prices, which it is not revealing yet. It will demonstrate it with one or two Sparc processors as a Java Development Station; an Intranet Server; an Internet Firewall and Server; an Engineering Workstation and, with two Sparcs only, as a three-dimensional Multiprocessing RenderStation to combine development within the Pentium environment with multiprocessor rendering capabilities within the Sparc environment. All Sparcplugs conform to the Sparc Standard Mbus specification and use standard CPU daughterboards that are upgradable and multiprocessing-capable, Ross asserts.

ICL BIDS FINAL FAREWELL TO HARDWARE TO BECOME SYSTEMS AND SERVICES COMPANY

ICL Plc is no longer a hardware company, and that's official. Announcing its new corporate strategy yesterday, the company spent considerable time and energy convincing us that it is now a systems and services company. Gillie Ritchie, market development manager, marketing and business strategy says the company has "defocused hardware," and mainframe business now accounts for only 5% of its turnover. Speaking of its decision to hand its loss-making personal computer and low end server business to parent Fujitsu Ltd, ICL said it was a business that needed high investment and a global channel that ICL alone could not provide. The same applies to TeamWare, the company's answer to IBM Corp's Lotus Notes or Microsoft Corp's Exchange, which it said would be better served by the global investment and marketing powers of Fujitsu. Ms Gillie denied however that ICL would not invest in any business that need global presence and major investment. She said individual systems and services businesses would go global where appropriate, citing the Sorbus multivendor integration and maintenance business and the interactive multimedia businesses in particular. Under its new chief executive Keith Todd, the company is now concentrating on its seven or so systems and services business divisions, which include retail, financial services, facilities management, complex systems integration, multivendor services and distribution.

Several shifts

Ms Gillie says ICL has undergone several shifts recently, from hardware to systems and services, from mainframe to distributed systems, and from being a UK-centred operation to being European and in some fields global. She says the UK now accounts for less than 50% of ICL's revenues, some £3,100m in 1995, and the company has been restructuring into business rather than geographic units to exploit new cross-border opportunities. The company is still in the process of re-engineering its own business processes and systems, which have hitherto been geared toward a product-led company. It is also having a blitz on developing its brand identity, and has a £6m advertising campaign running in the UK at the moment with television commercials that de-emphasise computers. It has already succeeded in achieving brand leadership in Finland, which turns over around £350m per year, and the company admits that the trick would be to find out why, and apply the formula to the rest of Europe, although taking over by far the largest Finnish-owned computer company can't have done any harm. The company's Enterprises group is focused on developing worldwide businesses, and includes Enterprise Technology which develops leading edge technology for use by the rest of the businesses, and the vertical markets group. This group includes ICL's utilities businesses, government, travel, petrochemicals and telecommunications. The last, admits director of Enterprise Utilities Anita Gracie, has not suffered since the company's chief executive Sir Peter Bonfield became chief executive of British Telecommunications Plc. Since taking over, Todd has accelerated the move to a totally systems and services company. ICL now claims that, in spite of turning in losses of £188m last year on turnover of £3,100m, it has a clear strategy and focus.

CENTURA'S Q4 AND YEAR END RESULTS GO AWOL

If you've been following the fortunes of low-end application development tools and database vendor Gupta (UX Nos 571, 588), recently rechristened Centura Software, you might have been a trifle bemused by the company's latest results. Last week, Centura declared so-so first quarter financials for the period ending March 31, 1996. Revenues were none too shabby at \$15.4m, although the company could only muster a net income figure barely in the black at \$321,000. But at least Centura's in profit for a change. All well and good perhaps, until you realise that these are results in isolation. What about Gupta's Q4 results for fiscal 1995, and hence its year-end financials, which appear to have vanished into thin air? We took up the issue with the company's UK finance director Robert Gunn. It's an intriguing story. Remember late last year when Gupta sacked its then auditor Arthur Andersen after it dubbed the company's current chief financial officer Richard Heap "incompetent" and withdrew its consent to the software vendor's accounts for the whole of 1993 and 1994? Well, apparently, such a refusal still stands under US law, even after a new auditor takes over. So, once Price Waterhouse stepped into the breach and took over as Gupta's auditor, it then faced the mammoth task of reauditing the company's books for 1993, 1994 and 1995. In fact, so gargantuan has the effort involved been, that five months on, Price Waterhouse is still struggling with it, and hence, no Q4 results for 1995. Added to this, is Centura's change in accounting practice to a "sell through" model, ie, recognising licence revenue as and when it comes on-stream within an organisation instead of all in one lump sum when the initial licensing deal is struck. "We're moving back towards the conservative end of the spectrum," says Gunn. "It also gives us a smoother flow of revenues." Centura expects its missing results to hopefully surface publicly within the next few weeks. Then finally, we'll be really able to assess just how bad a loss-making year 1995 was, given that the company's now upped its estimation of the restructuring charges it will bear in that year from \$9m to \$11m. However since it's gotten out the good news of its first profitable quarter for two years out first, maybe this'll go a ways towards mitigating the bad news about last year.

BUSINESS OBJECTS DELAYS UNIX PORT; LAUNCHES DATA MINING INITIATIVE

On-line analytical processing (OLAP) outfit Business Objects SA has put the Unix/Motif version of its BusinessObjects 4.0 integrated query, reporting and query tool on hold. Originally due in the summer on HP-UX, Solaris and AIX (UX No 583), it's now scheduled for the end of the year. BusinessObjects 4.0 is currently available on Windows and NT, which accounts for up to 85% of its 150,000 customers worldwide, it explained. Meanwhile Business Objects launched its Open Data Mining Initiative last week, a series of technical and co-marketing partnerships designed to integrate BusinessObjects 4.0 with third party data mining tools. It'll offer what it calls "one button integration" with third party solutions via a Visual Basic enabled script. It can be launched from BusinessObjects 4.0 query panel. It's got a bunch of data mining-types signed up for the initiative including Toronto, Canada-based Angoss Software's KnowledgeSeeker for analytical and predictive data, Redwood City, California DataMind Corp's pattern recognition and prediction tools, ISoft Inc's AC interactive decision tree tool, Newburyport, Massachusetts-based Right Information Systems 4Tune statistical modeling and forecasting tool, Chicago, Illinois SPSS Inc's statistical analysis software, Mountain View, California Silicon Graphics Inc's Mineset data mining and data visualisation software and IBM Corp's Intelligent Miner knowledge discovery products.

JIGSAW TO UNITE PARCPLACE CODE BASES; AS IT RE-INVENTS ITSELF FOR CLIENT/SERVER/WEB APPS

ParcPlace-Digitalk Inc, spiritual home of Smalltalk, will bring VisualWorks, the VSE development environment it inherited from the acquisition of Digitalk, and Hewlett-Packard Co's Corba 2 ORB-enabled version of VisualWorks that it is now responsible for developing, distributing and supporting, together on to a common code base code-named Jigsaw. The release will beta in the summer and ship during the first quarter of next year. The company says it will continue to offer discrete versions of all three as long as they are wanted. The work is part of the company's plan to re-cast itself for multiple language client/server/Web development and lose its Smalltalk-only image. To begin with ParcPlace-Digitalk's reworked its Parts application toolset for Java; Parts for Java includes a ClassMaster browser for browsing and editing source code and class hierarchies; a tool set for selecting compilers and other tools; and an editor for creating and maintaining Java classes. It includes a palette of 20 pre-defined components which can be dropped on the workbench for visual linking between events and messages. A Component Wizard allows others components to be added to the palette. It ships in July. Martin Yam is now on board as senior VP of marketing, sales and Internet technology; Yam left ParcPlace for Next Software, then Dynasty Technologies before returning to ParcPlace three months ago to put the new strategy together.

SGI SELLS CRAY'S SPARC SUPERSERVER BUSINESS TO SUN - EVALUATES SALE OF OTHER UNITS

"As for the Sparc-based server line, some see Cray selling this to Sun," we wrote when news broke that Silicon Graphics Inc was to acquire Cray Research Inc (UX No 579). Yes indeed: Sun Microsystems Inc has a letter of intent to acquire the Sparc- and Solaris-related assets of Cray for an undisclosed sum. The Cray Business Systems Division designs and manufactures the CS6400 enterprise server, which scales to 64 processors, runs Solaris and is binary-compatible with Sun's previous generation of SuperSparc-based SparcServer 1000 and SparcCenter 2000 enterprise servers which use the Xerox Corp-designed XDBus. Sun admits Cray's implementation of XDBus and other high-end software and hardware techniques in the CS6400 deliver up to four times the scaling and throughput of its own 20-way SparcCenter 2000. Sun says it'll be able to improve the scaling and I/O of its 64-bit UltraSparc and is particularly attracted to Cray's domain partitioning software which allows users to run production and test systems in one environment or provide failover by replicating domains. Presumably it'll offer the software alongside other Solaris extensions for enterprise users it gets from Amdahl Corp, an OEM of both Sun and Cray servers. Sun also gets software developed for the CS6400s by the company's CraySoft unit, including the Network Queuing Environment client/server batch management and network load balancing software which some of its units are already reselling. As well as the technology Sun picks up Cray's installed base - Sun claims there are 100 "marquee" CS6400 users - Cray puts the number closer to 60. The CS6400 business is put at \$50m in annual sales. Following Sun's 64-bit UltraSparc server roll-out Cray had been due to reveal its own implementation of UltraSparc in a next-generation XFire line, claiming the things would be three times as powerful as Sun's Ultra Enterprise line, but they got caught in the cross-fire as SGI sought a buyer for the unit. They'll be the same GigaPlane bus as the Sun servers. The 200-person Business Systems division, with locations in San Diego, California, and Beaverton, Oregon, will report into Sun's Enterprise Server and Storage products under John Shoemaker. It'll live alongside fault-tolerant Sparc house Integrated Micro Products Plc which Sun picked up last month. Cray got into the Sparc SuperServers business when it bought most of the assets of bankrupt Floating Point Systems Inc back in 1991. Cray claims Sun was not the only bidder for the group. SGI is now deciding which other pieces of Cray it can offload; first under consideration is the company's San Antonio, Texas-based Cray Solutions integration unit, an Oracle shop which Cray picked up a couple of years ago.

VISUAL EDGE OFFERS INSTANT COFFEE FOR BUILDING JAVA INTERFACES

Visual Edge Software Ltd, Quebec, Canada, is offering a way for users of its UIM/X graphical user interface builder to create sophisticated Java front-ends or reverse re-engineer existing application interfaces into Java with release 2.0 of the Cross-Platform Toolset which includes its Instant Coffee Java code generator. Visual Edge says Instant Coffee used in conjunction with UIM/X provides a more comprehensive Java interface development environment than general purpose offerings from SunSoft Inc, Imperial Software Technology Ltd or Active Software Inc because developers can work at the level of application objects rather than with every separate control. This is achieved by allowing developers to create interfaces containing Java classes that encapsulate layout, behaviour and Java AWT event handling code. The classes are dragged and dropped onto a palette from which the interface is created. Other Java interface builders don't support this feature, the company says, claiming its solution also overcomes problem of matching Motif semantics to Java controls. In addition to Instant Coffee, CPT 2.0 is said to include expanded geometry management, support for drag-and-drop and pop-up menus, paned window controls, multi-column lists, outlines and grid components. CPT 2.0 is an add-on for UIM/X on Solaris 2.5, Sun OS 4.1.3, SGI Irix 5.3, IBM AIX 4.1.3 and DEC Digital Unix priced from \$2,500. The company has other tools which reverse engineers existing interface code for CPT which can then generate Java code. It says Instant Coffee isn't designed to compete with full Java application development environments such as those from SunSoft, Symantec, Borland or Rogue Wave, but can be used to create front-end for applications created with them. Visual Edge says it's waiting to land a couple of other important wins for its ObjectBridge bi-directional object translator before going public with another slew of supporters.

O2 OFFERS JAVA API FOR RELATIONAL/OBJECT DEVELOPERS

Now headquartered in Palo Alto, California, French object database company O2 Technology Inc will announce its promised support for Java at the JavaOne development conference this week with Java interfaces for relational and object databases. It hasn't worked out how it's going to market the thing but from September it will offer an interface allowing developers to store Java applets in relational or object databases. O2 says its runtime sits atop the low-level JavaSoft JDBC API and doesn't require the programmer to know the structure of the relational database being used. Currently the Java support offered by relational vendors requires the developer to write a mapper to map Java objects to relational rows and tables. The interface provides automatic generation of the database schema from the Java schema and also interfaces to existing C++ and Smalltalk interfaces. The API will be available to O2 users as an add-on module. A second API will implement the forthcoming ODMG Java binding for object databases, again at a higher level than the first-level read/write JDBC mechanism.

LITTLE LOYALTY IN BROWSER MARKET

Netscape Communication Corp's Web browser is the primary desktop browser for 87% of users, but few companies are loyal to one particular browser, according to a survey by Zona Research Inc, Redwood City, California. It found most users have access to two browsers and companies don't mandate which employees should use. "It's easy to substitute browsers, so it's a fluid market. A lot of folks are still running Navigator 1.0 which shows that often whatever lands on the desktop wins," Zona said. That could be good news for Microsoft when Windows 95 ships with Internet Explorer 3.0 if users take the easy option and default to Explorer - but that's assuming Windows 95 penetrates the corporate market. Currently Explorer is the primary browser for only 4% of users, but it's present on 17% of desktops, compared with Netscape, which sits on 59%. Zona says its survey of 100 corporate IT professionals is more accurate than looking at Web site hits, which don't measure Intranet use.

COMPUSERVE ROLLS OVER ONTO THE WEB

The decision by CompuServe Inc, Columbus, Ohio, to follow Microsoft Corp, Prodigy Services Co and AT&T Corp and adopt the Hyper Text Mark-up Language standard was inevitable, but what's not so certain is how it will make money once it leaps from a proprietary to an open environment. At last week's press conference CompuServe said its Internet plan - codenamed Red Dog - will result in a suite of services available via a standard Web browser by year's end. The H&R Block spin-out says its development costs will decrease because it will be able to buy more content, instead of designing in-house, leaving it leaner, meaner and better able to adapt to its five million customers' needs. It claims it will soon be able to bring product to market 75% faster. But the whole move is a bit of a gamble on future technology. The company admitted it's still developing the authorization technology to monitor and charge customers when it becomes possible to access CompuServe from any Web browser at the end of the year. CompuServe says currently most of its revenue comes from subscriber fees and vows to implement some sort of transaction fee for users under Red Dog, but admitted that to keep profits up it needs more advertisers and to create more partnerships like the one it has with Charles Schwab. As part of that deal CompuServe gets part of Schwab's customer fee, similar to the way credit card companies get a cut of purchases. But CompuServe says it has no similar relationships to announce in the near future. The company thinks users are still afraid of or unable to quickly navigate the Web and will pick up new customers on that basis: "People are tired of the 'World Wide Wait,' but CompuServe is a safe environment with a sense of community which helps people know where they're going," the company said. However, the opposite view would suggest that as search engines become more prevalent, the Web becomes easier to navigate and users become more sophisticated, they may not need CompuServe. The company disagrees and predicts there will be enough new users to sustain its services. CompuServe will continue to support its proprietary CompuServe Information Management service for as long as there is customer interest. Over 80% of CompuServe's future product development will reportedly be focused on developing content and services that use Internet and HTML technology and tools. CompuServe has already begun designing content in HTML and says a summer wave of new content will be followed by another in September. America Online Inc, Vienna, Virginia, is now the only large online provider which has not yet embraced HTML as its core delivery mechanism.

MCAFFEE OFFERS \$10 PER 10MB DATA STORAGE

McAfee Associates Inc, Santa Clara, California, is offering to host its users' data instead of it being stored with ISVs, on corporate LANs or Iomega Zip drives. McAfee shipped its WebStor client backup software six weeks ago and yesterday launched its McAfee Personal Vault allowing users to back-up and restore data files over the Web at a rate of \$10 for 10Mb per month. It says it wants users to have more options and claims some ISVs don't want to act as repositories. McAfee says WebStor and the Personal Vault are an easier alternative to tape drives - particularly for notebook users. McAfee says it will ship its SmartStor tape manager on June 7 as a competitor to ArcSolo from Cheyenne Software Inc, the company which rebuffed McAfee's hostile advances last month. The 300-person McAfee says it's focusing its energy on Internet- products and treating the Web as a platform in its own right like Unix or NT.

VMARK SHEDS 37 HEADS FOR DATAWAREHOUSING

In an effort to reverse a large fall in earnings, VMark Software Inc, Westboro, Massachusetts, is handing future development of its ObjectStudio to Cincom Systems Inc, Cincinnati, Ohio, as part of a plan by new CEO and president Robert Morrill to refocus on its core products - the UniVerse RDBMS server and its HyperStar middleware. It sees data warehousing as its future money maker. VMark and Cincom won't decide who keeps ultimate ownership of the product until sometime in June and neither would comment on how much they plan to invest in the venture. It appears that VMark doesn't want to spend any more money on ObjectStudio and if Cincom wants to continue using it with its Total FrameWork object application development environment, it'll have to foot the bill. Last week VMark shut down its development center in San Diego and gave 37 people pink slips. It's possible that ObjectStudio was responsible for the high expenses which VMark blames for its 63% plunge in first quarter earnings. Revenues were static for the same period. VMark says it has two more stages of its data warehousing strategy to roll out over the remainder of the year. ObjectStudio came with the acquisition of Easel Corp, Burlington, Massachusetts, under CEO and president James Capeless, who was demoted to executive vice president for international operations recently, and who, not surprisingly, left the company this month.

SCOPUS EARNINGS "WILL DOUBLE"

Morgan Stanley & Co Inc has run the rule over Scopus Technology Inc and is forecasting earnings more than doubling next year and a further 50% hike in 1998. The Emeryville, California help desk system company has a couple of products on track for release in the summer called Voyager and ScopusWorks and Morgan Stanley expects several partnership agreements to be signed within the next few months. Several systems integrators including SHL Systemhouse Inc, Cambridge Technologies Inc, and Grant Thornton are said to have shown interest in the Voyager product. Scopus also plans to revamp its graphical user interface and development environment this summer, adding OLE. ScopusWorks is a graphical development and configuration environment that is said to simplify the customisation and configuration process. The company is also going after the call center outsourcing market. With earnings per share of \$0.17 in the year to March 31, Morgan Stanley is predicting \$0.37 in 1997 and \$0.55 the following year. It leaves Scopus with an outperform rating.

HP EYES INTERNET TERMINALS - FROM A DISTANCE

Hewlett-Packard Co, Palo Alto, California, has adopted a wait-and-see attitude to the rush to Network Computers, claiming quality devices can't be built for under \$1,500 - a price it believes users won't pay. HP says "Our Internet terminal strategy is that the whole area is interesting and we're investigating it, but we're not part of the Oracle group and we don't plan to be." It is developing electronic commerce products for the Internet that will use HP smart cards. *Computer Reseller News* reports the company is readying software code-named Cream that can translate Java applets into ActiveX, C++ and Smalltalk objects, with Sugar that tags Java applets.

NATURAL INTELLIGENCE AND EVERYWARE CONNECT THEIR JAVA TOOLS

Natural Intelligence Inc and EveryWare Development Corp have added jointly-developed connectivity software to their respective Java development and querying tools. Cambridge, Massachusetts-based Natural Intelligence is the provider of Roaster, a Java development environment and Mississauga, Ontario-based EveryWare has Tango, a Web-enabled SQL querying tool. Users can create queries in Tango, and use Roaster to call the query documents, which then return the data to the Java environment. The stuff comes free with Roaster DR2, which is \$300 or Tango 1.5, which goes for \$1,000.

NETWORK COMPUTER REFERENCE PROFILE LAUNCHED: PARADIGM SHIFT?

The great and the good from IBM Corp, Apple Computer Inc, Oracle Corp, Netscape Communications Corp and Sun Microsystems Inc duly converged on San Francisco last Monday to confirm the set of existing standards that comprise the Network Computing Reference Profile 1 (UX No 590). The group emphasised that this was the first of many such profiles. This one will be made available for public comment and review in July and is expected to be finalised in August. The quintet plan to organise a joint Web site by the third quarter including tests for ~~profile compliance. Any manufacturer that meets the set of standards will be able to promote their devices as "NC Profile compliant" and use the NC logo.~~ Oracle CEO Larry Ellison predicted that even his *bête noire* Microsoft Corp would eventually be among those using the NC logo. The specification cites that an NC must have a minimum screen resolution of 640 x 480 (VGA) or equivalent, a pointing device, text input capabilities and audio output. The agreed Internet protocols include TCP/IP, FTP, Telnet, NFS - where a distributed file system is in operation, and SNMP. Others relate to specific versions of the NC. On the Web front, they must comply with HTML, HTTP, Java development environment, Java Virtual Machine and Java class libraries. There are numerous other mail, security and multimedia protocols listed in the draft profile, which can be found at <http://www.nc.ihost.com>. There is a list of 70 endorsers including telcos, chip manufacturers, hardware and software companies, some as manufacturers, some as technology partners and the others are distributors and systems integrators along for the ride. The list is expected to grow daily, according to the five, although it hasn't done so yet.

The Ellison side show; Major Telco order imminent?

As usual Ellison stole the show with his Microsoft-bashing rhetoric, but IBM, Sun, Apple and Netscape were more low-key, emphasising that this is just a set of existing standards, and everybody is welcome to join in. Ellison, whose company's design is to be aimed at consumers as well as businesses from the off, predicted some devices being given away by telecom companies eventually. Telcos on the list include British Telecommunications Plc, Cable & Wireless Plc and Nippon Telegraph & Telephone Corp. Ellison was teasing the audience last week as to the identity of one telco that reportedly wants 2m NCs. The current front runner though is France Telecom SA. The company's US division said it "probably will" buy a significant number of NCs and at this stage is talking with Oracle, rather than any of the manufacturers, which is understandable given that most of them haven't declared their hands yet. The telecom giant is certainly planning trials in the near future. Benjamin Epstein, the company's business development manager in the US said they could be used as the "next generation Minitel terminals" and integrated set-top boxes. There are around 14m Minitel terminals in France running around 25,000 applications. At the cutting edge when launched, the technology is looking a bit tired these days and needs replacing. The French public are well used to looking things up electronically and so would be an obvious target for the NCs. There is no word yet on which of the 15 or so manufacturers are likely to land the prized order. First out the gate with an Oracle NC is likely to be UK-based Acorn Computer Group Plc in September with its NetSurfer box. Apart from Acorn, the other Oracle NC manufacturing partners are Akai Electric Co Ltd, Funai Electric Co Ltd, IDEA, Ing C Olivetti & Co SpA, Lite-On Technology Corp, Mitac Inc, Nokia Oy, SunRiver Data Systems Inc - the only US company - Tatung Co, Teco Information Systems Co, Uniden Corp, Wearness Technology Pte Ltd, Wyse Technology and Tatung Co.

IBM's six pilot NC projects underway

The only manufacturer with anything to actually show was IBM, and contrary to earlier reports that the company would not be making the things the AS/400 division has in fact built a PowerPC-based thin client prototype, as has the Personal Computer Co. There will be six Application-Centric Terminals as the company unfortunately calls them, by the year-end, costing between \$500 and \$1,000, said John Thompson, head of IBM's Software division, but speaking here for the entire company. They will range from commercial to consumer devices. Senior AS/400 technical staff member Bruce Anthony said the AS/400 people's work has resulted in lights "clicking on in a lot of people's heads" in the other IBM divisions, but the only other one with any hardware is the PC Co. The mainframe guys pointed out that the next version of IBM's OS/390 flagship mainframe operating system, due in September, will be fully Java-enabled and be ready for connections to NCs, while the RS/6000 division said "there is nothing concrete we can talk about at the moment" and downplayed its role in any NC development. Thompson said IBM has six pilot programmes underway, in the airline, banking and automotive industries, and it turns out that the PC Co is running these pilots with its own prototypes, which it said also embrace the insurance and healthcare industries. At least one of the pilots is with a "major European customer", Thompson said, but the location of the others is unclear, though they are not thought to be all US-based. The PC Co has already delivered what it called an NC "solution" to a customer, but adds that "clearly this is a beta site." It would not provide any more details on how many devices the solution involved or any specifi-

cations, other than they differ from the AS/400 offering. Anthony said the AS/400 device is not part of any of those pilots and was not being tested outside IBM. The PC Co was more cautious than Thompson with its roll-out plans, merely saying that "one or more of [the six models] will ship by the year end."

AS/400 thin client

The prototype AS/400 thin client has no local storage and will run on a 403 embedded PowerPC processor. It has between 4Mb to 32 Mb RAM, Token Ring or Ethernet connections - coax and thinax connectors will be added later - running a thin AS/400-like operating system with printer, serial and audio ports, a PC Card slot, a monitor, mouse and keyboard. The processors will scale up and iAPX-86 processors could be part of the picture later. It is about 1" thick and 10" x 8" in the other directions. It will include full 5250 and 3270 terminal emulation and will run all existing AS/400 terminal sessions and green screen applications. A Web browser, TCP/IP stack and Java Virtual Machine will download from the server upon start-up, and as such, there is no real operating system other than that, as far as the end-user is concerned. It is essentially a Java terminal. OS/400 will shortly include software to attach the thin clients to IBM and non-IBM servers. As there is no operating system on the client, it is an AS/400 device only inasmuch as that division made it and will market it initially at AS/400 green-screen users. It will be able to access any Java-enabled server. Anthony added that it would be nearer \$1,000 than \$500 and will be shipping in volume by the year-end. Thompson downplayed the cost of the hardware, emphasising once more the total cost of maintaining an NC versus a PC. Thompson admitted that the company was "a little bit further behind with consumer products."

Sun, Apple and cow's milk; Netscape waiting in the wings

Significantly, Sun sent along SunSoft Inc president Janpieter Scheerder, and made no mention of its Java terminal, concentrating on Java and pointing out that all Sun Sparc-based machines running Solaris already comply to the profile. For Apple, CEO Gil Amelio said "Pippin supports the spirit of what we're talking about" and the company is looking to license that to third parties and to make further "simpler subsets of MacOS". And Netscape co-founder Marc Andreessen said the profile would generate hundreds of millions, if not billions of Netscape Navigator users in the future. Referring to the future of network computing and reliability and bandwidth of the networks themselves, Ellison's reasoning was that we've migrated from having our own cows for milk and our own wells for water supply, so why not migrate from our own bloated desktop PCs to NCs with the software on the server?. The cost of these things will be so low, he believes that "we can give every child [in the US] a low-cost NC", because so often "where computers are needed most is where computers are found least", he concluded.

Acer readies alternative to "completely useless" NCs

After originally having been lumped in with them, Taiwan's Acer Inc is determined to set itself apart from the NC Reference Profile crowd by introducing a personal computer costing less than \$500 that is Internet-ready but will run MS-DOS and Windows 3.1 and includes a separate storage device. It is a low-end Pentium-based "fully-functional PC" the Taipei company said, unlike the offerings from those complying with the NC Reference Platform, which it said are "completely useless" when separated from the Internet umbilical cord. The Acer Basic, as it is called, comes with Iomega Corp's 100Mb zip drive and runs through a monitor or a television. It is only going to be marketed initially in China, India and some "other developing nations", according to the company.

HITACHI TO MARKET REVOLUTIONARY NUCLEUS BIT MAP SYSTEM FROM SAND FOR SEARCHING MOUNDS OF DATA

Sand Technology Systems International Inc, Montreal, Quebec, is hoping to leap onto the data warehousing bandwagon following its licence deal with Hitachi Data Systems Corp to distribute Sand's Nucleus Enterprise Server in the US, Canada and Australia. Nucleus Enterprise is a relational database management system and query engine for local area networks, with a difference, says Sand. It is ideally suited to the type of very large, unstructured queries spawned by the availability of masses of data. The Nucleus technology uses a different form of data storage from traditional databases. Conventional database systems store data as a sequence of records. Relational databases comprise collections of tables, with columns and rows. All are stored as identically-structured records on disk, one after another. This puts an overhead on query and retrieval of data, in terms of large input-output requirements and indexing schemes. Nucleus uses a column-oriented approach to data storage, and separates data values from their use in tables, using bit map arrays.

Bit map vectoring

The main criticism of bit map indexing has been that it takes up a lot of space. However Sand has patented a bit map encoding technology, or bit map vectoring, to compress the bit maps, which enables searches to run without decompression. Sand says massive queries have been reduced down to three hours from 36 hours, and input-output overhead is significantly reduced. The company says conventional approaches to the problem tend to opt for parallelisation, which increases the hardware requirement. Nucleus says, by reducing the amount of input-output, obviates the need for such parallelisation and therefore requires less hardware. The company likens the product to any of the well-known relational database management systems such as Oracle or Sybase, but say that it also has an integrated search engine comparable with Sybase IQ. Sand's vice-president of finance, Susan Waxman, says Nucleus Enterprise Server is currently installed in customer test sites and should be with 12 customers by the end of the year. Sand Technology, which employs only six people in Canada and six in Pasadena, California, has a joint marketing venture with Hitachi Data Systems in Canada, which is 60% owned by Hitachi and 40% by Sand, and one in the US. The Canadian joint venture originally sold tapes and disk drives in the mainframe market and latterly markets Hitachi Ltd mainframes. However, Sand admits the Canadian mainframe market has all but died and the nail in its coffin is the currency exchange rate. It therefore looks to the Nucleus Enterprise Server for future business. Nucleus currently runs on Digital Equipment Corp Alpha machines, but the company says it will run on any 64-bit Unix systems as they become available - Sand is currently talking to Silicon Graphics Inc. However, with only 12 employees, Ms Waxman admits Sand, which is developing the product, has quite a lot on its plate. She says DEC is seriously interested in installing Nucleus as standard on its network servers, and believes once it is tried and tested in the US, Hitachi Ltd will be interested in the product for the Japanese market. Once the US, Canadian and Australian markets have taken off, Ms Waxman says that Sand will look to sell Nucleus Enterprise Server in Europe.

NCD RESTATES LAST YEAR'S FIGURES DOWN, WARNS ON QUARTER

Network Computing Devices Inc has finally finished reworking its figures more rigorously, and also warns that it expects a first quarter operating loss of \$3.7m to \$4.8m before a special gain of about \$7m from the sale of its Mariner product line in January. The results will reflect continuing margin pressures on its systems business and unsatisfactory software results. It restated fourth quarter figures to a net loss of \$234,000, or \$0.01 a share, from a reported profit \$1.1m, \$0.07 per share. Second quarter net was restated to a profit of \$85,000, from \$440,000, or \$0.03 per share. The net loss for the full year 1995 was restated to \$4.0m or \$0.25 per share, from a loss of \$2.3m, or \$0.15 per share. The restated statements reduce software revenues by \$2.7m from what it reported. The company says it is implementing personnel reductions to reduce the operating expenses of the Software business, and is also evaluating various options for its Z-Mail electronic messaging product line, including sale or discontinuation of the line. On the Systems side, the Mountain View firm says that it is focusing its sales efforts on increasing the revenue contribution of its new WinCenter Pro application server software, and working to cut the cost of its Explora network computers.

TOP FIRMS SUPPORT NETSCAPE DIRECTORY STANDARD

AT&T Corp, Banyan Systems Inc, IBM Corp, Lotus Development Corp, Novell Inc and more than 40 other companies have joined with Netscape Communications Corp to support the Lightweight Directory Access Protocol (LDAP, RFC 1777) as a proposed open standard for directory services on the Internet. Lightweight Directory Access is a protocol for accessing on-line directory services over TCP/IP and can be used to access stand-alone Lightweight Protocol directory services or directory services supporting X.500. It provides a standard way for Internet clients, applications and Web servers to access Internet directory listings. Netscape is planning a product supporting the proposed standard, Netscape Directory Server. Based on technology pioneered at the University of Michigan, it allows corporate information such as user names, electronic mail addresses, public key certificates and contact information to be organized and published in a searchable, structured, scalable directory. This information can be replicated automatically throughout the enterprise or between enterprises, says the company. The product is expected to include the capability to create hierarchical entries, along with extensible attribute-value pairs, support for text, graphics and other data types and access control. The architecture will support up to 200,000 entries and up to 100,000 queries per hour on typical servers. Under Lightweight Directory Access Protocol, corporate directory entries are arranged in a hierarchical structure that reflects geographic and organizational boundaries. The Netscape Directory Server will ship Windows NT and major Unix systems by next quarter for around \$1,000. It will also be part of future versions of Netscape SuiteSpot.

NETSCAPE TAPS SEAGATE'S SOFTWARE UNIT FOR ITS CRYSTAL REPORTS

Seagate Technology Inc's Seagate Software Inc has signed a licensing and joint technology development deal with Netscape Communications Corp for a special version of Seagate's Crystal Reports. The new version will be included in the upcoming release of Netscape LiveWire Pro, an integrated visual development environment with built-in database communications for building live, on-line applications. It will include the Crystal Web Report Engine, enabling the publishing of reports to HyperText Mark-up Language and, say the companies, seamless integration with the Netscape SuiteSpot integrated suite of Web server software. The aim is to enable LiveWire Pro users to build live Web applications that access information held in corporate databases and data warehouses, and publish it in presentation-quality HTML reports. Users will be able to include either pre-formatted or dynamic reporting capabilities in their Web applications. In addition, current users of Crystal Reports Professional 4.5 will be able to extend their Crystal Report files to a variety of servers, including Netscape SuiteSpot. According to the firms, upgrading the Crystal Reports software included in LiveWire Pro to Crystal Info 4.5 will enable Web masters and LiveWire Pro developers to add automatic, scheduled updating of reports to an organisation's internal and external Web sites.

BLACK & WHITE TO MARKET JAPANESE UNIX TEXT EDITOR FROM ASTEC

Japanese Unix products company Astec Ltd has announced an alliance with Black & White Software Inc of Campbell California, for the sale in the US of the text editor enhancement function developed by Astec for the graphical user interface builder UIM/X. Astec is the Japanese distributor for UIM/X, which hails from Visual Edge Software Inc of Canada. Astec has been selling its text editor with UIM/X in Japan since last August. Like Astec, Black & White develops added value products for UIM/X. Astec sells other Unix products such as CodeCenter, OpenX-Press, Replix and its own Internet information service HyperDirectory.

IBM TO RESELL OPEN HORIZON'S CONNECTION

IBM Corp is to begin reselling Open Horizon Inc's Connection middleware line for connecting IBM and non-IBM platforms, operating systems and networks. It enables connection to a number of databases from workstations or World Wide Web browsers, including DB2, Informix, Oracle, Sybase and SQL Server. Features include secure single sign-on and users to incrementally add support for network security services, centralised directory services, transaction processing monitors, and other tools across distributed computing environments. Connection is about to get a Java applet that works with any JDBC-compliant development tool to access remote databases and application servers.

WEB GATE OPENS FOR MAINFRAMES WITH CASABLANCA

Mainframes still hold the lion's share of business information - but are not known for their ease of access to the newer generation of web browsers. Now UK-based transaction processing expert Gresham Computing Plc has introduced software that allows mainframes to be more easily utilised as information providers for public Internet, or internal intranet services, using standard web technology. Casablanca, described as an intelligent gateway between web servers and mission-critical corporate applications, connects mainframe applications to a Unix-based web server providing access to them via a standard HTML browser. Initial versions due this month provide integration for ICL VME and Digital VMS platforms, with an IBM MVS version due by the third-quarter. Casablanca sits between Web browsers and the applications on the mainframe, interfacing between html input/output screens and the request response interface more typical of the mainframe. Applications consist of HTML forms and output documents, Casablanca-enabled by the addition of a field invoking the Casablanca dialogue, and mapped to definitions held in the management information base (MIB) of the enterprise server. At the web server end, an NT version is also under development, and should be ready by year-end. Gresham anticipates that three types of users will be interested in Casablanca. First, organisations providing browsers to their users for internal use; the classic intranet users. Second, those organisations who want to give other businesses access to their information over the public internet. Here security is important, and Casablanca provides the facility for specifying the security service to be invoked at the start of every dialogue, either Kerberos, DCE security, or mainframe-based security systems already in place. And third, organisations that want to provide public access to real-time information services that can't be downloaded onto a web server - the company plans to show a demo of an airline information system on its web site shortly: try <http://www.gresh.com>. Gresham plans further integration with Oracle (via stored procedures rather than SQL) and online transaction processing monitors such as Tuxedo and Top End. Gresham is based in Southampton.

SEAGATE GETS GO AHEAD FOR NETLABS INC...

Pulling the strands of its data management software acquisitions together, Seagate Technology Inc, Scotts Valley, California has got definitive agreement to acquire NetLabs Inc (UX 549, 531) for an undisclosed amount of cash. NetLabs Inc's flagship network management software is NerveCenter, a rules-based alarm service that correlates, filters and upgrades alerts delivering pre-processed information. Netlabs has been licensed for use in Sun Microsystems Inc's Solstice Enterprise Solution and comes with HP OpenView under an OEM agreement with Hewlett-Packard Co. Since 1993 Seagate Technology has acquired data access and reporting tools outfit Crystal Computer Services Inc, Novell NetWare storage management company Palindrome Corp and file server, workstation and SNMP management outfit Network Computing Inc. Seagate's also struck a deal with the US Internal Revenue Service (IRS) over its wholly-owned subsidiary Conner Peripherals Inc in which the IRS claimed a deficiency in tax for the calendar years 1989 and 1990 relating to Conner and its foreign manufacturing subsidiaries. The IRS claimed nearly \$43m plus accrued interest of approximately \$28m through March 29, 1996, but Conner filed a petition with the United States Tax Court in March, 1995 contesting the proposed deficiencies. Under the settlement agreement filed with the Tax Court, Conner will pay additional taxes of approximately \$5.3m for the years 1989 and 1990, plus accrued interest of about \$4.3m as of April 30, 1996.

...UPGRADES ASSETMANAGER

Meantime Seagate has revved Version 2.1 of its AssetManager network inventory tool for accessing configuration data. The tool enables up to date configuration data on network software and hardware and includes the promised consolidation between the asset and inventory management products of Asset Manager and its Boston-based acquisition Frye Computer Systems Frye LAN directory for Windows (UX No 569). It means information can be shared over an enterprise enabling each workgroup to view local assets and forward them to the database for inventory and asset management. The company has also extended AssetManager's inventory capabilities with performance improvements and added support for Oracle, AIX operating system and IBM's NetView for AIX and collection from Windows 95 and NT. Prices start at \$6000 and it runs on Sun, HP, IBM, Novell NetWare, Banyan Vines and NT. Data collection works with HP OpenView, SunNet Manager and NetView AIX. Seagate has appointed Terry Cunningham as president of subsidiary Seagate Software's Management Group, reporting to Steve Luczo, executive VP for Seagate Technology, and chief operating officer for Seagate Software. Cunningham founded Seagate's 1994 acquisition Crystal Services in 1984, and has served as president of Seagate Software's Information Management Group (IMG) for more than two years. He'll replace Kevin Azzouz, former president of Seagate Software, SMG, who has resigned. Azzouz will work on special projects for Seagate's Corporate Development division.

TRANSARC TO ADD ORB's TO ENCINA

IBM Corp's on-line transaction processing subsidiary Transarc Corp took time to raise its head above the parapet last week, detailing a plan to release a version of its Encina monitor in early 1997 enabling the invoking of messages over Corba-compliant Object Request Brokers (ORBs) including Iona Technologies Orbix and IBM's DSOM. It still remains to be convinced about the worth of the current crop of ORBs on the market, it says, believing they lack rigid contact between clients and servers and the necessary levels of performance, scalability and security. But the work the Pittsburgh, Pennsylvania-based company is involved in with the OMG's Object Transaction Service specification has convinced it that the move towards Object Transaction Monitors is inevitable. In the meantime the backbone of Encina Monitor communications is supplied courtesy of the aging Distributed Computing Environment Remote Procedure Call (DCE RPC) including dynamic binding and asynchronous communication; old DCE RPC may be Transarc concedes, but it offers the kind of security and binding ORBs are still struggling to provide. Other features to be included in the first half of next year include support for OMG's IDL, distributed transaction, advanced security, transparent resource replication, load balancing and single-image systems administration. Transarc did \$30m in revenue last year, claims it has 500 major customers and has just opened its first European office in London.

THE BOOM FALLS ON 40 JOBS AT HAL

The boom has duly fallen at Fujitsu Ltd's Hal Computer Systems Inc (UX No 589), but only about 40 people, 8% of the workforce, is to go, despite the company deciding to switch to contract manufacturing and engineering rather than doing the work in-house. In future the 64-bit HalStation workstation line will be built by Fujitsu affiliate PFU in Japan. It says it is negotiating a contract with a third party to implement the entire manufacturing process, including parts purchasing, manufacturing, testing and shipping. The company has also been split into three units, the microprocessor group which is developing future versions of the 64-bit Sparc64 RISC, the workstation group, responsible for HalStation design, and a new scalable systems division which will design servers around the processor, none of which are expected this year. Hal expects there will be further consolidation between the disparate Sparc efforts underway at the Fujitsu companies, including chip-builder Ross Technology Inc, ICL Plc and Amdahl Corp. As expected, the company has also beefed-up its high-end HalStation 350 for specialist EDA customers, loading the thing with from 1Gb to 3Gb RAM allowing users to run a whole simulation in memory. The 118MHz Model 353 costs \$106,700 for 1Gb RAM and 4Gb disk - each additional 1Gb RAM costs \$88,000. Hal claims it's got customers queuing for the things. In a couple of months it'll provide other configurations tailored for capital markets, scientific research and development and MCAD. It claims it'll be profitable by the end of its financial year in March 1997, but couldn't explain whether that means it will have repaid the years of development funding that led up to its first product at the end of last year.

COGNOS READIES REALOBJECTS FOR BUSINESS APPS

Cognos Software Inc has a new development environment in beta for building object-based Windows 95 and NT business applications. Called RealObjects it's meant for business-type developers and comes with what Cognos claims is a high level of automation, including pre-built customisable business templates, common processing behaviour and inheritance links and techniques. It'll also be offered as an integrated component with its Axiant 4GL development tool. The Burlington, Massachusetts-based company says it's looking at support for Unix but not until next year. It wants to get things right on NT first, it explains. RealObjects uses Cambridge, Massachusetts-based Mystic River Software's Visual Basic-like Softbridge basic scripting language - also used by the likes of Oracle Corp, Attachmate, Borland International and Hummingbird - and is targeted at the kind of business-user who has only a cursory understanding of Visual Basic. It reckons RealObjects falls between the "plethora" of tools currently concentrated on the graphical market and those in the user services layer. RealObjects' differentiator is in the building of application services rather than user services," claims Bob Thompson, director of market development for Cognos. General availability is due at the end of the summer. No prices. A second release, due by the end of the year will include application partitioning.

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Oracle Corp is readying to ship its first enhancement of the Rdb database it acquired from **Digital Equipment Corp** eighteen months ago as Rdb version 7. The firm says it now has no future plan to assimilate the Rdb engine with Oracle7 in a single code path, despite what it said last year. Oracle cites the 15,000-strong Rdb Advisory Council; UK product marketing manager Andy Bailey says "the Council is more interested in protecting investments and providing users with development tools that work across Oracle and Rdb platforms." There's also the money of course; Oracle says it's squeezed more revenue out of Rdb in the last year than DEC did in its last three years of ownership. And as a bonus, Oracle is building a new lab in New England to house Oracle and Rdb engineers - the Rdbers at Oracle are still working out of DEC's offices. Rdb 7 ships in July for OpenVMS and for DEC Unix a month or two later. A Windows NT version is not expected until 1997 with the next rev of the Rdb database. According to Oracle release 7 includes improved performance and support for Oracle SQLnet, bringing secure encryption and authentication services. Rdb will also make use of Oracle Enterprise Manager, which Oracle announced in its Universal Server launch a few months ago. Optional extras include other tools acquired from DEC including Trace and DB Expert for performance tuning and monitoring.

Seems to say more about **Anderson Consulting** than it does about the Year 2000 problem: Iain Lopata, associate partner at Andersen Consulting, told **Dow Jones & Co** that many of Andersen's clients are facing charges between \$20m and \$80m to fix the Millennium problem.

Parallel schmaralle! I'm off to the bright lights and glitter of Hollywood: **Walt Disney Co** has hired Danny Hillis, **Thinking Machines Corp** founder and former chief scientist as part of a new Fellows Programme to attract technologists to make contributions to the creative arts, media and entertainment.

Hewlett-Packard Co has finally kicked the mainframe habit, claiming that it is now the largest company in the world running its mission-critical applications exclusively on distributed open systems over the world's largest Intranet. CEO Lewis Platt performed a ceremonial unplugging of the water-cooled, monolithic machine in the Palo Alto data centre and left the entire company to the tender mercies of the Intranet environment of 84,000 personal computers running the same core software applications; 23,000 desktop Unix systems; 6,000 servers; 1,600 Web servers; and the Netscape Communications Corp Navigator running on 60,000 desktops.

Sybase Inc is introducing a support plan aimed at all the small departmental and workgroup users who don't need mission critical support. Called SupportPlus Lite options include per incident telephone support, with individual issues costing \$175 and a ten issue pack, good for twelve months costing \$1,750.

An end-of-life uniprocessor VAX supposedly designated Catamount (an American wildcat) is expected in the fall. Meanwhile insiders say DEC's direct sales Alpha systems Business Unit is downsizing from 1,100 accounts to something nearer 800. However insiders say they wouldn't be surprised if that number was culled to as few as 250 as even at 800 it's still operating at the 20/80 level - 20% of revenue from 80% of the accounts.

Tangent Computing Ltd, the Tokyo-based distributor of Toronto, Canada-based **KL Group's** Motif widget set says it turned over around \$1m last year. Tangent sells over 50% of its product direct and the other 50% through a range of resellers, including Astec, Sumisho Electronics, Tomen Electronics, Lifeboat and others. Tangent recently became a project client in the Japan Market Entry Competition, a programme which is rapidly becoming known as the mini-MBA course in Japan market entry.

Paris, France-based **Argos Systemes SA** is offering its Spotline asynchronous and network terminal servers through Spotline Inc, San Francisco, California. The 210 model supports eight concurrent Telnet sessions, two serial links, a parallel port, print server and set up utility with ANSI emulation support for SCO, AIX, HP-UX and System V. It costs \$700.

Applix Inc has added Red Hat Software Inc's Linux to the stable of platforms for its Applixware office automation suite. Red Hat will bundle Applixware version 4.2 with version 3.03 of its Linux, codenamed Picasso. Red Hat will distribute and support the combined package, which includes the Applix Builder application development environment. Available in the next couple of months, it will cost \$500 per user.

Netscape Communications Corp is offering Unix and NT betas of its News Server 2.0 release for creating forums and discussion groups as well as accessing Usenet groups. 2.0 is claimed to include new capabilities to restrict access to discussion groups, extended network management and encrypted remote administration support. Production versions will cost \$1,000 individually or \$4,000 as part of Netscape's SuiteSpot server bundle.

IBM Corp quietly briefed three of the glossier weekly trade pubs last week on its AS/400 thin client; only one of them was awake enough to spot the significance of the thing and actually run a story on it.

Fresh from its foray into the world of on-line analytical processing, **Business Objects SA** will heave itself onto the Web in a couple of weeks with a new set of modules allowing users of its data access tools to publish reports in HTML and execute searches from browsers.

Cambridge, UK **Acorn Computer Group Plc**, responsible for the design of Oracle's Network Computer - will be showing off its own \$300 ARM RISC-based NetSurfer "Internet Box" on the 4th June in London (UX No 564).

UK multidimensional database and OLAP outfit **Planning Sciences International Ltd** has snared **Comshare** VP of North American operations Charles Palmer as CEO and president of its North American operation. Planning Sciences has US offices in six cities including Boston and San Francisco and has 130 people worldwide. Palmer reports to Planning Sciences chairman and CEO Paul Rolph. The company has just got its IPO away at \$16 per share on an offering of 3,000,000 shares.

DEC has won **Qualix** and **Clam Associates'** certification for its StorageWorks RAID Array 410 system. Qualix certified it for its QualixHA failover and recovery system under Solaris and Clam Associates wants it for High-Availability Cluster Multi-Processing software for AIX.

Massively parallel processing house **Red Brick Systems Inc** has ported its Warehouse XPP to **IBM Corp's** RS/6000 SP platform. The new rev includes a "parallel table management utility" or parallel loader for distributing data across nodes. Available from June 30 on the RS/6000, prices start at \$60,000 for a two-node solution.

ParcPlace-Digitalk Inc and **GemStone Systems Inc** have got together to integrate the former's VisualWave Server with GemStone's server offering into the VisualWave/GemStone Internet Application Server, which the pair claim is the first applications server to support transaction-oriented Web applications for thousands of users.

Congleton, Cheshire-based **JSB Computer Systems** is adding three new products to its range of PC to Unix connectivity software; Multiview Desktop Lite, Desktop Pro and Multiview/X Pro. The products will enable Web browsing through Multiview Mosaic and Internet mail exchanged internally and externally. All the products in the Multiview range have been upgraded to use Windows TCP/IP stack and are Windows 3.1 and 95 compatible. Multiview is up on IBM, SCO and Sun. No prices.

IBM Corp software house **Compagnie General d'Informatique SA** (CGI) is reselling Canadian **Cognos Inc's** Impromptu and PowerPlay on-line analytical processing software tool under the CGI name for its Human Resources Management package. Financial details were not disclosed. The deal adds query, reporting and multidimensional capabilities to CGI's payroll and human resource modules. CGI claims 650 customers for its HRM solution.

Away from the esoteric niceties of standards for the Network Computer (*see p5*), **Oracle Corp** CEO Larry Ellison was ruminating on what comprises his ideal desktop. Naturally, he has a Mac, "because it's the right thing to do...and I have the other thing." As for software he continued, "I have a word processor; I do about two spreadsheets every two years, tons of electronic mail...I think I'm done."

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SGI JOINS BIG BUS CROWD WITH SPIDER INTERCONNECT

Silicon Graphics Inc will join the "big bus" lane towards the end of the year with a high-speed, low-latency interconnect called Spider - for Scalable Pipelined Interconnect for Distributed Endpoint Routing - which it says can be used for interprocessor communication, as a distributed graphics switch or central switch for high-end clustered configurations. SGI insiders said Spider should crawl all over the space which currently houses the likes of Tandem Computers Inc's ServerNet, DEC's Memory Channel or IBM Corp's Vulcan switch, but with far more bandwidth. Spider will be integrated into SGI's next generation clustered servers - presumably its anticipated Lego arrangement (UX No 579) - and will, SGI says, support cache coherent Non Uniform Memory Architecture and other symmetric multiprocessing configurations. Spider is being fabricated in IBM Corp's 0.5 micron, five-layer metal CMOS process and dissipates 29 watts at 3.45V. The six port crossbar switch has a sustainable data transfer rate of 4.8Gb/sec between chips in a single chassis or between remote chassis over cables up to five metres apart. Raw data bandwidth of each link is put at 1Gb/ps - 800Mb/ps after administrative overheads. Point-to-point latency is under wraps until later in the summer, though delay across the chip is put at 50 nanoseconds. Network administrative messages use source vector routing, while main-stream messages use programmable routing tables which exist in each chip. SGI says routing tables define a static route between every pair of destinations in the network, and are programmed by software whenever the network needs to be reconfigured allowing hardware to take advantage of the static route and optimise routing latency. Software can step in at any time to define new routes which avoid detected faults or change existing routes based on new algorithms.

JAVASOFT UNLEASHES ITS JAVAOS, JAVA BEANS BLITZ

Sun Microsystems Inc's JavaSoft division saved up all its announcements for the JavaOne conference in San Francisco last week. Top of the agenda was JCA, the Java Component Architecture, which is supposed to ensure that anything built on Java works on any machine, Java's whole point. Described by JavaSoft chief operating officer Jon Kannegaard as "the moral equivalent" of Microsoft Corp's ActiveX, Java Component Architecture's seven application programming interfaces include Media, Enterprise, Commerce, Security, Server (under the name Servlet), Management and Embedded interfaces, for use as a framework for developing robust applets and applications within Java. The project for developing these is code-named Java Beans, and they will be written entirely in Java, providing developers with the ability to write components once and run them anywhere. Java Beans is also designed to support OpenDoc and Microsoft's Common Object Model (OLE) compound document architectures, plus HTML and LiveConnect, which means developers should be able to write Java applets from reusable components that can transfer functionality not only to other Java applets but also to non-Java applications. Also announced was the long-awaited JavaOS operating system, previously known under the code-name Kona, aimed at the embedded market and hyped as "the fastest, smallest operating system for running Java." Acorn Computer Group Plc's Advanced RISC Machines Ltd, Cirrus Logic Inc, Fujitsu Ltd, LSI Logic Corp, National Semiconductor Corp and Sun Microsystems Inc plan to implement the system. It runs in as little as 512Kb ROM and 256Kb RAM and Sun says a system such as one of the vaunted NC network computer devices - and presumably its own still unannounced JavaStation terminals - with JavaOS, HotJava, space for downloading Web material and applets, would need 3Mb ROM and 4Mb RAM. Development tools software houses such as Borland International Inc, Metrowerks Inc, SunSoft Inc and Symantec Corp are also working to integrate their products with JavaOS - see our JavaOne round-up. And JavaSoft has repositioned its HotJava product as a set of classes designed to be used to build intranet applications such as collaborative systems. The HotJava name was previously applied to Sun's World Wide Web browser.

PICOJAVA LICENCEES STEP FORWARD

The next raft of licencees for Sun Microelectronics' Java chips have raised their heads above the parapet, following Northern Telecom Ltd's declaration last week (UX No 591). Sun is keeping the microJava and UltraJava chips to itself for the time being, but the picoJava instruction core on which they are built looks like ending up in everything from toasters to aircraft. Sun is licensing the picoJava core to LG Semicon Co Ltd, Mitsubishi Electronics America Inc, NEC Corp, Rockwell International Corp, Samsung Electronics Co Ltd and Xerox Corp. Raj Parekh, vice president and chief technology officer said "there are no plans to licence microJava or UltraJava" at present. The company's aim is to get as many Java chips with picoJava cores out there as possible, added Chet Silvestri, president of Sun Microelectronics. Mitsubishi already has a Java-on-silicon chip with its M32R/D with integrated DRAM and SRAM built around the company's own RISC core (see separate story). Stephen Hester, vice president of systems marketing at Mitsubishi Electronics said a chip similar to the M32R/D, but with a picoJava core would be a "very interesting product." Rockwell's Collins Commercial Avionics division said its AAMP processors have a very similar instruction set to Sun's implementation of the Java Virtual Machine in the picoJava core, and it has used those in embedded applications from global positioning systems to avionics, so we can expect similar things with the Java chips it develops. Samsung will embed the core in its consumer electronics products, computers, semiconductors cellular phones and much, much more. There was no word from Sun Microsystems Computer Co on when it will be using Java chips in its so-called JavaStations (UX No 582). Silvestri suggested Sun Microelectronics was ready when the Java stations were: "it's really up to them now", he said.

IBM BREWS ARABICA TO BRIDGE OPENDOC AND JAVA

Keeping, it says, with the coffee theme, IBM Corp has carved a component architecture out of OpenDoc it's calling Arabica which will allow Java applets and OpenDoc components to inter-operate. Big Blue says it was pushed into previewing Arabica, as yet just a prototype, by last week's Java activities, including JavaSoft's supposed plan to support OpenDoc in its Java Beans APIs, (even though it hasn't actually licenced OpenDoc yet). The problem is that IBM hasn't yet worked out quite how and if Arabica is going to work, let alone packaging and licencing issues. Initially Java development tools will create applets that use Arabica components and are run through what IBM describes Arabica's post-processor to make OpenDoc calls. Compatibility issues haven't been worked out yet; will Java applets with Arabica components be able to interoperate with vanilla Java applets and Java virtual machines? Are Arabica applets only inter-operable with other Arabica applets? The best it can offer is that these issues will be sorted through by the end of this year. IBM believes a bridge such as Arabica will be required to bring the Java and OpenDoc worlds together; it thinks native Java support in OpenDoc or vice versa could be as long as three of four years off. IBM's notion is to use Arabica for connecting Java applications with enterprise OLTP and database systems. Arabica betas in the fourth quarter

FORGET NOTES: MOSAIC LAB'S HABANERO IS REAL TIME

We haven't got anywhere near to absorbing the last half dozen "hottest new things" in the world of the Internet, but already the National Center for Supercomputing Applications, begetter of the Mosaic World Wide Web browser can hardly contain its excitement over its next trick. The lab, at the University of Illinois campus in Champaign, has come up with Habanero, an extension to Sun Microsystems Inc's Java that is designed to enable collaborative applications to be developed. The idea is that people in diverse locations would be able, for example, to look at the same engineering drawing or X-ray photograph of a patient and make changes, draw arrows or whatever, that all the other participants would be able to see and counter with their own scrawls or suggestions - or a grand master might play speed chess against half a dozen geographically dispersed opponents simultaneously, with the games able to be watched by millions. The proponents, reports *the Wall Street Journal*, argue that even current groupware environments such as Notes operate in what is effectively on-line batch mode rather than real time - and that Habanero, named after the hottest chili, will enable people in widely scattered locations to interact in real time. As with Mosaic, Habanero will be distributed free, only requiring a licence if used to create a commercial application. It is currently in prototype, and should be ready by year-end..

MEMCO OFFERS HARDENED FIREWALL

Memco Software Ltd has duly announced another partner to add to its roster, as it recently promised it would (UX No 589). The Tel Aviv-based company announced that it will start reselling fellow-Israeli CheckPoint Software Technologies Ltd's FireWall-1 network security software, together with its own SeOS Security for Open Systems offering them as a single product with a single installation process from July. CheckPoint's offering targets network access while Memco targets server security, and the combination provides a secure firewall running on any flavour of Unix, according to Memco. The company added that the offering has certain B-1 features, but it is not aiming for full B-1 classification. A key aspect of Memco's SeOS is that it disables super user privileges and shifts responsibility to individual users. Memco's SeOS Access Control secures the operating system, while CheckPoint's Internet firewall package is one of the most popular of its kind and is already resold by SunSoft Inc, Hewlett-Packard Co, Vanstar Corp and UB Networks Inc, among others. The bundle costs from \$6,100 to \$23,150, depending on the network configuration, and for existing CheckPoint FireWall-1 users, the hardened upgrade will be available from Memco for between \$1,100 and \$4,250.

INFORMATION ADVANTAGE CLAIMS FIRST TAILOR-MADE CUSTOMER-CENTRIC DATA WAREHOUSE

Information Advantage Inc reckons the next version of its DecisionSuite data warehouse solution is the first to address the scalability issues associated with customer-centric data warehouses, as opposed to financial or product-centric ones. The Minneapolis-based company can also cite MasterCard among its customers, it's already rolling out DecisionSuite 3.5 in a 1.2Tb configuration supporting 22,000 member banks (UX No 576). The new version includes the company's WebOLAP front-end to DecisionSuite, which trusts the World Wide Web to enable users to analyse the most up-to-date version of the data. Naturally, Information Advantage was at pains to emphasise the multi-layer security. Each user has a security profile on the server at personal, workgroup and enterprise levels, accessed by their encrypted password. There are also layers of database security, whereby users can have collaborative capabilities but also lock-outs. Each Web page has a token attached to it that retains the user's security ID so they don't have to log on again if they want to go back and look at the page in the same session.

Customer-centric

Customer-centric data warehouses are the most demanding in terms of the size of the database. They tend to be used in industries with millions of customers, such as retail, insurance, telecommunications and finance. Whereas financial data warehouses typically range from 5Gb to 20Gb, and product ones from 50Gb to 500Gb - the company's previous area of focus - customer data warehouses can be multi-terabyte. This provides a set of problems that Information Advantage believes it has met. For instance, customer analysis databases tend to have large numbers of users. And if they are all making SQL queries on it using temporary tables, it doesn't take long to significantly slow the whole thing down. Therefore, DecisionSuite aims to get round this by eliminating the need for temporary tables by optimising processing between the database and DecisionSuite server through what the company calls join, aggregate and data filter optimisation. Join optimisation entails switching on the fly between logical joins - those in the DecisionSuite OLAP engine - and physical joins - those done in the actual customer database. For example, the product data join is done in the DecisionSuite server, and the customer join and segmentation into groups would be done in the physical database. Aggregate optimisation involves processing raw data, such as unit sales in the database, and calculated data, such as the percentage market share in the DecisionSuite server, again eliminating the need for temporary calculation tables and improving performance, according to the company. Lastly, data filter optimisation automates where filtering takes place, again with the raw data filtering in the database and the processed data in the OLAP engine on the DecisionSuite server. DecisionSuite also has native SQL support that tunes the SQL statements to the particular vendor's RDMS and splits large statements into multiple queries. DecisionSuite 3.5 comes with four client applications, InfoAlert for light users; NewsLine, which enables users to modify reports; Workbench, an administrator's client and Analysis, for power users to publish their own reports and develop their own intelligent agents. Available from this month for Windows clients, supporting OLE, MAPI, DDE and extendible using Visual Basic, C++ or PowerBuilder, and a wide variety of Unix servers, it also supports DB2/6000, Informix, Oracle, Red Brick, Sybase and Tandem Non-Stop SQL databases. DecisionSuite server with WebOLAP goes from \$30,000 and the InfoAlert, Newsline, Analysis and Workbench clients cost \$45, \$150, \$900, and \$3,000 respectively.

CALDERA TAPS LASERMOON TO MAKE LINUX WIDESPREAD: MISSION IMPOSSIBLE?

Caldera Inc really believes there is money to be made from Linux, and has bought a seat at the Open Group table and key Linux technologies and people from the UK and Germany to help it achieve full Unix 95 branding for its Caldera Open Linux. The Provo, Utah-based company, backed by former Novell Inc boss Ray Noorda, has tapped Lasermoon Ltd, of Wickham, Hampshire for Linux technology and engineers - although not for a stake in Lasermoon itself - including Lasermoon co-founder Ian Nandhra, who is now Caldera's director of product certification. Caldera has also tapped the Unix systems and Linux engineers from Linux Support Team of Erlangen, Germany. They will integrate Lasermoon's stuff with Caldera's existing operating system, additional SPEC 1170 Unix APIs and their own Linux 2.2 offering. The first Posix 1 version of Caldera Open Linux will be out in the third quarter. It will be XPG4 Base 95-compliant and will get full Unix 95 branding sometime in 1997 - the company declined to narrow it down further than that. When each stage is completed, the company will put the code up on ftp.caldera.com for free downloading and use, but obviously other companies will not get the Unix 95 badge automatically. As well as the seat on the Open Group, Lasermoon had Open Group test suites that Caldera needed. Lasermoon will continue to do Linux development and is now also a Caldera distributor. Caldera has a couple of products at the moment, the Caldera Network Desktop environment for publishing on the Internet and intranets, and the Internet Office suite, including ports of WordPerfect and CorelDraw. It will shortly ship the Caldera Solutions CD containing all the applications it and its ISV's have written for Linux, in an encrypted form, which can be unlocked with the FlexLM licence manager key that Caldera and its partners have licensed from Globetrotter Inc. The company has also licensed Sun Microsystems Inc's Wabi Windows-on-Unix API to include in future applications. The company will also incorporate the Lightweight Directory Access Protocol (LDAP) into the product line this autumn for directory services over the Internet. Caldera is committed to giving a "significant" percentage of its revenues to the Linux development community to further encourage its spread, including buying equipment. As Nandhra put it, Caldera's is the "biggest single investment that probably ever will be made in Linux." It really is make or break time.

ULYSSES LAUNCHES BASIC WEB GROUPWARE ODYSSEY

Despite being a bit lightweight by the company's own admission and not pretending to get near the functionality of IBM Corp's Lotus Notes, Ulysses Telemedia Networks Inc's forthcoming Odyssey intranet groupware package hopes to get a slice of the groupware action before IBM gets round to fully Web-enabling Notes. Odyssey, sold through Ulysses Intraprise Technologies affiliate, comprises Odyssey Contact Manager, Odyssey Calendar and Odyssey Reminder and is, so the Minneapolis company claims, a platform-independent Web-based groupware package. Odyssey Contact Manager resembles a Rolodex-like system for basic contact management, as well as tracking the call history of a contact, Odyssey calendar is self-explanatory and Odyssey Reminder "takes on the life of a real-life personal assistant", according to the company, which is putting it a bit strong. It enables messages to be programmed and delivered via electronic mail, fax, pager or through Odyssey Calendar. The next release will add a task manager on top of Contact Manager. Out now, Odyssey costs \$1,500 for the server software and \$150 per user.

NETSCAPE SET TO PROPEL CORBA INTO FOREGROUND BY INTEGRATING POSTMODERN ORB...

Netscape Communications Corp picked up a small piece of Visigenic Software Inc last week and it's believed it's because of PostModern Computing Inc, the well-regarded object request broker (ORB) company Visigenic is buying with some of Netscape's money. Sources claim Netscape will use PostModern's all-Java Corba-compliant IIOB ORB, Black Widow, in Navigator and its Internet servers. The move could give Object Management Group's Common Object Request Broker Architecture a critical boost as a standard, as Netscape's backing did for the fledgling LDAP, and definitely pose a problem for Microsoft Corp's rival Distributed COM/ActiveX scheme. It could even force Redmond to the distasteful task of supporting Corba just as it's had to support Java and LDAP. In case it does, PostModern's product line includes ORBeline, a C++ ORB that like Black Widow implements the Object Management Group's Internet InterORB protocol (IIOB) for instant interoperability with any Corba 2-compliant ORB. Even if Microsoft doesn't reconsider its stance on Corba, a Netscape-PostModern tie-up could still do wonders for Corba, which - pre-IIOB - was the victim of too many implementations and poor interoperability. The Netscape buy-in puts Visigenic in an odd situation since it has exclusive rights from Microsoft to put ODBC on non-Windows platforms. Some interested by-standers say it has "stuck a big knife in Microsoft's back." Visigenic founder Roger Sippl, who also started Informix Software Inc, declined to pinpoint Netscape's interest in PostModern other than to define it as "strategic." He did however suggest that a browser might use HTTP to find an application and Black Widow "to do the business" of downloading it, using it, communicating the data or of developing applications. Sources say Netscape's was a make-buy decision and that it had been doing its own IIOB implementation called DOP which will now be retired in favour of PostModern's. It is believed that IIOB could also impact the World Wide Web Consortium (W3C), widely criticised as behaving as if it had "no adult supervision" and endangering the future of the Web as happened under MIT with the X Consortium. Corba, it is said, could become the next-generation implementation of HTTP and the poorly conceived CGI browser scripting language. At the very least the two could co-exist. Insiders say that if Netscape does indeed ORB-enable its browser it will be a tremendous incentive for developers to create Corba-based applications, knowing that objects could be instantly accessible across the Internet from any browser.

...AS CISCO EMBEDS ORB IN NEW CLASS OF ROUTERS

Netscape's equity in Visigenic wasn't revealed, and the dollar amount it's investing was masked by lumping it together with investments from Cisco and Platinum Technology. Together the three are putting \$8m into the privately held company for less than 10%, Sippl said. It is believed Netscape has the lion's share of the points. Visigenic won't need the whole \$8m to pay for PostModern whose impending takeover was announced last month. The rest of the money, Visigenic's third round, will be used to fund growth. Technically, the Netscape-Cisco-Platinum investments aren't tied to using Visigenic software, which is covered by separate licensing arrangements. However some are dubious Netscape will pay any more for the technology than its investment in Visigenic. Both Cisco and Platinum are using Visigenic ODBC code in their core products: Cisco to let its network management products create repositories of network data from any ODBC database not just Sybase. Platinum is using its OpenChannel ODBC-compliant database connectivity software in its POEMS messaging technology. More interestingly, Cisco aims to stick PostModern's stuff in its routers to do object passing on the network, currently the task of servers, thereby creating a new class of intelligent devices. However, it's not exactly sure how all this'll be done. It may also be one answer to what's becoming a major problem, namely that IIOB isn't understood but the majority of Internet/intranet firewalls. It expects other Cisco technologies to flow back into Visigenic as a result of its investment. Companies like Shiva are also expected to use Corba in their widgets. Meantime, Visigenic has licenced the source code to JavaSoft's Java database connectivity (JDBC) API test suites to certify its products comply with JDBC as well as the JDBC/ODBC bridge, which provides Java applets with access to Open Database Connectivity-compliant databases.

INKTOMI ADDS PARALLEL PROCESSING TO THE WEB

Four month start-up Inktomi Corp, Berkeley, California, staffed by a bunch of UC Berkeley scientists, is planning to cash in on the boom for all things Internet and intranet with its parallel processing search engine and Web crawler products. It's already co-developed the HotBot search engine with Wired Ventures subsidiary Hot Wired Ventures LLC and reckons its got a bunch of partners in the bag to push its stuff into the mainstream market. Inktomi's core technology is based on parallel processing work its founders Eric Brewer and Paul Gauthier developed at Berkeley. HotBot uses a custom-built high-performance primary database integrated with Informix's Online Dynamic Server for tracking user preference profiles, ad placement and accounting. It relies on a network of workstations and Arcadia, Los Angeles-based Myricom Inc's Myrinet local-area network (LAN) technology for communication and packet switching within concurrent and parallel supercomputers. Myricom claims Gigabit-per-second packet communication starting at \$1,500 per host. Bandwidth is 160Mb per second per processor with an injection time of 12 microseconds, claims Inktomi. The search engine comes with a software package Audience 1 including dynamic tags for database access enabling arbitrary persistent information and customised HTML tracking and support for SQL. The crawler recognises multimedia file types including ShockWave, Java and RealAudio. Access to the Inktomi search engine can be encapsulated into a single dynamic tag, hiding the complexities of parallel programs and enabling multi-threaded, interleaving long latency queries and customer content selection. Inktomi reckons HotBot provides a more comprehensive index than the likes of Digital Equipment Corp's Alta Vista search engine, which it estimates covers 30m pages out of the 50m HTML pages on the web. It describes the full text index of Alta Vista as haphazard, missing lots of entries based on individual words. In comparison, HotBot delivers an index covering the whole of the web, with a level of fault tolerance that the single big computers from the likes of InfoSeek or set of independent machines such as Alta Vista and Lycos cannot manage because of replication requirements. Point your browser at <http://www.hotbot.com>

HITACHI JP1 FOR SYSTEMS MANAGEMENT

To accommodate the expanding role of distributed Unix systems within the mainframe world, Hitachi Europe Ltd is adding a systems management capability to its ObjectIQ object-oriented application development environment. JP1 is a suite of tools providing performance management, backup and restore, automatic job scheduling, automated operations and print services. With a nod to Hewlett-Packard's OpenView the JP1 performance management module includes HP's PerfView network performance management software for performance monitoring and system data collection. It comes with an information management capability for gathering information for batch and print jobs. The backup and restore operations include HP's OmniBack II which backs-up file systems, database files and images. It also includes a job scheduler. Batch job operation is handled with JP1/Nosexec enabling transparent job queuing, multiple queues and connectivity to NQS. Hitachi has already been peddling the stuff in Japan (UX No 523) and recently released it into the US market. Initially it will target the retail and banking sectors, it says. Entry level prices start at £3000.

PERFORMANCE HITS RS/6000 SALES

Analysts have told our sister publication *IBM System User* they believe IBM Corp is losing market share to rival Unix vendors as a result of a lack of power in its RS/6000 SMP models. IBM's RS/6000 has fallen behind rival Unix platforms as delays to the Power PC 604 processor have left its symmetric multiprocessing (SMP) systems lacking in power, analysts argue. "It is a three horse race. Hewlett-Packard, Sun and Digital are the top three Unix vendors, IBM has fallen back," said Brian Richardson, Meta Group programme director of the Open Computer group. IBM executives admit the RS/6000 SMP models are suffering from a lack of power. One executive admitted that much of the resulting damage to the overall RS/6000 business has been hidden by strong RS/6000 SP sales. However, some users have balked at making the difficult upgrade from SMP boxes to SP2s for extra juice; others have been left waiting for over a year for the SMP power boost that IBM promised to deliver with the PowerPC 604 processor - the 604 upgrades will finally ship next month. Although IBM is confident of a 100% growth rate in the SP commercial market this year, SP sales will do little to fend off the attack to the RS/6000 in the SMP market place, say analysts. Furthermore, the RS/6000 is coming under increasing pressure at the low-end from SMP servers based on Intel SHV parts, giving users a lower cost SMP option. "They are a significant threat to RS/6000 sales," said one IBMer. IBM claims it is remedying its performance problems and that the SMP PowerPC 604 processor will ship next month. Existing PowerPC 601 SMP users will get free upgrades. IBM has officially denied any suggestion that its RS/6000 business is suffering setbacks.

ORACLE USES POWERSHIFT TO POACH POWERBUILDER WAVERERS

According to Oracle Corp there's a whole bunch of corporate PowerBuilder application users worrying about just how database-neutral Sybase Inc will allow its Powersoft unit to remain. So it's added Milpitas, California-based Sierra Atlantic Inc's PowerShift migration tool to its Developer/2000 application development environment ISV programme. PowerShift captures PowerBuilder V 3.0 and 4.0 application libraries and converts them to Developer/2000 applications by generating corresponding form and menu modules. The PowerShift architecture consists of a user interface layer built on what Sierra Atlantic calls the "PowerShift migration genie" which is responsible for parsing the PowerBuilder objects and building its internal mappings. The migration genie includes an object conversion module for converting PowerBuilder objects to Developer/2000 objects, a DataWindow conversion module for converting DataWindow to BaseTable blocks in Developer/2000, a PowerScript to PL/SQL language conversion module and a SQL conversion module for converting Embedded SQL in PowerBuilder to PL/SQL. PowerShift will convert up to seventy percent of PowerBuilder code without modification, Oracle claims. Sierra counts Mercury Interactive as one of its pre-beta customers. PowerShift Workgroup - for migrating less than 300 PowerBuilder objects - goes from \$15,000, the Enterprise version is from \$25,000.

APERTUS PUTS MQSERIES TOOLS UP ON TIVOLI TME 10

Atlanta, Georgia-based Apertus Technologies Inc has integrated its MQView application tool with IBM Corp's Tivoli TME 10 NetView systems management solution. Apertus' MQView is an SNMP-based manager for IBM's MQSeries message queuing technology and includes centralised configuration management, operations control, stop and start Queue Managers and Channels, monitoring and inquiry, fault reporting, and alert processing. It runs from a single graphical interface located on the TCP/IP network. TME 10 systems management solution combines the existing IBM SystemView environment with its recent Tivoli Management Environment 3.0 acquisition (UX No 575, 584).

BRIO REVEALS INTRANET HAND

Decision support and EIS outfit Brio Technology Inc is the latest company to climb aboard the intranet bandwagon, announcing a three-level strategy to include support for the location and viewing of pre-built reports through a Web browser, interactive analysis of pre-executed query data via Brio's on-line analytical processing BrioQuery Enterprise and an interactive querying of the data warehouse via the intranet. The first part of the strategy will roll out in the third quarter on NT. The Palo Alto, California company says it has been stung into announcing plans after numerous questions from its existing customer base about its intranet plans. Competitors include Business Objects SA and Cognos Inc. Meantime Brio has opened its first wholly-owned European subsidiary Brio Technology Ltd based in Middlesex, UK. The UK subsidiary - which has eight staff - will oversee the distribution of Brio products in eight European countries including France, Germany and Italy. Its BrioQuery Enterprise is being integrated with IBM Corp's information analysis server, Intelligent Decision Server. It's due in the fourth quarter.

INFORMIX REVS ONLINE DYNAMIC SERVER

Informix Software Inc has revamped its multi-threaded OnLine Dynamic Server for uniprocessor and symmetric multiprocessor machines to Version 7.2. Based on its Dynamic Scalable Architecture, Version 7.2 includes the Parallel Data Query developed in association with Sequent Computer Systems Inc for parallelising queries. New features include support for 64-bit large memory addressing, continuous data replication enabling shared information across geographically dispersed locations, global language support, online backup and recovery, a parallel load utility with a claimed 50Gb per hour load rate and year 2000 support. The Menlo Park, California-based company has signed up PeopleSoft Inc, Baan Co and SAP AG for it. PeopleSoft plans to ship its PeopleTools application toolset for the platform in the third quarter. Baan and SAP AG's R/3 application suite is already available it says. 7.2 is up on most Unix and goes from \$1,500 for a development license and \$1,125 for a run-time version with a five-user minimum. 7.2 for NT is due in the third quarter.

PLATINUM ADDS SUPPORT FOR THIRD PARTY APPS

Oakbrook Terrace, Illinois-based Platinum Technology Inc is drawing ever closer to its long promised Platinum Open Enterprise Management System framework and put another notch on the bedpost last week with a bunch of adapters for its AutoSys batch job control system enabling it to recognise and respond to third party applications and coordinate tasks. Called AutoSys/Adapter - the company describes it as an access translator - Platinum has a host of AutoSys/Adapters up and ready for SAP's R/3, Oracle applications including financials, government financials, manufacturing and human resources and its own distribution management tool AutoXfer. It's currently working on adapters for PeopleSoft's financial, human resources and distribution applications slated for the third quarter. Other applications currently in beta include its own tablespace reorganisation utility TSReorg, system file backup NetArchive and network backup specialist Legato Systems Inc's storage management software. The adapters include single schedulers enabling centralised points of control, dynamic load balancing, coordinated tasks between platforms and complex job dependencies across applications. The AutoSys/Adapters come as add-on products to AutoSys and prices go from \$15,000. Meantime Platinum has spun out the service arms of its Locus Computing Corp, Axis Systems International Inc, Paradigm Systems Corp, Trinzic Corp and education division of Platinum into a wholly owned professional services subsidiary, Platinum Solutions Inc.

NEC AND BUSINESS@WEB TEAM ON NET KIT

NEC Corp and Business@Web Inc of Cambridge, Massachusetts have announced an alliance for joint development of corporateware for the Internet-intranet applications environment. Part of their alliance involves the transformation of NEC's StarOffice "corporateware" application into "StarEnterprise," using Business@Web's object component development and operation technologies. In April, NEC also invested \$1m in Business@Web, which will be used "for working capital," according to vice-president John Burke, who made the announcement with NEC executives in Tokyo. Business@Web is part of the Cambridge Technology Inc group of companies set up to develop Massachusetts Institute of Technology's technology under stewardship of Professor John Donovan. NEC's subsidiary on the East Coast, NEC Technologies, has been working with Business@Web on the project since October 1995. Both companies will use the product for drumming up system integration business, in Japan, the US and internationally. Star Enterprise will be two-byte-enabled to make possible translation not only into Japanese but other two-byte languages. According to Burke, the trend in the US is to try to control costs stemming from operations outside the company; interactive communication via the Internet, with outside customers or suppliers, is one way to achieve this. Use of StarEnterprise, to develop a "Presentation Layer" between the outside and existing mainline applications, can considerably cut development time and costs as well. NEC showed a demonstration in which a customer ordered traditional summer gifts via an Internet interface that was linked with an existing application in the company to process and ship the order. NEC will be demonstrating the product at the Business Show 96 Tokyo this month. It expects installation at 5,000 sites over the next three years.

TRITEAL'S TED DESKTOP CHOSEN FOR US DEFENCE KERNEL

TriTeal Corp said its TriTeal Enterprise Desktop has been selected for the US Defense Information Infrastructure Common Operating Environment (DII-COE) kernel to be implemented by the Defense Information Systems Agency. The standard is an attempt to bring together the array of systems used by the US Army, Navy, Air Force and Marines. It has received 10,000 orders initially to be deployed in something called the Global Command and Control Systems (GCCS) programme for wartime systems and information management. The Carlsbad, California company's environment is based on the Common Desktop Environment standard.

STRATUS LICENCES HP-UX FOR CONTINUUMS...

With its present OEM supplier Sequoia Systems Inc still stuck on the 68040 processor, it looks as if Hewlett-Packard Co's fault-tolerant Unix future lies with machines from Stratus Computer Inc, even if gossip that HP wants to buy the Marlborough, Massachusetts-based systems builder proves unfounded. At all events, Stratus last week announced that it will license the HP-UX implementation of Unix and put it up on the Continuum family of Precision Architecture RISC-based fault-tolerant computers. Stratus will provide some of the fault-tolerant components of its own FTX Unix SVR4 implementation such as hot-plugging and maintenance as add-ons to the HP-UX it will sell and support, claiming its decision will allow customers to take advantage of HP-UX's broad base of commercial applications. Stratus will also resell a range of key HP-UX layered software products on Continuum, including DCE, OLTP and network management. The company claims it has no plans to halt development of FTX, which is used predominantly by its telco customers, but admits the biggest drawback to the expansion of its Unix business has been FTX's lack of application and middleware support. It'll position FTX for users writing their own applications and HP-UX for general purpose use. It won't port the HP-UX applications or middleware to FTX, neither are the fault-tolerant pieces it attaches to HP-UX to be passed back to HP, at least not yet anyway. With Stratus already committed to using the next-generation HP/Intel Corp Merced processor VP Steve Kiely admits there are a wide range of potential synergies down the road, but denies there have been any discussions just yet. Although the company has previously said it'll use Santa Cruz Operation Inc's 3DA Summit kernel OEM offering as the basis of its future FTX Unix requirement (UX No 581), last week it wasn't at all sure what will fill that spot. Stratus plans to release HP-UX on the Continuum Series 400 at the end of 1996, with availability on other Continuum models next year.

...AS PRECISION RISC CLUB ADDS HP-UX

Stratus Computer Inc may be the first third party to sign to license HP-UX, but it is unlikely to be the last: the Precision RISC Organisation said yesterday it had broadened its technology base beyond systems powered by the RISC family, and it now also embraces the HP-UX Unix.

DATA WAREHOUSING MEETS DATA MINING; RED BRICK BUNDLES DATAMIND TOOLS

Redwood City, California-based DataMind Inc's won Red Brick Systems Inc as the first OEM partner for its data mining tools. The Los Gatos, California data warehouse has been working with DataMind for a year or more to embed DataMind's algorithms and analysis tools into its warehouse database server and will offer a data mining option for use with a new 5.0 release of its warehouse products from the fourth quarter. Red Brick claims it'll be the first company to offer users the ability to apply data mining's discovery-driven analysis to the same data as query-based warehouse tools. Data mining's potential is its ability to reveal new kinds of relationships between data by applying algorithms designed to find patterns in data. Data warehousing seeks to test assumptions and draw conclusions based on their validity. It's this kind of linkage which is needed to make data mining happen, according to DataMind. Red Brick says warehousing and data mining go hand in hand as they both require large data sets, a "clean" and integrated single source of data, although it believes "effective data mining requires data warehouse functionality to get clean, prepared data and to investigate conclusions further." Red Brick says its data mining option is accessed as tables in databases via SQL APIs or directly in warehouse tables. It's based upon DataMind's DataCruncher technology. The Red Brick Data Mine Builder uses DataMind's Professional Edition access tools which build data models interactively and connects to the Red Brick Warehouse via ODBC. Betas are due next quarter for Unix and NT which require the new 5.0 Red Brick Warehouse. It'll be bundled as an option with the new version of Red Brick's 5.0 products. DataMind says it won't be doing the same kind of integration anytime soon with other warehouse users such as IBM and Oracle, though it does plan to team with data extraction and cleaning outfits and is in discussions with Prism Solutions Inc and others. DataMind says it'll have a full OEM strategy in place by year-end. It's up to 32 people. Ex-Sun and Red Pepper exec Susan Atherton is on-board as VP sales to take care of direct business.

GEMSTONE DEBUTS 5.0 TECHNOLOGY, READIES JAVA TOOLS, SAYS 'WINDOW IS OPEN' FOR IPO

It's been a year since the Beaverton, Oregon-based company re-cast its object database business for three-tier application development and GemStone Inc believes its now about two thirds of the way to meeting the objectives it set itself at that time following the release of its GemStone 5.0 technologies last week. GemStone 4.0 was the initial makeover of the database for use as an object application server, the 4.1 release added some enhancements. GemStone 5.0 includes the anticipated tuning and performance tweaking that means on any given configuration 5.0 could support 50% more users than 4.1; it can also accommodate 50Gb data. Part of the reason is a new virtual machine which executes code between two and five times faster than GemStone 4.1. It also conforms to the emerging ANSI X3J20 Smalltalk standard which the company says will simplify partitioning and migration across different Smalltalk implementations. Other features include enhanced control of passwords and user identification. The release is up on HP, IBM and Sun Unices and NT. The company is also offering GemConnect gateways which provide read/write access to Oracle and Sybase relational databases. It claims developers can maintain a clean separation between object models and corporate data using the gateways, which have previously been available only as beta or "consulting" technologies. There's also a new GemBuilder for Smalltalk, said to improve partitioning performance over the existing GemStone Smalltalk Interface. GemBuilder allows Smalltalk classes to be migrated between clients and servers and works with IBM Visual Age Smalltalk and ParcPlace-DigiTalk's VisualWave and Visual Smalltalk. There are also GemBuilders for C++ and C. GemAdmin provides GUI-based administration from NT - it says its Unix users are happy to use a command line. GemStone 5.0 products are due this month at \$6,000 per user.

Robust

GemStone's already integrated its software with ParcPlace-Digital Inc's VisualWave environment for use as an Internet Application Server, claiming it to be the first server to support transaction-oriented Web applications for thousands of users (UX No 591). GemStone is expected to offer ParcPlace-Digital's Parts for Java toolset as part of Java product strategy which will include a basic Java interface to the GemStone object server in the autumn, with a more robust version to follow. It'll add JavaSoft's Servlet APIs for building small executables to run on networks or servers somewhere along the way and other development tools in 1997 that will extend existing GemStone environments for use with Java classes. It doesn't see corporates doing heavy Java work until 1998. There could be an IPO under way fairly soon as the company admits it fits underwriters' current penchant for fast-growing second generation application development houses; "the window is now open," it says. GemStone, which claimed to have done \$10m in revenue last year says it'll at least double that this year. The company's single Malaysian investor had already sunk more than \$30m into the company this time last year.

SUNSOFT OFFERS SOLSTICE WORKSHOP FOR JAVA VISION OF NETWORK MANAGEMENT

As part of the JavaOne festivities SunSoft Inc has created a Solstice Workshop toolkit based upon the Java Workshop programming environment and database for building applets that perform network management tasks over the Internet. The workshop will utilise a set of Java Management APIs created in conjunction with the likes of Cisco Systems and Novell. The idea is that being built in Java, interface and service components can be reused. The goal is to have users and ISVs building their applications using Solstice Workshop for a Java-ised version of Solstice Domain Manager due next year that'll include what SunSoft's calling a BUI, browser user interface, console front-end. The Domain Manager allows groups of servers and networks - up to 10,000 nodes - to be configured into local domains and to send and receive event information. Domain Manager is the mid-range offering in SunSoft's three-tier network management offerings which have been carved out of SNMP SunNet Manager (UX No 559). Domain Manager 2.3 and the low-end Site Manager ship this month, Enterprise Manager 2.3 is due at the end of the summer. SunSoft's lined up a slew of network and systems management companies to support the Java Management APIs, including AutoTrol, Bay Networks, BGS, BMC, Century Design Systems, Computer Associates, Compuware, Landmark Technologies, Legato Systems, OpenVision, Platinum Technologies, Tivoli Systems and 3Com. We're not quite sure where Solstice Workshop's going to live given that SunSoft's supposedly delineated its product offerings into Solaris, Solstice and Workshop families, but that's another story. SunSoft says it'll integrate the APIs with the other Solstice management products. Demo versions are up on SunSoft's Web site - production ships begin in the autumn for Solaris 2.4 and up and NT. The Java Management APIs include a manager-side proxy in allowing SNMP agents to work with applets created by Workshop Solstice.

HDS NOW DECIDES NC REFERENCE PROFILE IS A GOOD THING AFTER ALL

HDS Network Systems Inc doesn't seem to know whether its coming or going lately. But the chief executive certainly did: he quit a couple of weeks ago (UX No 590). And the company appears to have done a bit of an about-turn over its network computers. Prior to the launch of the NC Reference Profile on May 20, the King of Prussia, Pennsylvania company was aggressively distancing itself from the NC set of standards, bragging how its network computer - due for launch on June 11 - will "connect to anything", and accused the NC people of cooking up a proprietary spec (UX No 589). Well, a lot can happen in a fortnight, and proprietary or not, HDS wants a piece of the NC pie. Last week it announced its Posix-compliant netOS operating system now meets the NC Reference Profile and used the NC tag as a selling point to potential licensees. It has apparently added just a couple of mail protocols to make it NC-compliant. Executive vice president of marketing Mike Kantrowitz said the difference between HDS' NC and others is that it can run legacy mainframe, Unix and PC applications as well. The search for a replacement for former CEO Mark Gelberg goes on, with chairman Arthur Spector assuming the role for now. Spector is using his expertise from his other job as director of acquisitions at Safeguard Securities to look for a "fairly significant acquisition", as Kantrowitz put it, to provide the replacement and a whole lot more, but it's early days yet.

ITERATED SYSTEMS REVEALS FRACTAL VIDEO VIEWER SOFTWARE THAT CAN SHOW CLIPS ACROSS THE INTERNET

Compression specialist Iterated Systems Inc has unveiled its fractal video viewer, claiming it's software that can show video clips across an Internet connection using a standard modem. Fractal techniques are claimed to produce far more tightly compressed files than other methods - ratios of 150:1 are not unusual - beating Cinepak compression by between 10 and 30 times. Because they are built from mathematical patterns, fractal images can also be shrunk or zoomed without losing the degree of quality or clarity common with other formats. This enables Web pages to hold a single image that doubles as a thumbnail and the full-sized picture. CoolFusion, Iterated's fractal video software, is claimed to be capable of providing full motion video (up to 25 frames per second) across a standard 14.4Kbps modem - if the conditions are clear. Even 15 frames per second will be a considerable boost for Internet surfers that are accustomed to having their lines jammed with 'slideshow' video providing little more than a new frame every second. CoolFusion is a fractal plug-in for Netscape Communications Corp's Navigator 2.0. Currently it will play AVI video files encoded with Microsoft Corp's Video For Windows, but the company said its own fractal encoder will be available publicly before the end of June. Iterated is seeking beta testers and intends to give away the fractal decoders free of charge, hoping to spread the fractal image, currently suffering some obscurity, far across the Web. The company will make its money on the encoders, for which Bob Davis, Iterated's marketing vice-president, expects to sell licences for upwards of \$1,500 each. The Atlanta, Georgia company owns the fractal transformation patent devised by founder Michael Barnsley. In studying the mathematical properties of Benoit Mandelbrot's fractal patterns, Barnsley discovered a way of reversing the mathematics-to-pattern coding and managed to generate the 'fractal transform' used in the firm's visual encoding systems.

Kept quiet

CoolFusion is available at www.iterated.com, as is the Fractal Imager, a \$40 shareware compression tool that enables Web site developers to include fractal images in their pages. Fractal Imager will be implemented on Macintosh and 16-bit Windows systems by the end of this month. Davis said that the company had kept quiet for the past six months as it built its management team, which is now complete. He expects demand for the software to be overwhelming and doesn't begrudge competitors. "We will always be big because we were first in there," he said. Barnsley claims that the fractal algorithm is only 20% understood. Fractal compression is still too slow to perform real-time compression - taking up to an hour to compress one minute of fractal video - but Iterated is hopeful that as the algorithm becomes better known, so these timings will soon come down.

IBM/LOTUS SERVES UP DOMINO THEORY FOR INTERNET

IBM Corp has revealed Domino server technology, which it claims will transform Lotus Notes into an Internet applications server and will eventually be merged with the InterNotes Web Publisher add-on. IBM is working to have Lotus Notes fully Internet-enabled by the end of the third quarter, it said. It describes Domino as Lotus' core Internet technology and will soon announce applications to support it. The new technology enters beta testing today (June 3) and is intended to serve Notes data up to Web browsers. IBM's existing Web Navigator converts HTML into Notes documents. IBM wouldn't say when InterNotes and Domino will be fully integrated. A final version of Domino will ship in a couple of months. Domino supports HTTP to render Notes data on-the-fly in HTML format and to serve HTML documents from the file system. With Domino, Web clients will be able to access Notes data and applications. Domino requires a Notes Release 4.x Server and will be up on NT, Solaris, AIX and HP/UX, eventually, although first betas will be on NT. Domino will ship with Notes Server and is available for download from Lotus' Web site.

FIVE SKIP TO SUN'S APPLLET ENCRYPTION THEME

Sun Microsystems Inc said its Simple Key Management for Internet Protocol (SKIP) has been endorsed by Bay Networks Inc, BBN Corp, Premenos, Milkyway Networks and VPNet. SKIP uses cryptography to enhance Java's security by distributing Java applets in the form of encrypted applets. Therefore, the person receiving the applet can be sure it hasn't been tampered with en route as it cannot be read apart from by the user with the appropriate decryption key, or so the theory goes. Sun promised additional endorsers this summer and a SKIP product from a number of endorsers, including an unnamed pair from the five mentioned. Sun won't be producing the software itself. Sun said Java applets have never been encrypted before; the method is based on the Diffie-Hellman Key Exchange principles. Jon Kannegaard, JavaSoft Inc's vice president of software products attempted to hijack the WYSIWYG acronym to mean What You Seek is What You Got to describe SKIP's effect. But appalling English aside, SKIP, or something like it will obviously be crucial in the promised world of millions of Java applets flying across the world's networks.

INTEL VIDEO PHONE WORKS OVER ORDINARY PHONE LINES

Continuing its campaign to dissipate the power of its fastest current microprocessors so that users will soon feel the need to move onto the even faster ones it has in the works, Intel Corp has come out with a new Intel Video Phone version of its ProShare videoconferencing software that does not require an ISDN line - any ordinary old copper telephone wire with sparrow's sitting on it will do - but does require a 133MHz Pentium. Even then, it only does four to 12 frames a second, a rate that makes First World War movies look smooth by comparison, in a 4" by 5" window. Compaq Computer Corp is at one with Intel on the need to seduce users with ever faster machines, and will be bundling the new version of ProShare in most Presario models from the autumn. Cameras needed to transmit the picture will be sold as an accessory for less than \$200, Compaq says. It requires a 28.8Kbps modem, and the whole package will increase the price of a new personal computer by about \$200 - and users won't need a second phone line, because a feature called voice call first enables someone receiving a phone call to add video to the call after they pick it up. The Video Phone uses the H.324 standard.

DEC PLANS TO REPLICATE ALTAVISTA SEARCH ENGINE SITE ACROSS THE WORLD TO GIVE IT A "LOCAL FEEL"

Digital Equipment Corp has announced a programme to replicate its existing AltaVista World Wide Web site across the world, to give it what the company describes as a local feel. Details of the mirror sites are to be announced later this year but according to Dr David Probert, DEC's European Internet business manager, "many PTT and telephone manufactures around the world have expressed an interest." The partners will work closely with DEC and will be expected to invest in its AltaVista technology. In return it has been suggested that operators are to be authorised to offer advertisement sites to third parties - something DEC has distanced itself from since the launch of the search engine five months ago. DEC is also said to be in the process of enhancing AltaVista's search and workflow capabilities. More announcements are expected next quarter, but the company's vice-president of the Connectivity Software Business Unit Ilene Lang said of the recent announcements, "DEC's Internet software business is open for business, anywhere on earth, or in cyberspace."

JAVA-ON-TIN INTENT BUT LITTLE METAL ON SHOW

Of all the semiconductor companies - with the exception of Sun Microelectronics of course - Mitsubishi Electronics Corp has gone further down the Java-on-tin road than anyone. The Japanese company announced yesterday ~~that it has successfully ported the Java language to silicon. It demonstrated~~ its M32R/D multimedia processor with Java embedded in it. The M32R/D combines 2Mb DRAM and 2Kb of cache SRAM on a 32-bit RISC processor, as well as DSP capability, a memory controller and peripheral circuitry. The company demonstrated applications including Global Positioning Systems, local streaming and audio recording as well as playback streaming, audio download and real-time drawing. At the JavaOS announcement, Advanced RISC Machines Ltd - 43% owned each by Acorn Computer Group Plc and Apple Computer Inc - was fairly coy, saying it is working with JavaSoft to ensure compatibility with JavaOS, which already runs on ARM RISC chips. As for porting direct to silicon, chief executive Robin Saxby wouldn't be drawn on specifics, other than there have been "things done at the silicon level", and he hoped there would be further announcements with ARM and Sun in the future. The Cambridge, England-based company added that porting direct to silicon is one of the things being looked at. Cirrus Logic Inc also wasn't saying much about its JavaOS plans, just offering moral support. It will licence the ARM7500FE chip from ARM Ltd, which ARM is claiming is just the thing for JavaOS and Cirrus will tweak it and sell it on to NC manufacturers. Cirrus is also a key chip supplier to Oracle NC refugee Farzad Dibachi's Diba Inc in Belmont, California, which is readying Internet access devices including one to fit under the kitchen sink to provide recipes and other nutritional information (UX No 588). Fujitsu Microelectronics Inc's embedded control business unit is porting JavaOS and Java to its Sparclite processors, which, given that Java was developed on Sun's Sparc chips gives it a considerable time advantage, Fujitsu believes. Whether it will challenge Sun's own Sun's picoJava core processor, there was a firm "no comment." LSI Logic Corp has already licenced JavaOS, the Java Virtual Machine and the HotJava browser and will be using JavaOS in conjunction with its CoreWare custom system-on-a-chip program. The company is working with Sun "on a number of other developments that we can't talk about right now", according to Gary Meyers, director of Internet marketing at LSI. National Semiconductor Corp is preparing reference designs and architectures and said Java and JavaOS are important to the company for connecting analog and mixed signal solutions in particular. Sun Microelectronics is supposed to disclose other Java processor licencees today.

ORACLE AND OTHERS LICENCE JAVAOS FOR FUTURE NCs

Oracle Corp will use JavaOS as the basis of its next generation of network computer (NC) platforms. However, the first implementation of its Network Computing Inc subsidiary's Oracle System ~~Software for the NC is being written for Acorn Computer Plc's~~ RISC OS, not JavaOS. Whether Oracle's future plan spells the end for RISC OS for Oracle nobody was saying, but Acorn did not seem too bothered and said it will continue to work with Oracle and Sun. There probably will be room for RISC OS at least until iAPX-86 becomes popular as the NC processor of choice. Some of Oracle's original 15 NC manufacturing partners had something to say about JavaOS too. SunRiver Data Systems Inc has licenced JavaOS for its network computers. SunRiver was the only US company intent on making network computers to sign up to the Network Computer Reference profile recently. Tatung Co is incorporating JavaOS into its network computers, PDAs and other consumer electronic devices, as are Lite-On Technology Corp and Wyse Technology Corp, both of whom will use the JavaOS kernel in their NCs. Wyse plans to bring out an extension to its iAPX-86-based Winterm terminals, which are pitched as cheap alternatives to Windows PCs, that will include a Java-compliant browser and a Java Virtual Machine. However, although listed as one of Oracle's 15 manufacturing buddies, the company will not be veering away from its iAPX-86 architecture to build its NCs based on ARM RISC chips, but they will obviously comply with the Reference Profile, said Jeff McNaught, general manager of the Advanced Platform Division. Mitac Inc is integrating JavaOS into its Internet set-top box. Away from Oracle's NC cohorts, Acer Inc, which was at first lumped in with the NC crowd and then issued a disclaimer saying it was having nothing to do with it, will use JavaOS in its "consumer-based information appliances". Toshiba Corp plans to release devices complying with the Network Computing Reference Profile and Xerox Corp plans to use JavaOS to connect its document management stuff to the Internet. Hyundai Electronics America Inc said it will be using JavaOS as the basis for its Internet access terminals, due before Christmas in the US and early next year in Korea. Alcatel NV said "JavaOS is the right platform for [its] future interactive smartphones", and Omron Corp of Japan said it will use Java OS in PDAs and factory automation devices.

JAVAONE ROUND-UP

Novell uses Java for client-network vision

As part of its drive to move from client-server to what the company is calling client-network computing, Novell Inc will beta a Java SDK this autumn including a Java Virtual Machine, NetWare Loadable Modules and the Java and NetWare-specific class libraries for executing applications. The Provo, Utah-based company was the first to licence the Java Virtual Machine (JVM) and says it's using the technology to make Netware a more distributed computing environment so users won't be tied to a particular server. As there is no easy way to find Java applets across networks Novell proposes a generic naming class for its widely-used Novell Directory Services (NDS).

Bitstream brings Java to TrueDoc

Bitstream Inc, Boston, Massachusetts, promised to give Java developers and users access to all the typefaces on their systems with its TrueDoc typographic imaging technology. Currently Java has four to five preset fonts hardwired into it, but Bitstream's technology will circumvent those and handle the actual typeface generation instead of the Java OS. The company will incorporate its new TrueDoc Java classes into their applications for OEMs and ISVs in June. The technology was created after Concord, Massachusetts-based Future Tense - which is designing a desktop publishing application for Java called Texture - licenced TrueDoc C source code. It found it too unwieldy for its product and called in Bitstream to help develop a Java version. Future Tense is the only licensee to date. Bitstream says it expects other companies to provide a similar service, but claims other offerings will be "big and chunky" and unsuitable for small information appliances such as Java-based PDAs. Its rendering engine adds only about 35K to a Java applet. TrueDoc supports TrueType, PostScript Type 1 and OpenType.

Metrowerks sets JavaOS tools for 1996

Austin, Texas-based tools house Metrowerks Inc promised to deliver full support for the JavaOS operating system in new CodeWarrior for Embedded Systems tools due by the year end. Metrowerks says it will create software

development tools to support JavaOS on the new breed of network computers (NCs) and has devoted about 10% of its 55-member engineering team to Java development, which it called a significant investment for a small firm. But Metrowerks isn't betting the farm on Java, predicting that its importance in the marketplace won't be known for another two years. The company sees 32-bit development tools for the embedded market as its future. It says Java's portability fits in well with its company religion, or rather, lack of religion: "We want to be agnostic to programming languages and agnostic to microprocessors." CodeWarrior will include support for embedded industry-standard file formats, application binary interfaces, will support embedded application development for the 68K, PowerPC, MIPS and x86 microprocessors. Metrowerks ventured into the Java market earlier this month by building Java support into the Macintosh version of Microsoft's Internet Explorer browser for integration with ActiveX.

NTT Data tests US Internet water

NTT Data Communications Systems, Tokyo, Japan, was using the JavaOne conference to see if there is an American market for its InterInfo Re-Search Service which it is launching in Japan in the third quarter. It's touting InterInfo as an alternative to offerings such as Yahoo's news engine or IBM's infoMarket. NTT says features such as its Java-tised desktop interface, the fact that it stores its indices from the Internet and intranet databases on its own server along with the user's data, and the ability for customers to access the service as a forum set it apart from competitors. NTT is an information services giant in Japan, with an Internet service and Web manager and Internet commerce products in Asia, but it apparently has not formed a plan to make a name for InterInfo in the US. To provide its service in America it says it would need to create partnerships with information providers such as Lexus/Nexus and Dow Jones, but does not have any outside Asia currently. If NTT decides to launch in the US, the company said, it would aim for the corporate market, giving customers an initial 10 searches free and then charge under an undetermined scheme.

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The winner of **Sun Microsystems Inc's** Java Cup International contest is a team from the University of Lausanne, Switzerland. There were 19 winners in six categories selected from the 360 entries that qualified. The winning applet, called Cybcerone, is an interactive kiosk system written in Java, consisting of an interrelated group of databases on the Web. The lucky punters get a credit of up to \$200,000 of Ultra and Sparc systems and peripherals.

Object Database Management Group has a Java group developing an object database specification. JavaSoft Inc engineer and ODMG chair Rick Cattell will lead the group. The spec is already in draft form, and the final version is due in September.

Sun Microsystems Inc and **Lucent Technologies Corp** have come up with a Java telephony object specification that will enable developers to write Java applications that link voice and data connections. It will be used, they say, to tap into existing computer-telephony integration systems and enable the sharing of voice, data, electronic mail, fax, and video. Lucent has already demonstrated one such application that managed conference calls on a voice network from a computer, with the potential for sharing documents in a virtual conference room as well, the company said. The spec will enable integration of existing call control software standards, such as Novell Inc's TSAPI and Microsoft Corp's rival TAPI and Sun's Solaris-based SunXTL.

IBM Corp and **Bristol Technology Inc** last week officially announced their alliance to enable Windows NT applications to run under OS/390 - if you knew where to look for it. Bristol has created a version of its Wind/U development environment for System/390 and says it will enable C and C++ programs written to the Windows NT application programming interfaces to run under the OS/390 bundled version of MVS. Wind/U already provides a common development environment for Windows and Unix, and makes use of the Unix extensions to OS/390 to achieve the emulation feat. Developers can recompile and link their application source code with the Wind/U Library using IBM's development tools on OS/390 to generate a native Unix version of their application. The Wind/U applications have the same functionality as the original Windows NT programs.

One person not staying around to see how the NC pans out is **Oracle Corp** vice-president of the network computing division Andy Laursen. He's leaving to join **Unwired Planet Inc**, a Redwood City, California start-up working on wireless Internet technology. The company wouldn't say when he starts or even what his title will be. We'll have to wait until their product launch this summer to find out more, apparently. But we do know that Laursen starts right after he gets back from his flak-dodging vacation.

Metrologie International SA's Madrid-based subsidiary, **Metrologie Iberica**, has signed an agreement with **Digital Equipment Espana SA**, whereby it will distribute DEC's servers and workstations throughout Spain on a wholesale basis. \$720,000 will be invested in the new division, which aims to turn over \$8m by the end of the first fiscal year. DEC will thus become Metrologie's main partner and will account for 15% of the latter's turnover, forecast at some \$54m for the 1996 fiscal year.

As we thought, Java luminaries Kim Polese and her partners have solved the problem of what to call their infant company by settling on **Marimba Inc** (UX No 590), but as to what the company will actually do, it was saying little more than has been said already. Marimba, says the quartet of Ms Polese, Arthur van Hoff, Jonathan Payne and Sami Shaio, was created to provide next-generation technologies for deploying network-aware Java applications. "The success of any new computing paradigm is based on its ability to create a market structure that supports its growth," says Eric Schmidt, chief technical officer at **Sun Microsystems Inc**. "Sun is excited about the role that Marimba will play to advance Java as an open, platform-independent programming language for the Internet and beyond." Marimba's products are already in alpha test at a select group of organisations. It plans to announce and ship its initial products next quarter.

According to Bill Gates: "Netscape's strategy is to make Windows and the Apple Macintosh operating system all but irrelevant by building the browser into a full-featured operating system with information browsing. Over time Netscape will add memory management, file systems, security, scheduling, graphics and everything else in Windows that applications require. The company hopes that its browser will become a de facto platform for software development, ultimately replacing Windows as the mainstream set of software standards. In Netscape's plan, people will get rid of their existing PC and Mac applications in favour of new software that will evolve around the Netscape browser. Under ordinary circumstances, it would seem unattractive to build an incompatible operating system on top of an existing operating system. But because the widespread adoption of the Internet is a sea-change, Netscape's strategy could conceivably work if Microsoft wasn't bringing fast-paced innovation to Windows."

NCR Corp now says the agreement it struck with the South Korean government and a Korean business consortium around a year ago will be worth some \$1bn over five years (UX No 531). The Korean group will develop and market NCR's WorldMark 5100 MPP system in Asia and Eastern Europe. The consortium includes Samsung, Hyundai, Seoul University which represents the Ministry of Trade.

HPI Holding SA has invested \$3.6m in **Ibex Corp SA** to take its stake in the Luxembourg-held group that includes Ibex Computing SA in Archamps, France and Ibex Object Systems Inc in Minneapolis, Minnesota to 25%. Ibex acquired the Itasca object database - one of the first developed - last year from the eponymous company in Minneapolis and vowed to breathe new life into it (UX No 558). HPI said the move is designed to help it develop in Europe in the information document management fields and take advantage of its Hermes Precisa Australia joint venture with the Eastman Kodak Co which made typewriters, 16mm Bolex movie cameras and Thorens turntables in the 1980s.

Business Objects SA has won **Silicon Graphics Inc** to its BusinessObjects 4.0 integrated query, reporting and query tool. SGI claims it's got 350 users accessing a corporate sales and marketing data warehouse and a further 600 SGI employees using it for financial, manufacturing and human resources information stored in other systems.

Denver, Colorado-based **Unidata Inc** will offer version 4.0 of its nested form of relational database system this month. It includes database triggers that call stored procedures, updatable mapping allowing nested data to be manipulated by SQL tools and an optional Windows-based visual schema generator for defining SQL subtables and views. It'll also offer 4.0 releases of its UniServer and UniDesktop implementations of **Sybase Inc's** Open Client/Open Server ODBC connectivity tools as

The Portland Group Inc is to supply **Intel Corp** with Pentium Pro C, C++, Fortran and HPF compilers, initially for the TeraFLOPS computer to be installed at the US Department of Energy's Sandia National Laboratories later this year, but eventually available on all Pentium Pro-based computers.

Microsoft Corp's said to be readying a Unix version of its Internet Explorer browser that'll help it square up to **Netscape's** cross-platform-strength.

Sybase Inc's muscled in on **Oracle Corp's** DEC affair; the Maynarder is to sell, integrate and support System 11 on all of its Alpha boxes.

Globetrotter Inc's FLEXIm licence manager is now available for Java. FLEXIm controls and monitors a user's compliance with software licence terms and is integrated into applications. It will be more widely used when Java applets are distributed over the Internet.

Kernel Group Inc has announced ZeroFault 1.1 for AIX. ZeroFault spots software errors, including memory overruns and leaks and provides a report of what's wrong. Out now for AIX 3.2, 4.1 and 4.2 on the RS/6000 and Motorola Inc Powerstack; no prices.

Bob Sprowls has left **Unisys Corp** to head up sales at **Axil Workstations Inc**, the San Jose, California-based the Sparc-compatible builder affiliated to **Hyundai Electronic America**,

Emeryville, California help desk system outfit **Scopus Technology Inc** has won ex-**Landmark Graphics Corp** VP Europe Steve Jacob as VP Europe. He'll replace Michael Laven who has left the company.

Netscape Communications Corp has bought two more of **Sequent Computer Systems Inc's** Internet Accelerator boxes for FTP file transfer purposes. They are based on Sequent's Symmetry 5000 Servers and Netscape has two already. They are in addition to Netscape's NFS network file system boxes from **Network Appliance Corp**.

Open Horizon Inc's Connection middleware will be up on MacOS 7.5 in the autumn providing Macintosh applications access to remote databases, DCE security services, DCE and X.500 directory services, plus CICS, Encina, Tuxedo, Top End, C, C++, Forte and Dynasty support.

As we were going to press **OMG** president Chris Stone is flying off to have dinner with the Sheik of Bahrain; Bahrain Telecom's apparently all set to go Corba.

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IBM SEEKS 64-BIT WHEELS FOR CASTOR AIX SERVERS...

Although IBM Corp's got Rochester's single-chip Apache (PowerPC 625) implementation of AS/400 PowerPC AS to bear its 64-bit Unix strain if it needs it, the Somerset design team will be in the doghouse if doesn't come up with a credible PowerPC 620 by the third quarter of 1997. For at that time IBM's supposed to wheel out its first 64-bit system as a four-to-eight way PCI affair dubbed Castor, supposedly doing some 13,000 tpm going to twelve ways in 1998. Apache inherently supports AS/400's commercial load, not Unix's compute-intensive requirements and performance measures apparently show it. Alternatively IBM could go off and play with whatever Compagnie des Machines Bull SA manages to do with its 620-based PegaKid. The two have extended their development agreement but IBM's still not ready to follow-up the Escalans with a commitment to Bull's 64-bit system design, just yet. Plans for PowerPC 630, the merged PowerPC/Power 64-bit instruction part are on track, but observers believe that even then IBM will retain separate floating-point and integer streams for the part. The latest roadmap we've seen shows the 77MHz Power 2 evolving into the 135MHz Power2 Fast around year-end. The follow-on Power2 Super - due the same time as the 154MHz Apache, around the end of 1997 will, together with a 230MHz PowerPC 620 due at that time, be folded into a 200MHz PowerPC 630FP instruction set due 1998. Meantime the 4.3 release of IBM's AIX operating system will be a full 64-bit affair. It's not likely to appear until mid-1997. There's a couple of point upgrades before then including a 4.2.5 cut due in October.

...AS NORTHSTAR SHINES FOR AS/400

Meanwhile, in the AS/400 world, IBM Corp's top priority has to be to raise users' sense of comfort and security to the maximum, so the company has to be rather more open about its plans than it would ideally like. In September, IBM will wind the clock on the A30 chip set up to 182MHz from the current 154MHz in the 530s, but whatever you may have heard, don't look for anything bigger than a four-way. Then, in the third quarter of next year, IBM will announce 9406 machines using Apache. Supporting both AS/400 and Unix memory addressing schemes, they'll also be used in RS/6000s; see above. The biggest 9406 IBM expects to announce in 1997 will use eight Apaches. In 1998, IBM will still be using the Apache chips, but the high-end machine will be 12-way instead of eight-way. They will need OS/400 version 4 for N-way multiprocessing, and gossips say that v4 contains a true Unix kernel, making IBM's software development efforts - especially for internet - a whole lot easier. In the third quarter 1999, IBM plans a super PowerPC AS chip, using elements of PowerPC 630. Code-named Northstar, it will be designed from the ground up as a PowerPC family, although it is unclear whether or not IBM will use Northstar in RS/6000s. The fastest Northstar uniprocessors will run at 250MHz.

NCR TO SECURE THE NET WITH TOP END

Sources say NCR Corp will base its core Internet strategy around Top End, its OLTP mechanism, claiming that it solves the security issues connected with electronic commerce. An announcement of some kind is expected anytime now. The scheme, which NCR aims to make ubiquitous, will provide the same kind of security already provided - and accepted by the banking industry - in ATMs. It involves providing a Java Remote Client that can access Top End over the net. This 50Kb client, based on ATM code recoded for the Java virtual machine, is said to be much speedier than Netscape. Top End, meanwhile, is capable of handling tens of thousands of messages a second and doing real-time credit settlement, a factor that could make it beloved of both merchants and credit card companies since there's supposed to be somewhere between \$500 million and \$800 million worth of float on the Internet by the year 2000 - money no one's getting any interest on. Float aside, there's some \$35 million worth of credit card purchases being made on the net right now. NCR will reportedly offer the cross-platform client free and go after the big accounts like Internet service providers, call centres and data warehouses with Top End, server hardware and professional services. It has been quietly working on prototypes with banks, airlines, German travel agent RK Reisen and retail giant Walmart for the last six months. It will depend on partners to integrate Top End with the verticals' software and provide tools. It expects little competition from Tuxedo. It claims BEA Systems Inc hasn't the resources or mentality to go after the enterprise. Encina's about the closest. IBM isn't expected to make CICS Internet-capable until next year.

UNIFORMUM UK CREATES INTERFORUM FOR THE NET-CENTRIC

Uniformum UK believes the user community needs a new place to come together on net-centric and global computing issues unencumbered by the collateral of Unix and open system politics. So it's creating a new chapter in its organisation called InterForum which sprang into life after we went to press on Friday at an InterForum '96 symposium in London, possibly the precursor to a trade show of some description. It's got the likes of Larry Ellison, Phil White and Peter Bonfield on the podium and expects to attract computer, telcos and other net-types to its ranks. Insiders say Microsoft UK will likely lend its support, though it hadn't actually filled out a membership form as far as we could understand when we closed. Uniformum's looking for 20 charter members; we heard it's got already at least IBM, ICL, Novell, StaffWare and Sun to back it. It's secured the services of ex-X/Open Co Ltd boss Geoff Morris on its board. With the state-side Uniformum show apparently on its last legs (UX No 590), we wonder whether the US Unix user organisation mightn't follow the lead of its UK cousin and bring Microsoft to the party through some kind of Network Computer-type forum. Mind you, we're sure SGI chief executive and Unix zealot Ed McCracken would have something to say about that.

IBM SAYS GOODNIGHT TO SOLARIS AS A GENERAL PURPOSE POWERPC OS

IBM Corp is reportedly dumping Solaris as a general purpose operating system for its RS/6000 line apparently after several large customers who had originally expressed an interest in the combination and stimulated the development got cold feet and few if any other takers could be found. IBM had already shelved plans to host OS/2 on the boxes as part of a multiple operating system strategy it delineated a couple of years ago. It's retrenched to AIX, with NT - and maybe MacOS - on the side. SunSoft says its PowerPC efforts will be re-focused at embedded markets; it'll detail plans at the Embedded Systems conference in September. SunSoft's Solaris Internet bundle is being picked up by IBM's PC Server group.

DG AND ICL JOIN HP/SCO DEVELOPMENT TEAM...

It's understood Data General Corp and ICL Plc will stand up over the next couple of weeks and declare themselves official development partners in Santa Cruz Operation Inc and Hewlett-Packard Co's 64-bit Unix initiative. They join NEC and TriTeal Corp as the only two publicly-declared development partners to date.

...GENERIC NUMA SUPPORT

Meantime, the NUMA vendors' squabble over how Santa Cruz Operation Inc will support shared memory architectures in its next-generation Unix boils down to money, and how a planned NUMA API layer for the operating system set gets skewed toward any particular implementation. (UX No 587). It's important because Sequent Computer Systems Inc's ccNUMA-Q data pump technology reportedly requires major and expensive mother-board changes. The further Sequent could persuade SCO to skew a NUMA API towards NUMA-Q, the less those changes would be felt in users' and ISVs billfolds. Similarly two of SCO's four NUMA partners, including Data General Corp, use proprietary cards rather than Scalable Coherent Interface-on-PCI board implementations to achieve shared memory. SCO believes it's quite possible to support multiple NUMA/SCI implementations, connectors, failover and other clustering techniques in an API layer like those implemented in other operating systems for device drivers. Besides DG and Sequent its other NUMA partners are Dolphin Interconnect Solutions AS and Tandem Computers Inc. SCO says the API layer will reflect generic shared memory technology support rather than a particular optimisation even if it has to give up some small amount of performance as a result of going for the common denominator. It could even include support for the shared nothing arrangements more favoured in one-to-four way systems though that's yet to be decided. SCO says scaling and cost will be the key concern of ccNUMA consumers, much less the performance measures which vendors beat each other up with.

POLYCENTER TO BECOME CA-UNICENTER FOR OPENVMS

As part of its agreement to take over DEC's Polycenter systems management software and base (UX No 587), Computer Associates International Inc says it will enhance the Polycenter product line, create an ~~OpenVMS version of CA-Unicenter and provide native support for~~ DECnet from its IP and SNA-based CA-Unicenter TNG. The deal under which CA purchases the Polycenter software and base was announced in April and formally concluded a few days ago. CA says it will upgrade Polycenter products to the latest versions of OpenVMS, enhance them with CA-Unicenter functionality and develop Windows NT and HTML-based management workstations for Polycenter products to provide administration of heterogeneous environments from a single desktop. It will bring OpenVMS under the CA-Unicenter umbrella by incorporating Polycenter functionality into a new CA-Unicenter for OpenVMS product, allowing administrators to manage OpenVMS systems from NT or Unix workstations. CA will support DECnet alongside Internet Protocol and SNA communications in its next-generation CA-Unicenter TNG product. CA's also offering a version of the TNG software development kit extended with a Polycenter integration kit. There's also a full-blown migration kit to get users off Polycenter and on to CA-Unicenter. CA-Unicenter is already available for DEC's Unix and NT Alpha systems. DEC will retain PolyCenter NetView, but it will be included in future Unicenter products. DEC will train 25,000 of its engineers in CA-Unicenter systems management software and will resell it worldwide. In return for that, Computer Associates agreed that it will "promote" DEC's service business. The two are collaborating on future products.

CHECKPOINT TAKES ITS FIREWALL TO MARKET

Israeli Internet firewall specialist CheckPoint Software Technologies Ltd based in Jerusalem and Redwood City, California, is going to the market, seeking to raise between \$12 and \$14 in an initial public offering of 4.2m shares. Goldman, Sachs & Co is lead underwriter. CheckPoint recently sold a 20% tranche of its stock to Venrock Associates and US Venture Partners which now hold 10% each. CheckPoint's initial investor, BRM Technologies Ltd in Jerusalem, 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. International Data Corporation gives CheckPoint a leading 40% share of the worldwide commercial firewall market, with more than 4,000 units shipped in 1995. According to the report, more than 75% of all web server software shipped in 1995 is being used for Intranet servers, and by 1999, this number will grow to more than 91%. CheckPoint, which counts SunSoft Inc as its largest OEM to date, will today reveal that Bay Networks Inc is to integrate the CheckPoint FireWall-1 software into its the BayRS software (Bay Routing Services) which runs across its family of routers. The two claim it's the first time a firewall has been integrated into a router. Bay Networks will resell and support what it's calling BaySecure FireWall-1 as well as the FireWall-1 management console on Unix and Microsoft from the fourth quarter. BaySecure is a new enterprise-wide security framework that Bay will launch today. CheckPoint claims FireWall-1 supports 120 applications, services and protocols.

SOFTWARE PROFESSIONALS GET ENLIGHTENED NAME CHANGE FOR UNIX DRIVE

San Mateo-based Software Professionals Inc is changing its name, reorganising its sales structure and betting its future on Unix, in a bid to return to profitability. The new name, ENlighten Software Solutions Inc, refers to its ENlighten for Unix/Distributed Systems Manager 2.0 product. It admits Unix/DSM has had "nominal sales at best," but is investing in a new, regional sales model with more value-added resellers and direct sales to large customers. The firm's former core product line was its proprietary Tandem Computers Inc Guardian technology, but it believes Unix has a brighter future, although all indications appear to suggest Tandem is moving on again to Windows NT. ENlighten, which went public in 1994, has hired Byron Jacobs, formerly of Siren Software and Oracle Corp, as VP sales and marketing, replacing Ken Voss, who was one of eight who lost their jobs when the company decided to focus more heavily on Unix. Jacobs has added a sales office in Chicago and will open another in New York this summer. The company lost \$1.3m last year on turnover of \$6.6m. The firm expects revenue from version 2.0 - which shipped May 21 - to kick in later this year.

IBM READIES DB2 V2 BETAS FOR SCO AND SNI

IBM Corp went to beta last week with a Santa Cruz Operation Inc version of DB2 2.0 and said it will finish the current beta of a Siemens Nixdorf Sinix Unix version before the month's out. It's targeting both the small-business and mission-critical market. That definition is supposed to create a distinction between the SCO and Sinix versions and Windows NT (an upgrade to the NT is in beta and due to ship June 28). Of course the NT version is not mission-critical in IBM eyes. IBM's hoping the SCO version, which is targeted for a third quarter release, will substantially broaden the market for the Unix family of DB2s since it's the only one that will run on less expensive Intel Corp platforms. It's already got DB2 up on HP-UX and Solaris and on its own AIX and OS/2. Once SCO is finished merging OpenServer and UnixWare, IBM said it's going to do another version to support what emerges.

ORACLE WOOS PTT NEDERLAND FOR NETWORK COMPUTER-BASED SERVICES

It seems to have been largely forgotten, but Oracle Corp's interest in what it now calls the Network Computer was intimately bound up with its plans for on-line services that would knock the socks off Microsoft Corp's Microsoft Network, and which at last mention were to be called Web TV. Oracle was saying that while the idea was that such services should be hosted on Oracle Media Server on nCube Corp machines, it didn't need to own the service operator, although it might take a stake. The ideas have evolved now, but popped back into prominence last week when Oracle said it had asked Koninklijke PTT Nederland NV to be a service provider in the Netherlands for the new Network Computer. "Telecommunication companies and banks are the next generation service providers, because they run the large databases and are also developing content," Oracle chief Larry Ellison said. At the launch in September, Oracle says it will have seven or eight applications available, including a word processor, spreadsheet, electronic mail and Internet access - "But this covers about 95% of all activities you do with a much more powerful personal computer," Oracle's founder said.

COREL PORTS TO JAVA TO FIND NEW MARKET FOR SUITE

After a constant beating by Microsoft Office in the desktop market, Corel Corp is taking its WordPerfect Suite to a more level playing field and is rewriting it in Java, releasing a beta of the new suite by year-end. "There is no market share in the Java world so far. No one is way ahead of the game there." Corel will split up its suite into applets which users can download as needed through the Internet or Intranets, leaving only a small footprint on the client. Corel says Java is the key to its Internet strategy and predicts that Java applications could soon overtake Windows. The Ontario, Canada-based company is one of the first major software makers to port its products to Java. Microsoft, whose Office has conquered more than 80% of the suite market, of course disagrees, and says it has no plans to port Office to Java. but Corel is entrenched in the Java camp and says it has no plans to support Microsoft's ActiveX, "ActiveX is not as optimal for the Web as Microsoft would like to think. Java has the advantage in cross platform technology", it said. Corel's vision for its Java-enabled products involves a three-pronged pricing model. First, Internet Service Providers could licence the software from Corel and charge users a flat fee or by usage. Second, Internet terminal manufacturers could licence from Corel and bundle smart cards encoded with access privileges for users to download the software. Third, companies could pay site licence fees similar to current client-server arrangements so that employees could download the software from intranets. Corel says the new channels require it to expand its business model, but has not determined whether a new division will emerge. Corel began talking to vendors earlier this year, but said serious interest only came after it demonstrated its new versions at JavaOne recently. Corel says it's in the first stage of talks with all the major network computer manufacturers and large service providers. Corel expects its Internet capability to attract users away from the Microsoft Office camp when the Java products ship in early 1997. Corel also announced it will launch a Macintosh version of its Corel Draw graphics product, priced slightly lower than its Windows version to compete with Aldus Freehand and Adobe Illustrator. The move follows Corel's announcement of Barista, which allows Corel Office Professional WordPerfect 7 and Corel Ventura users to create Java-based documents without programming knowledge. Corel will also rewrite Quattro Pro and other productivity products.

SCO, TRITEAL WORK ON NET DEVICE OS DESIGNS; SEEK GREATER SYNERGIES

Following their tie-up on Common Desktop Environment technologies (see below), Santa Cruz Operation Inc and TriTeal Corp are looking at other areas in which they can cooperate; security, internet, networking, X Windows and Motif iron are all in the fire. More interesting is if their respective plans for next-generation user interface and network computer device-type environments cross paths. By the time the Gemini UnixWare/OpenServer combine arrives the Common Desktop Environment is unlikely to be regarded as the desktop for the future in any case. Although SCO already has plans to incorporate Java technologies in its mainstream operating systems and to front-end applications with Java, it's also working up a new browser-friendly strategy that will gradually supersede its Windows-friendly initiatives. In its mind Microsoft Corp is shooting itself in the foot by trying to tie Windows desktops to NT versus Unix' support for multiple environments. Its new direction is also expected to lead to creation of small footprint system software designs to support Intel Corp-based network devices as well as more comprehensive user environments that support conventional desktops (UX No 591). Speed of connection is all important in SCO's design considerations. The problem it has with TriTeal's effort in the space is TriTeal's alignment with second-tier browser concern SpyGlass Inc; SCO has partnered with Netscape Communications Corp. Meantime TriTeal is working-up some kind of Network Desktop client environment that it's already previewing under NDA. It claims the thing will run on any device attached to a network. It's not browser-centric as it believes a network OS must be more lightweight, although it will support a browser if required.

ORACLE AXES EURO VP ROLE; BRINGS EURO REPORTS BACK TO US

Larry Ellison tore himself away from the network computer frenzy last week to try and restore some lost morale in Europe after a reorganisation which saw the axe fall on the Loek Van den Boerg's VP Europe position. He'll be replaced by a European product and sales manager as soon as one is found to step into the breach. Ellison has created four business units - product sales, consulting, support and education - whose managers will report directly back to California. Ellison and his lieutenants were briefing their European executives and top users on the reorg, new marketing strategy and focus on network computers and applications.

SSA SEEKS OMG ENDORSEMENT

Chicago financial and accounting house System Software Associates Inc (SSA) is trumpeting its submission to the Object Management Group's Business Object Facility RFP for predefined business rules (such as customer, order and name) and object services that will allow developers to create interoperable business objects (UX No 578). SSA thinks that with two ex-OMG board members now sitting on its board it's in with more than a shout. European director of technology Samit Kholsa says SSA is betting its future on use of the Facility as an object-to-object messaging system based around the use of semantic messages. The Facility sits above an Object Request Broker, which in SSA's case is initially IBM Corp's Distributed SOM and later Expersoft Corp's XShell. UK company JBA Holdings Plc and IBM appear to be creating similar facilities for use with their San Francisco object-oriented application development framework using JBA Guidelines (UX No 575), though Kholsa believes San Francisco won't embrace the same object-to-object functionality. SSA says its implementation of the Facility will appear in a new 7.0 version of its BPCS software. Submissions to the RFP are due by mid June; runners and riders will be announced with the spec by October 15.

BUSINESS OBJECTS WEDS TO WEB

As expected (UX No 591), Business Objects SA is Web-enabling version 4.0 of its OLAP and query and reporting tools. BusinessObjects reports can be saved as HTML reports so that users can create report catalogues accessible from Web browsers. As the reports are saved, hypertext links back to source documents are automatically created so that users can download the documents for slice-and-dice OLAP operations using off-line microcube tools. The Document Agent technology has been enhanced to schedule and post HTML reports to the net. The company says it supports fat and thin clients over internet/intranets. Its Java plans might include the creation of front-end applets from analysis which could be sent to a browser or decision support applets worked into a browser front-end. The Web enhancements will ship as part of the Business Objects product later this summer.

HP CLAIMS PERFORMANCE LEADERSHIP WITH FIRST PA-8000 SYSTEMS

With the last major leap for the Precision Architecture RISC line, Hewlett-Packard Co has finally unveiled its first system implementations of the 64-bit PA-8000 as C- and K-class technical compute engines. There will be a couple of further iterations of the PA-8000, the 8200 and 8400, though the names are not definite yet. Then the technology shifts to the Merced 64-bit instruction set being developed jointly with Intel Corp, which will get a real name by year-end. The PA-8200 will be out next year. There's a high-end, dual I/O bus K460-XP quad which supports Visualize-48XP graphics, a dual I/O bus K460-EG quad that can accommodate Visualize-EG graphics, a single I/O bus K260-EG quad that supports the EG graphics and a low-end C-180XP uniprocessor that supports Visualise-48XP. All the above are 180MHz systems which perform 11.8 SPECint95 and 20.2 SPECfp95. The 160MHz C-160 uniprocessor performs 10.4 SPECint95 and 16.3 SPECfp95 and supports graphics up to Visualize-48. K-Class are desksides, C-Class are desktops. The C-160 starts at \$24,000; with 64Mb memory, 2Gb disk and 20" monitor, it costs \$27,000 compared with a 200MHz Sun Microsystems Inc Ultra 2 Model 1200 Creator at \$30,000, HP said. The C180-XP starts at \$50,000 with 32Mb RAM, 2Gb disk and 17" screen and is claimed to perform floating-point operations 50% faster than Silicon Graphics Inc's 200MHz Indigo2 R10000. The K260-EG is \$66,700 with 128Mb RAM, 2Gb disk and 20" screen. The K460-EG costs \$88,700 and the K460-XP starts at \$112,250 with the same configuration. HP also reduced prices on its Model C110 workstation by 23% so a Model C110 with 64Mb, 2Gb disk and 20" monitor is \$19,000. The new models ship next month. PA-8000-based servers will follow in September. HP also launched the MPower Web desktop environment, which includes Netscape Communications Corp's Navigator browser, a shared whiteboard a 3-D model viewer that supports VRML, HTML and stereolithography formats and also cut prices on its C-Class and Visualize-8, -24 and -48 graphics products.

SCO TAPS TRITEAL FOR GEMINI INTERFACE ENVIRONMENT

Santa Cruz Operation Inc's gone to TriTeal Corp for desktop environment technologies which it will bundle with Gemini, the merged UnixWare/OpenServer kernel from the second quarter of next year. TriTeal currently sells an enhanced version of the Common Desktop Environment it calls the TriTeal Enterprise Desktop (TED), and it's the TED core and other unspecified technologies which SCO has licenced for inclusion in its direct, channel and OEM versions of Gemini which betas in the first quarter of 1997. The technology core is described as an enhanced CDE minus the plug-in applets TriTeal has either developed or bought-in. TED is already available for UnixWare and SCO will offer TED as an option for OpenServer next quarter. TriTeal sells it at \$340 per seat.

3DA Summit Unix

The deal effectively grants TriTeal a hunting licence to go out and bag SCO's installed base for CDE installs and upgrades. Many of the SCO OEMs have pre-existing arrangements with TriTeal and will pick up the Carlsbad, California-based company's add-ons through those routes initially although SCO's expected to licence some other pieces over time too. The additions include a Spyglass Web browser with graphics streaming and disk caching called TED-vision (users with other browsers can't take advantage of TED's cut-and-paste facilities), 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 TED 4.0. TED 4.1 is due anytime. Due in part to the Aspen group's lack of attention on the user interface space, SCO's also made a big deal of its rights to use TriTeal technology in the 64-bit 3DA Summit Unix architecture it's developing with Hewlett-Packard Co and others. TriTeal claims the \$4m second round of VC funding it picked up a couple of months ago (UX No 582) will see it through the next 12 months of development. It's currently being unusually reticent about its business, offering no insight into financials or the size of its installed base.

SAG CREATES Y2K CENTRE IN DERBY

Darmstadt, Germany-based software and services outfit Software AG's opened an International Centre in Derby, UK to deal with the infamous 'Year 2000' problem - where applications first deployed when space was at a premium and languages such as Cobol stored ~~dates in a truncated fashion ie date routines in the form 01-01-96, or~~ MM-DD-YY start having to compute around dates that cross century boundaries. It's launched Expedition 2000, including branded consultancy, project management, applications re-engineering, software conversion and software tools that it claims will selectively automate key tasks such as impact searching and code changing. It includes Fulcrum 2000, an integrated graphical environment for re-engineering and automation and as yet unnamed OEMed technology, NCX 2000, that can slice existing code into reusable modules.

PLATINUM REVS INFOBEACON DECISION SUPPORT

Platinum Technology Inc's Business Intelligence unit has revamped its InfoBeacon 3.1 decision support tool to include support for Web browsers and distributed three tier architecture. It's added InfoBeacon Web, a gateway between Web server and InfoBeacon application servers and support for the Common Gateway Interface (CGI) and Microsoft and Netscape APIs. InfoBeacon creates a virtual multidimensional view on top of relational databases including IBM's DB2 family, Microsoft's SQL Server, Sybase, Oracle, Informix and Red Brick Warehouse via ODBC. It comes with drill down, pivoting, ranking, ratios, complex exception and date handling. A multi-server navigator feature supports distributed heterogeneous data warehouse environments by parceling a single logical request into parallel queries to disparate database servers. Platinum is pushing InfoBeacon into the business analyst, application developer and database administrator market. Typical InfoBeacon uses include ad-hoc interaction with warehouse data, agent based messaging and browser based interactive analysis. It includes proactive agents for notifying users of problems and automated decision support workflow processes. InfoBeacon also includes InfoSynergy to manage the workflow application construction environment for InfoBeacon. InfoBeacon Web is scheduled for release in August. The client and application server are up on Windows 3.1, 95 and NT now, with application versions for HP-UX, AIX and Solaris due in September. No prices. Platinum has also inked a licensing deal for InfoBeacon with Dallas, Texas outsourcing outfit Affiliated Computer Services Inc who'll offer the product with its data mart and data warehouse solutions.

PILOT'S NEW DECISION SUPPORT TECHNOLOGIES

On-line analytical processing outfit (OLAP) Pilot Software Inc will introduce the next generation of its executive information (EIS) tool Decision Support Suite 5.0 (EIS) this month which includes a new multi-dimensional architecture enabling the definition of dynamic dimensions and hierarchies. The new release will enable complex analysis such as flavour, package size or consumer demographics to be performed in hundreds of dimensions in what the Cambridge, Massachusetts-based company claiming is almost an instantaneous response time. 5.0 integrates its Lightship EIS, decision support and OLAP offerings in a minimised consolidation time and server size. The company reckons it's given especial attention to 'what if' analysis for forecasting and predictions based on company data. 5.0 is made up of five components: Pilot Desktop including a new graphical model builder and tools for ad-hoc ranking and exception analysis; Pilot Analysis Server with more support for structural dimensions and large member sets; Pilot Designer including a new object manager, toolbar control, drag and drop events and an integrated debugger; Pilot analysis library with enhanced modules for complex ranking, 80/20 Pareto analysis, BCG quadrant analysis and trendline forecasting and Pilot Excel Add-in. It includes an optional design environment and pre-built analysis library for customising. A camera icon enables analysis to be saved at any point during analysis for organising, printing, or distributing electronically to others. It supports ODBC, OLE 2.0 and MAPI. Client components are up on Windows 3.1, 95 and NT and go for Australian \$1000. Server components for most Unix and NT start at Australian \$48,000 for a five concurrent configuration. Pilot, a subsidiary of The Dun & Bradstreet Corp, is also working on a set of Internet components for Version 5.0 which will be available later in the year.

KENAN REVS BILLING SOFTWARE

Cambridge, Massachusetts-based Kenan Systems Corp has introduced a new version of its billing software with support for customer analysis. Arbor/BP 5.0 comes with new features including Arbor Strategist, an on-line analytical processing customer analysis ~~and decision support module. Strategist is based on Kenan's~~ database and 4GL development environment Acumate and includes access to billing data, segmenting, reporting, 'what if' analysis, as well as promotion tracking, profitability and churn analysis. Version 5.0 also comes with a new multiserver architecture and a library of API functions for extending functions into payments, collections, financial data selection, off cycle credits, adjustments, approvals, refunds and notes. Kenan claims version 5.0 supports up to three times the number of subscribers and usage events than previous editions. Arbor/BP is up on AIX, HP-UX, NT and Solaris. Kenan is targeting Arbor/BP 5.0 at the telecommunications market, where customer care and billing is a priority business function. Siemens AG has signed to integrate Arbor/BP in their own product and services. Arbor/BP 5.0 ships by the end of the month. No prices.

SUNSOFT SIGN FOR AUTOSYS JOB MANAGEMENT SOFTWARE

SunSoft Inc has signed for Platinum Technology Inc's AutoSys job scheduling and job management software. Sun will resell AutoSys with its second generation network management bundle Solstice. The deal includes Platinum's AutoXpert, a graphical interface for planning, monitoring, analysing, and forecasting large AutoSys implementations. AutoSys is Platinum's batch job control system for distributed Unix and NT processing and includes self-correcting job control, centralised system wide monitoring and programmable error recovery. Platinum has already got Hewlett-Packard and Tivoli peddling the stuff.

DB VENDORS SPACE-BASED SQUABBLE OVER HUMAN BEHAVIOUR MONITORING

The fur has been flying between Sybase Inc and Informix Software Corp over who's won the NASA deal to develop the \$1bn Earth Observing System Data and Information System (EOSDIS) project to monitor the impact of human behaviour on the environment. The spat has broken out because both suppliers have tossed their next-generation object-relational technology at the project. Sybase won the original phase of the deal last November setting in motion the design and prototyping of a three terabyte relational database. But at the end of last month Informix claimed its object-relational database acquisition Illustra had been chosen for phase two of the project, developing EOSDIS for imaging and spatial data and indexing. Claims and counterclaims have sailed to and fro; Informix claims Sybase has been ousted for not delivering on the original deal. Sybase says phase two is still up for grabs. Meantime IBM Corp's Tivoli Systems is to provide core systems management technology to the project. Its TME 10 systems management environment will integrate and manage a network supporting the collection and analysis of data obtained from six satellites, space shuttle missions and hundreds of land and sea-based monitoring systems.

UNIPLEX WEB-ENABLES DOCUMENTS MANAGEMENT SYSTEM

Now headquartered in San Mateo, California, Uniplex Software Inc has added the ability to access documents stored in its OnGo Document Management System repository from Web browsers. Specifically it's enhanced the OnGo Document Agent Services to convert documents to HTML; documents can be posted to the Web repository in their original form. Uniplex touts its version control and revision management facilities and says support for Java is underway. OnGo DMS is \$650 per user; version 2 is up on Microsoft clients and Unix servers. OnGo DMS currently uses either Uniplex's proprietary messaging system or HP OpenMail, for which it was developed, although the company says it is moving to a more independent position. OnGo can also be used with generic Unix sendmail services. It can be synchronised to interoperate with Microsoft Corp Exchange but does not currently run over it. It's looking at supporting Novell Inc's NetWare Directory Services which supports Groupwise, if it becomes more widely adopted. Other groupware/messaging technologies include Lotus Notes.

TANDEM BREAKS INTO FIVE UNITS TO MEET NT CHALLENGE

Tandem Computers Inc has reorganised into five business units to equip itself for its adventure into Windows NT. A Parallel Platform group under senior VP Kurt Friedrich will house its proprietary Himalaya MPP and ~~NT systems, which are now bound together in the so-called "New Tandem"~~ (UX No 589). A Commercial Platform unit is created under acting chief Roel Pieper, otherwise Tandem's CEO, who's putting his Unix experience to work for its Unix, telecommunications and intelligent networking interests. A ServerNet Group under senior VP and general manager Jerry Peterson will sell its ServerNet interconnect stuff to OEMs. A ServerWare Group under senior VP and general manager Bill Heil will commoditize Tandem's software. And the old Atalla Division under president and general manager Bob Gargua will pursue alliances and partnerships for its network security stuff. The company's end-user field sales force is under senior VP John Losier while a service and support unit under Scott Thompson reports to Losier, remains as before.

100,000 NT clusters in two years

Tandem claims the largest installed base of clustered machines in the world, some 10,000 Himalayas. It's whole heritage - but for its foray into Unix - has been clustering. It owns what it says are the key clustering patents, called I'm Alive, that cover the software that talks between machines, technology that Microsoft can now access under a new arrangement. Tandem told our sister publication and NT-watcher *ClieNT Server News* it expects the current fascination with NT clustering to drive 100,000 clustered NT machines into deployment in the next two years. Most of these, it says, will be Intel-based. Either 2 x 4, 3 x 4 or 4 x 4s. Tandem, with its background, aims to be represented in a lot of them. This is where Heil's new ServerWare unit comes in. If Tandem doesn't sell the hardware, its software can at least be in them. Tandem has taken the stuff that makes its clusters work and given it to Heil and his team to productize on behalf of NT. It includes its database, transaction processing (TP) software and MSF or Message Switching Facility. Tandem is taking its own familiar Non-Stop SQL database, something that's already parallel, and moving it over. When Tandem finishes with its NT system the later part of next year, it will also be object-oriented and capable of handling all the multimedia types that Illustra handles. By that time, it will be called something like ServerWare SQL. Tandem currently has mixed transaction processing interests: Tuxedo, CICS and its own proprietary Pathway software, all of which run on Himalayas. It is porting all of it over to NT and to ensure that it's got a corner on the TP market, it's creating a new class of TP software, object-oriented TP called TP Objects that it expects to come out first, probably in the summer of 1997. It expects this stuff to tie back to its big Himalaya machines and give them more of a reason for being. In fact, it fancies that NT and Himalaya will cross-pollinate: Himalaya because it's no longer a closed solution; NT because customers can migrate up to an industrial-strength solution when they've exhausted NT's resources. Tandem has licenced Tuxedo since 1993, first from Unix System Labs, Pieper's old haunt, then from Novell and now from Bea Systems Inc. Tandem created a clustered version of it for Himalaya which it is porting over to NT from the ground up despite the fact an NT version of Tuxedo already exists. It says its port is not just Tuxedo on NT. It is the stuff that makes it fault-tolerant and more scalable and again makes Himalaya more viable. The same is true with CICS whose API Tandem licenced from Micro Focus Plc, parallelised and put on Himalaya. That stuff is going over to NT. Heil has previously claimed to CSN that Himalaya and NT are structurally similar and Himalaya and NT ServerWare products will share the same node base so porting will be a straightforward recompile. Tandem has snubbed NCR's TP system Top End in favour of more widely deployed systems. Microsoft of course is working on its own TP system Viper and Tandem intends to interoperate with it but suggests that Viper will be more low end than anything it has.

FREE-MARKET SHAKE-UP FACES DOMAIN NAMES

Ever fancied running an Internet top level domain for profit? Faced with the unwieldy popularity of the .COM domain, the Internet Society is pondering a radical restructuring of Internet domains. Nearly 87% of ~~Internet sub-domains are now in .COM and competition for converted names is fierce~~, so the idea is to let new domains be added - say, .CHM for pharmaceutical companies, or .PUB for publishers. In fact, the Internet Draft, put out by Internet Assigned Numbers Authority doyen Jon Postel, envisages that, if the plan is accepted, 30 new international top level domains will be created every year for the next five years. The paper proposes that the whole area of domain creation and administration be opened up to free market competition. Where today, the US InterNIC handles .NET, .ORG, .COM and .EDU, in future individuals or organisations will be able to run competing registries, each of which will be allowed to administer up to three of the new domains. Postel suggests that around 10 registries will start up each year, over the next five years - they will each be able to administer up to three of the new domains and compete with each other for customers' business. The paper, titled "New Registries and the Delegation of International Top Level Domains", sets out how organisations will be able to apply to run a domain, how disputes will be resolved and what will happen if a registry collapses. Internet Drafts are fluid papers that carry no authority, however the ideas that Postel lays out have been around the consultative cycle three times now, and it seems certain that something of the sort will be implemented: Postel himself says that the draft "may be changed somewhat before it is actually put into practice". Start pondering which could be the popular domains now - we suggest .NUZ for news, .JAV for Java companies and the self-explanatory .TIT.

NASA AMES-BRED iTV HAS CHIP FOR \$300 WEB DEVICE

Java and the stampede to the Internet are seen as giving new chip architectures a small window of opportunity to make a mark against the entrenched might of the iAPX-86 franchise, and San Mateo, California-based iTV Corporation Inc has high hopes for a low-cost, high-speed processor designed to use a fraction of the memory and draw a fraction of the power of conventional microprocessors. The company plans to launch it in a consumer Internet access device later this year. The thing is dubbed a Minimal Instruction Set Computer, and has all the unneeded functions eliminated, making it so small that 600 to 800 can be derived from one 6" wafer. The company, a spin-off from the NASA Ames Technology Commercialisation Center at Moffat Field, California, was co-founded by Chuck Moore, creator of the Forth language, which includes its own execution environment so does not need an operating system, and the chip uses a programming technique that requires substantially less memory compared with conventional microprocessors. iTV claims that its chip is a variant of a device that will be used for NASA spacecraft, designed to handle the massive streams of data generated by satellite imaging of planet surfaces and other image processing applications. "The processor runs at 400 MIPS, uses 100 times less electricity and costs 50 times less than a Pentium chip," asserts Gary Langford, iTV's president and co-founder, and it will be used in a consumer Internet product he estimates will sell for well under \$300, linking television set, a telephone line and a keyboard. The company stresses that it is not a fully-fledged Network Computer but an Internet adaptor that simply connects a phone line to the television for Internet access, electronic mail and browsing. The iTV pitch is that where the computer industry is trying to reach the consumer market for Internet access by downsizing their existing hardware and software, iTV's approach is to start with an unconventional but highly efficient processor design, and put all the necessary co-processors on the same chip.

"HOSTILE APPLETS" JOIN LIST OF JAVA SECURITY PROBLEMS

The stream of Java security problems shows no sign of slowing. Attention has turned to the thornier problem of how to define a "hostile applet." Deleting files or stealing passwords are relatively easy hostile activities to define and guard against, but what about applications that hog so many resources that the browser keels over, or simply exploit the browsing machine's resources? For those that are concerned, Mark LaDue, a PhD candidate at the Georgia Institute of Technology has made a selection of hostile applets available at <http://www.math.gatech.edu/mladue/HostileApplets.html>. The site also includes a comprehensive article, explaining the problems of defining the word hostile. At the one end of the spectrum is an applet which effectively kills the browser by forcing it repeatedly to execute a CPU-intensive task. More serious are applets that ask for and then steal passwords, kill other applets and a really nasty one that when you view it, invisibly connects you to the applet's home mail host and forges electronic mail from you. A briefing on Sun Microsystems Inc's Java site says: "We are actively investigating ways to better monitor and control resource consumption by applets. It is hard to automatically tell the difference between an MPEG decompressor and a hostile applet! However, there might be good ways to enable both the browser and user to specify resource limits on downloaded applets."

PURE BUYS ATRIA

Pure Software Inc has acquired Atria Software Inc to form a combined software testing and development company in a deal worth more than \$970m. The new company, Pure Atria Software Corp is likely to have revenues of more than \$100m this year. Pure's president and CEO Reed Hastings will assume the same role at Pure Atria, and Paul Levine, Atria's president and CEO will become chairman. The HQ will be in Sunnyvale, California, Pure's current home. Under the terms, each Atria shareholder will be offered 1.5446 Pure shares. Pure will take a charge in its third quarter, the amount yet to be decided, and the deal should be completed by then. Hastings dubbed the deal a "merger of stars" as both companies are rising fast. Indeed, last year Pure managed to double its revenues to \$44m and go public, raising \$31m in the process. Atria's revenues were up 93% to \$40m last year. There will be no job losses, "it's a melding of high-quality high-passion employees" gushed Levine. In fact both companies were currently looking for about 100 new recruits. The pair claim there's only one overlapping product area: defect tracking. As a result, Pure Atria will offer the PureDDTS product and migrate Atria ClearTrack users to PureDDTS and put some of the ClearTrack technology into it. Pure's stuff is all about testing, or Automated Software Quality, as it likes to call it. Pure has most areas covered with the exception of GUI testing, where competitors like Mercury Interactive Inc specialise, while Atria leans towards configuration management. So Pure Atria may have to dip into the market again for GUI testing technology. It may not want to, however, preferring to cover all the other bases. The synergy between a testing and a configuration management company is not at first apparent and broad references to "broader landscapes" that Levine referred to don't serve to make the picture any clearer at the moment.

SCOPUS LAUNCHES VOYAGER AS PART OF LIFT-OFF PROGRAMME

Scopus Technology Inc announced its Voyager sales automation software for mobile sales people. It includes lead, opportunity and account management. The meta-data architecture includes meta objects which are said to enable application customisation to match Voyager to existing or changing business practices, without modifying source code. It's based on Sybase Inc SQL Remote and SQL Anywhere technology. Voyager is currently only available as part of Scopus' Lift-Off service and support programme which is due to be launched this month. Along with 25-30 Voyager licenses, comes support, training and a fixed-price business requirements analysis. Lift-Off will cost around \$150,000.

INCONCERT WEB-ENABLES WORKFLOW SOFTWARE

InConcert, the company spun off by Xerox Corp's XSoft division last month, will announce a complete Internet development environment and specialist front-end tools for Web-enabling InConcert workflow management software in the coming months. The Cambridge, Massachusetts-based company will also announce technology partnerships with firms involved in imaging, document management, modelling, forms packages and reporting tools to integrate into InConcert. It will also add support for OLE. The company boasts 100 InConcert customers and 25 systems integrators such as EDS Corp and Anderson Consulting Corp peddling its software; apparently not enough because it's about to launch a campaign to win more partners in the verticals and the regions. XSoft has spawned two companies - InConcert and Astoria - both wholly-owned subsidiaries of Xerox New Enterprises. InConcert has no permanent president and could not say when it would post its first results as a separate entity from XSoft. Xerox says it orphaned InConcert to boost recognition of both the company and product reputation.

OBJECT DESIGN FILES FOR IPO

Object Design Inc, Burlington, Massachusetts object database specialist where IBM Corp is a significant investor, has filed to go public with an initial offer of 3m shares, all new, at a target \$9 to \$11 a share. Hambrecht & Quist LLC, Alex Brown & Sons Inc and Wessels, Arnold & Henderson underwrite. But the company is still losing money: for the year to December 31 it lost \$10.4m on sales of \$32.7m, against a \$12.4m loss on turnover of \$25.5m for the previous year.

NCD DUMPS Z-MAIL; RE-INVENTS X-TERMINALS AS NCs...

Network Computing Devices Inc has shrunken a bit further with the sale of its Z-Mail electronic messaging product line to NetManage Inc and has joined the search for the Network Computer Holy Grail. NetManage paid an undisclosed cash sum and assumed liabilities of less than \$1m. The Z-Mail business represented less than half of NCD's software revenues, which were between 10% and 15% of the \$142m it turned over last year. In January the company sold its Mariner Internet access product line to FTP Software Inc, which used it to replace Spyglass' Mosaic, and NCD licensed the stuff back and all future versions for a one-off \$2.5m charge, half of which was paid at the time. The agreement gives NetManage all licensing responsibilities, sales, development, and support for Z-Mail, which it says is currently being used by more than 500,000 corporate users. NetManage will retain employees working on the product and plans to combine Z-Mail with its JetMail messaging suite. Network Computing acquired Z-Code Software Corp, developer of the graphics-oriented Z-Mail in 1994 for up to \$26m. Z-Code was already a licensee of the technology NCD developed to include a sound capability with its X terminals. Walt Amaral, chief financial officer at Cupertino-based NetManage said the company had been in the electronic mail business for a long time "but nobody had noticed", with its Chameleon intranet desktop product. Therefore, its going to ditch its own JetMail name and keep Z-Mail. The main question the company has yet to address is whether to continue to develop a Unix client, or to go with the Windows-based client already in Z-Mail, said Amaral. Meanwhile, the Mountain View, California-based company is doing what it seems any self-respecting X-terminal company must do these days - HDS Network Systems Inc, for one - and re-badging its line as Network Computers. But that's a bit disingenuous as they don't comply with many of the software specs laid down in the NC Reference Profile, including such planks as HTTP and SMTP (UX No 590). But things are set to change, promised co-founder and VP of marketing Mike Harrigan. NCD is in negotiations with Sun Microsystems Inc to licence the Java Virtual Machine so Java applets will be executed on the NCD boxes of the future. The company is promising news within a couple of months about its NCs and products by the year-end. It is aiming squarely at the \$1,000 price point, and will concentrate on the corporate market, going head-to-head with Sun.

...LAUNCHES MARATHON NFS CLIENT/SERVER PACKAGE FOR WINDOWS 95 AND NT

Separately, Network Computing Devices Inc has announced Marathon 4.0, which it claims is the first package to provide NFS client and server for both Windows 95 and Windows NT. It also has terminal emulation for IBM Corp mainframe and AS/400, Digital Equipment Corp VAX, Unix and Hewlett-Packard Co platforms. It includes a SLIP/PPP and an FTP client so files can be dragged and dropped between PCs and network servers. The NFS technology is based on stuff the company licensed from FTP Software Inc back in January (UX No 573). Marathon 4.0 supports 3270 and 5250 terminal emulation and also has an automated script generator, which automates frequently executed tasks. It also has a Session Manager for the creation and management of remote dial-up SLIP and PP connections. Out at the end of the month as one package for Windows 95 and NT, Marathon 4.0 costs \$146 per user in packs of 100 and \$325 per user otherwise.

SUNSOFT REVEALS WEBNFS SUPPORTERS

Sun Microsystems Inc is now ready to talk about what its doing with SunSoft Inc's WebNFS announced a few weeks back (UX No 589). Oracle Corp, Spyglass Inc and predictably, JavaSoft Inc will put WebNFS in their browsers. And IBM Corp and Sequent Computer Systems Inc will get it as part of their deals for ONC+ 2.0. Auspex Systems Inc is currently evaluating its options. It can either license the stuff or implement it from the spec and according to software product marketing manager Saquib Jang, Auspex is "strongly leaning towards" the latter, as that's what it did with NFS 2.0. Jang said Auspex could have its version out by the year-end for inclusion in its Internet-intranet data servers. Sun Microsystems Computer Co will also add WebNFS to its Internet servers. WebNFS enables file transfer over the Web via NFS, rather than just HTTP. Files can then be edited, managed from within a browser. Sun expects all ONC+ customers - 17 in all - to take WebNFS.

ADOBE TAKES ACROBAT TO WEB, CUTS PRICE

Adobe Systems Inc is planning a Java version of its Acrobat Reader, other Java plug-ins and embedded Java classes inside PDF files before year end. Version 3.0 of its Acrobat online document sharing product **ships in August or September. Adobe said it is taking the product further down into the consumer market and is pinning the future success of Acrobat on its Web capabilities, backing its strategy by citing the six million users it claims, have downloaded its free Acrobat Reader software. Adobe is also slashing the price of Acrobat from \$595 to an expected street price under \$200 for Acrobat 3.0, to be more competitive with products such as Netscape Communications Corp's Navigator. Acrobat will include Exchange, Distiller, PDFWriter, and the Capture plug-in and Catalogue, which were previously sold separately. The Java version of Reader is still mainly on the drawing board and is being made possible by Sun Microsystems Inc's recent licensing of Adobe's PostScript-based Bravo 2-D imaging model for Java. The Java version will provide a smaller system footprint and be a more simple product, Adobe says. Netscape has also licenced Bravo for use in Navigator. Adobe says the main Web enhancements in Acrobat 3.0 are the integrated viewing of PDF files directly within Web browsers that support Navigator Plug-in API or ActiveX controls; page-on-demand downloading so users can be reading files as they are being downloaded; better compression technology; and progressive rendering. Adobe Reader 3.0 beta is out now. The Unix version will ship a few weeks later than Mac and Windows versions. Foreign language versions will be released in October or November. Volume pricing will be \$88 for 100 copies and around \$50 for thousand-user deals.**

BMC DECLARES WAR ON PLATINUM WITH RED BRICK WAREHOUSE MANAGEMENT WIN

BMC Software Inc, Houston, Texas, is revving up a data warehouse management campaign it plans to drive into the space that management rival Platinum Technology Inc regards largely as its own. With management of Sybase Inc warehouses already under its belt, BMC's expected to tie the knot with Red Brick Systems Inc this week, announcing a Knowledge Module for the Red Brick Warehouse. Red Brick will resell Patrol and the new Module from July on Unix and NT. It gives users graphical tools for monitoring data about query performance, event logging and segmentation. They'll also be able to automate the management of user connections, segments or the functions of Red Brick's high-speed parallel loader called the Table Management Utility, so the company claims. The Patrol Agent and Knowledge Module run on the server; Patrol Console runs on Unix or NT workstations. The Module and Console cost \$6,500 on Red Brick 4.0 or higher.

BAAN ADDS COMPLEX MANUFACTURING CUT

By the end of the year all of fast growing Baan International BV's revenue will come from sales of customised versions of its Triton 4.0 manufacturing suite into four vertical markets. Last week the company added complex manufacturing arrangements of its suite to those it already sells for the automotive and electronics industries. Complex manufacturing users - heavy equipment and project services supply chain - can now buy tailored software and pre-defined models which support their dependence on engineer-to-order environments. Products tailored for the supply chain industries, including primary metals, pulp and paper, plastics and food and beverage, will be added by year-end. Baan will use its new OrgWare services to create other customised Triton modules in future. It's still working on support for NT, Sybase and DB2. It's using its Berclain Group Inc acquisition's Moopi software to add scheduling and synchronisation to all of its products. Moopi - a French acronym for Industrial Production Sequencing Optimizing Method - is the Quebecois' three-tier C++ environment. Baan claims 1,700 customers.

• Two year Novell Inc spin-out Btrieve Technologies has teamed up with Israel's Magic Software Enterprises Ltd (MSE) to develop and market a toolkit for rapid application development. Magic is Btrieve's first signing for the repositioned Scalable SQL and Btrieve 6.15 embedded databases for developing packaged client/server applications (UX No 587). MSE brings its development toolkit Magic to the party.

INTEL BUNDLES BMC FIRMWARE AGENT WITH I/O CHIPSET

BMC Software Inc has won a significant endorsement from Intel Corp, which is to embed the Houston, Texas-based company's Patrol intelligent agent technology into its i960 RP I/O processor, allowing **users to monitor data traffic at the mother board level and optimise resources accordingly.** The significance of the win is that the i960 RP processor is key to specifications being created by the I2O Intelligent Interface Organisation to which vendors such as Compaq, IBM, HP, DEC, Novell, SCO and others will build next-generation server products. The I2O spec, which provides an operating system- and hardware-independent specification for creating portable device drivers, is designed to remove I/O bottlenecks associated by offloading I/O tasks from the CPU on to i960 RP-based I/O subsystems. Intel began sampling the part last month and expects early implementations next quarter with mainstream server manufacturers announcing products at Comdex Fall for shipment in the first two quarters of 1997. Although BMC and Intel anticipate Windows NT and NetWare configurations in their announcement, they were quick to point out - if not in print - that the all-PCI I2O spec applies equally to Unix, pointing to SCO's membership of the group. There's no licence or royalty arrangement; BMC makes its money selling Patrol Knowledge Modules which monitor and manage information received from agents. As it does for its other device, database and application agents, BMC will provide a Knowledge Module for the i960 RP agent that'll include a set of routine response guidelines which the agents can act upon without having to alert the console. However BMC's hardware, database and application management agents can also be interpreted by a number of third-party management environments with the appropriate adapters, including CA-Unicenter. The creation of BMC's first firmware agents is significant not for BMC and Intel, but also for the development of long overdue management out-of-the-box. BMC says its agents will work at a lower level than the management technologies Intel has partnered with Tivoli Systems Inc and Computer Associates International Inc for. Intel says version 1.5 of the I2O spec due this summer will include support for Desktop Management Interface APIs which Tivoli, CA and others use to manage Intel systems.

Decoupling

The I2O group includes Intel, Microsoft, Novell, Compaq, HP, NetFrame, 3Com, Symbios, IBM, DEC, Sun and others. Under its spec peripherals will supposedly be capable of routing data without sending calls to the CPU. The routing scheme is similar to Tandem Computer Inc's ServerNet, though the ServerNet PCI buses are memory-based instead of being truly intelligent. As well as creating higher throughput systems I2O also promises to make any driver compatible with any piece of software without custom instructions, saving manufacturers significant development costs for multiple ports. The spec effectively "decouples" the connection between the operating system and operations so that device driver developers don't have to write to specific software platforms but write instead to a common messaging layer that circumvents incompatibilities. The layer, which fits between drivers and operating systems and makes drivers and peripheral devices processor- and operating system-independent, is based on a NetFrame Systems Inc message-passing layer that has been part of the company's systems since 1989. Although I2O exacts a slight performance cost for each node, it expects to make up for any loss in speed with much greater throughput performance, making large fast clustered systems possible. I2O also lets NT nodes communicate with Unix and mainframe nodes and allows users to add devices, such as an EISA card, without having to shut down the system. Intel is bundling Unix veteran Wind River Systems Inc's IxWorks embedded operating system with the i960 RP. IxWorks, an I2O derivative of Wind River's VxWorks real-time embedded operating system, will allow hardware designers to write I/O adapter cards such as SCSI, ATM and Fibre Channels to a common network operating system-independent interface. It uses the Wind microkernel that VxWorks is based on and is specific to the RP chip. Technically, I2O's a proprietary spec; special interest group members get rights to it as part of their membership fee; other companies have to buy a license. By the end of 1997 I2O plans to have an additional group of specifications finished covering a broad range of client/server I/O connectivity issues including clustering connectivity and fault tolerance, peer-to-peer communications, server/network management, fibre channel technology, ATM and WAN applications, 64-bit addressing, RAID I/O and real-time operating system connectivity.

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Looking to take on **HP** - at the same time dumping on its **Lexmark International Group Inc** spin-out - **IBM Corp's** Boulder, Colorado-based Printing Systems Division will reveal its own brand of monochrome and colour laser and inkjet network printers on June 18 at PC Expo in New York. "Think outside the box", is how Big Blue will pitch the printers. Its non-competition agreement with the low-end printer, typewriter and keyboards business it spun out as Lexmark ended back in March.

VXtreme Inc will launch its own family of video conferencing products later this year, emphasising bandwidth scalability as its biggest selling point. Recognising that between the Internet, LANs and ISDN users will be connecting to video conferencing in many different ways, the company's strategy is to find a broad base for its products by enabling them to work with a range of user connections, with video quality in line with the connection's capability.

Sense8 Corp, the company behind the virtual reality interface for CA-Unicenter TNG (UX No 585) has won another fan in **Hughes Research Labs** that's taken Sense8's WorldToolKit and WorldUp virtual reality design tools. It will use them to design a visual simulation environment for air-traffic conflict detection and resolution; a shared visual environment for astronaut training in weightlessness and a Naval command centre supporting 3D visuals and sound, speech recognition and other communication forms. Hughes will initially use Sense8's software on **Silicon Graphics Inc** workstations before porting to other systems, including PCs.

Intersolv Inc's DataDirect SmartData ODBC drivers are now available for HP-UX, AIX and Macintosh, to add to the Solaris, NT, OS/2 and Windows 95 drivers announced already. **Informix** is integrating DataDirect with future releases of its New Era Application development environment and Enterprise Gateway architecture.

Oracle CEO Larry Ellison is promising the names of international telecommunications companies that will provide phone links for his Network Computers in 45 to 60 days. The telcos will buy Oracle's server data management software. Oracle already has **BT**, **France Telecom**, **Bell Atlantic** and **NTT** interested and the eventual group will "sell, rent or give away" network computers to subscribers in "millions of units", Ellison predicted.

In the week **HP** claims the fastest graphics workstations around with its PA-8000 Visualize offerings, **Sun** counters to claim supremacy for its Ultra workstations, with the addition of Freedom accelerators from **Evans & Sutherland Computer Corp**. They had previously been on the SparcStation 20 boxes. Sun claims 316.7 PLB-surf93 with a 16-processor Freedom 3000.

IBM Corp reminds us its Power Parallel brand statement means there is no such animal as a SP2 anymore. The current model and all future models are called RS/6000 SP thus, there is no longer any numbering scheme. The new SP2 switch is officially called SP Switch. The "old" switch is called High Performance Switch or HPS. Is that enough to confuse you?

VMark Software Inc sees data warehousing as its future, and has formed a data warehousing division to prove it. Peter Fiore has been promoted to vice president and general manager, reporting to president and CEO Robert Morrill. The Westborough, Massachusetts company recently passed its ObjectStudio technology to a joint venture with Cincom Systems Inc to cut back on runaway development costs (UX No 591). VMark's hired ex- Progress Software UK MD James Bush to run its UK concern.

Sequent Computer Systems Inc has snagged former VP marketing **AT&T GIS** (the NCR/Teradata division) Andre Dahan to be its new VP worldwide marketing.

Client/Server Labs, the RMark benchmarking house, has announced an Intranet benchmark to test Web server performance. Out in July, it rates a configuration of server, OS, protocol stack, security, Web server software, RDBMS connection and RDBMS.

Sun Microsystems Inc acknowledges it holds the patents on **Kendall Square Research Corps** ill-named Cache Only Memory Architecture, COMA and other multiprocessing technologies (UX No 583). Apparently there's between fifteen and twenty patents in total. **Dolphin Interconnect Solutions A/S** which picked up both staffers and technology from the failed MPP concern insists the non-exclusive property rights it has come direct from the bankruptcy court. It says it has had no communication from the company owning the patents.

IBM Corp has appointed Dilip Chandra as general manager for AIX Systems Europe, Middle East and Africa replacing Lars Alm who will head up the Nordic Services operation. Alm was only appointed in November and replaced Robert Youngjohns who jumped ship to join Sun (UX No 563).

Rumour has it **Sun Microsystems Inc's** kitting UltraSparc with support for PCI bus.

New Tuxedo house **BEA Systems Inc** has won Pleasanton, California-based **PeopleSoft Inc** to its OLTP middleware. PeopleSoft is integrating and bundling Tuxedo with its applications and tools, PeopleSoft Version 6, due in September (UX No 587). PeopleSoft will use Tuxedo's RPC to shift intensive processing and SQL functionality to an application or database server. PeopleSoft says future releases will include partitioning of online and interactive applications. Meantime it's announced a component of its Distributed Application Framework called BEA Access/DAL which it claims delivers an interconnect for desktops to Digital Equipment Corp's servers running VMS, Open VMS, Digital Unix and NT. No prices.

Mercury Interactive Corp has named ex-**Iplex Information Technology Group** European general manager Uri Lotan as VP of European operations. He'll report to Mercury president Amnon Landon.

Hitachi Europe Ltd has spun out a new division HiSoft for its ObjectIQ and JP1 system management tools (UX No 592).

Hewlett-Packard Co says it'll be at least a year before it presses its **Convex Computer subsidiary's** ccNUMA Coherent Torodial Interconnect into use as a commercial system technology.

When will **Sun Microsystems Inc** be able to manage SNMP devices over the Internet? Its Solstice Workshop development environment and Java management APIs (UX No 592) will be used to build the applications that can do this (Solstice Workshop is due in the fall). However the management APIs won't be injected into Domain Manager aka SunNet Manager until next year.

It's gonna take a year for **Axil Workstations Inc** to reach the higher server ground and it won't necessarily be seeing a sunny Sparc future from there.

SunSoft Inc says its newly shipping Solaris 2.5.1 cut doesn't contain the necessary mechanisms to support Java-based network computers, be they SMCC's own JavaStations or any other devices. The prevailing NC model - remember we're dealing in Internet time - has devices plugging into intranets and being activated by data packs downloaded from servers which may include Java virtual machines, JavaOS, TCP/IP stack, a browser and applets. Solaris 2.5.1 doesn't even include a Java Virtual Machine.

Marimba Inc's got ten customers kicking alpha versions of its Java technologies; it's looking for enterprise Java shops in the worlds of finance, entertainment and publishing to beta the stuff. It's being shown under NDA. Marimba's hiring interns for the summer months whilst it looks for permanent staff. It says it's still putting its financing together.

Former **X/Open Co Ltd** chief Geoff Morris is putting together a Web/intranet start-up he expects to go live in the fourth quarter; it'll also provide a European distribution channel for US-developed technologies in that space.

Open Horizon Inc is integrating its Connection middleware line with **CyberSafe Corp's** Challenger Kerebos-based security system.

Fujitsu Ltd's answer to Lotus Notes or Microsoft Corp's Exchange, its collaborative workflow TeamWare Flow, has been enhanced to include the Workflow Management Coalition's standard interfaces and support for Solaris, Oracle, ODBC, Sybase and Windows 95. It also includes a link to cousin ICL's ProcessWise business processing modeling software. TeamWare Flow 1.1 is due in the third quarter priced at \$500 per user for a 10 user license. ProcessWise WorkBench for TeamWare Flow ships in the third quarter. No prices.

So pleased was **HP** at its turn as the vendor with the fastest graphics workstations - at least for the time being - it couldn't resist bashing **Sun** at every available opportunity at the launch last week. Along with the graphs, charts and the like with Sun at the bottom and HP at the top, it showed a video of its new 64-bit workstations crashing through the "Sundown Cafe," offering "Free Java".

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SUNSOFT READIES EMBEDDED SOLARIS

SunSoft Inc will soon detail its plan to enter the real-time Unix market with binary versions of Embedded Solaris expected to run on Sparc as well as PowerPC and likely as not Intel too. Interest from the PowerPC fraternity, notably traditional embedded enthusiast Motorola Inc, will be used to defray some attention from the failed effort to establish Solaris as a general purpose PowerPC operating system in conjunction with IBM Corp (UX No 593). SunSoft's notion is that embedded Solaris will run in switches, manufacturing systems and the like, whilst Sun's other skinny operating system, JavaOS, will run in internet phones and other devices. Solaris 2 is suited to real-time applications, being far more deterministic than most past versions of Unix, SunSoft says. With faster RISCs, interrupt latencies are getting shorter and shorter, the company claims. It says there are already instances of Solaris being used in embedded applications such as process control; customers have chopped-down source for their own requirements. It says embedded PowerPC won't end the market for Wind River, Lynx and other embedded Unices, but thinks it will push them further down into the market for customers with "hard" real-time requirements. The initial version of Embedded Solaris will have a toolkit allowing developers to trade Solaris features such as the GUI, for RAM and disk (and dollar) savings. There may also be ROM-able and Flash memory versions in future for markets where no moving parts such as disks are desired.

MERCED EXPECTED IN HP SPP3000

Hewlett-Packard Co's Merced systems are expected to be multi-processors affairs using the crossbar switch technology from its Convex Computer Corp acquisition. Merced chips will be packaged in groups of four or six, similar to the forthcoming Pentium Pro SHV boards. A system will be composed from Hypernodes; groups of eight Merceds sharing local memory with four-port isochronous crossbar switches providing point-to-point links inside the node. Each port has 250 Mbytes/second bandwidth with the switch total being 1Gb per second. Hypernodes will be connected by a Scalable Coherent Interconnect forming what HP call a 2-D toroidal mesh with global shared memory. Because of the delays associated with accesses between hypernodes a ccNUMA - cache-coherent non-uniform memory architecture - will be needed and will be a feature of the combined HP-UX/Open Server/UnixWare Merced operating system being produced with SCO's help - see pages 1 and 7. I/O channels and devices connect to memory with a second set of crossbar switches. Disk storage subsystems, network connections and I/O buses will hook up to a switch port. The first systems from HP using Merced Hypernodes will appear in early 1998 and are provisionally called SPP3000s for scalable parallel processing, the next generation of Convex's SPP series. Unlike Tandem, which is licensing its ServerNet ATM-like bus-replacement technology to third parties, HP is keeping its crossbar switch in-house. We're told compilers for the systems will feature a Convex front-end and HP back-end.

VISIX CLAIMS ELEVEN WILL "BLOW JAVA WORKSHOP OUT OF THE WATER"

Visix Software Inc's next-generation Java cross-platform application development and deployment solution - code-named Eleven - "will blow Java Workshop out of the water," according to the Reston, Virginia-based company (UX No 579). Eleven is composed of two integrated components: a visual Java-specific integrated development environment (IDE); and a Java compiler and an Intranet Application Platform (IAP) for deployment. The cadre of ex-Sybase Inc executives now running Visix's day-to-day affairs reckons it's got a year's head start on the rest of the crowd. Eleven-built application components will be accessible and executable using a Visix-provided launcher delivered as a Netscape Navigator or Microsoft Explorer plug-in. IAP application deployment uses Visix's Galaxy high-end, high-brow C/C++ development tools. Galaxy has been criticised in the past for being difficult to use, a fact the company concedes, but it insists Eleven will be as easy to use as Microsoft Visual Basic or Borland Delphi. Applications built with Galaxy are executable and addressable on the IAP and can be combined with Java applets according to Visix VP marketing Ben Martindale. Visix IAP supports Java and Microsoft OLE/ActiveX controls. Although Visix expects to pick up the usual crowd of web authoring-types its looking to grab the business application space pitching the stuff as a low-price, entry-level offering for intranet application development. It doesn't expect Eleven to replace Galaxy in the short term. IAP includes Galaxy-type foundation classes for building functionality into shared libraries on the execution platform, team development support, a super-set of uniform class libraries and integration with Galaxy applications. The development environment is expected to cost \$3,000, the IAP plug-in will be priced at around \$50. It's up on Windows95, NT, Unix and MacOS. Eleven betas in July and ships in the fourth quarter.

COMET DISAPPEARS FROM SCO SKY

Santa Cruz Operation Inc has dropped plans to provide a single end-of-life kicker for its OpenServer Unix customers before the operating system gets swallowed by Gemini, the merged UnixWare/OpenServer kernel. Attempting to wrest every last cent out of the base SCO says it will offer a series of maintenance releases between now and the first quarter of next year when Gemini goes to beta instead of the "Comet" cut of OpenServer it originally promised by mid-1996 (UX No 557). The company this week unveils the first of those offerings as OpenServer 5.0.2 new media release. The main difference between 5.0 and 5.0.2 is support for French and German; 5.0 was only available in English. Although there's little new, 5.0.2 is required for customers that want to run any of SCO's Atlas Internet products. Trial versions of SCO Advanced File and Print Server, which supports native file and print services for Windows clients and servers without the need for additional PC servers; Cheyenne Software's ARCserver/Open Lite backup software; and the SCO Doctor Lite systems administration and performance analysis tools are bundled for those that are interested. SCO Merge 3.2.2 with support for 80386 enhanced mode applications is bundled too. Upgrades from the OpenServer 3.0 product will be automatically remapped to 5.0.2; moving from 5.0 to 5.0.2 requires a full reinstall and SCO Admin Enhancement Supplement 1.0 must already be installed to run SCO Advanced File and Print server on 5.0. The 5.0.2 English and French Media/Documentation kits are \$95 for CD-ROM and \$150 on tape. An Open Desktop or Open Desktop Lite upgrade to OpenServer 5.0.2 desktop is \$200. SCO Unix upgrades to OpenServer 5.0.2 Host System cost from \$200 for up to five users to \$3,650 for unlimited users. OpenServer Enterprise System 3.0, OpenServer Network System Release 3.0 or SCO Unix System with SCO TCP/IP upgrades to OpenServer 5.0.2 are from \$450 for 16 users to \$3,800 for unlimited users. Of the Comet technologies, SPEC 1170 (Unix 95) compliance will be introduced as a supplement around the end of the year. SCO says it's still seeking release candidates that'll feature promised support for 4Gb RAM plus integrated Atlas Internet and Java technologies. A date for the sale of floating user licences isn't yet penned and plans to support user level threads in OpenServer have been dropped completely. Meantime SCO's expected to meet the challenge of the anti-Intel Corp Network Computer crowd with some kind of small footprint system designed for devices built with Intel chips.

UNISYS TURNS TO PARCPLACE FOR SMALLTALK/WEB SUPPORT IN OSMOS RELATIONAL/OO DATABASE

Unisys Corp has hitched its C++-based Osmos object-relational database to ParcPlace-Digital Inc's Smalltalk application development technologies, integrating the Sunnyvale, California-based firm's VisualWorks - and Web-enabled VisionWave add-ons - to the database via an Osmos-Smalltalk interface. It'll allow Osmos developers to store Smalltalk objects in the database and to create Smalltalk applications for Web-based or vanilla client/server arrangements using data objects stored in Osmos. Future Osmos releases will support ParcPlace-Digital's next-generation integrated Smalltalk product, code-named Jigsaw, which includes VisualWorks, the Hewlett-Packard Co Corba 2-enabled Distributed Smalltalk and Digital's VSE (UX No 591). Unisys will also pick up ParcPlace-Digital's Java work for the databases. Osmos is said to combine non-persistent relational storage with object-based application logic. Unisys expects Osmos to play in the embedded and telco 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. Osmos components include a data object management layer and native object database it calls Griffin. Unisys' says developers using its Linc 4GL development tools can use Osmos or a relational database as their data store. Osmos is available on Unisys Unix SVR4, HP-UX, Solaris and NT. A UnixWare port is coming. It'll add Dynix/ptx and AIX support to Griffin.

UNISON SHIFTS ROADRUNNER UP A GEAR

Systems management software outfit Unison Software Inc has cranked out version 3.0 of its RoadRunner backup software, adding new fault-tolerant catalog management. It'll add device and volume management year-end. Catalog management enables the storage of on-line indexes of files, volumes and backups redundantly across the network so that data can be retrieved and located more quickly in the event of system failure. Other catalog management capabilities include; configurable design, permitting local, fault tolerant or hierarchical storage of catalog databases; security for customised security parameters; on-line index and filtering to identify and retrieve lost files and volume management functionality including ANSI-labeling of volumes and the ability to change volume status or location. Unison claim RoadRunner can store data at up to 40Gb per hour, due to what it says are four key capabilities; configurable compression with parallel backup support for up to 16 tape drives; data interleaving enabling up to 8 files to be backed up concurrently and fast search reads using DAT drives. Roadrunner 3.0 is up on HP, IBM and Sun. Prices start at \$4000. Meanwhile the Santa Clara, California-based company's workload management software Maestro, and RoadRunner, has won certification from Hewlett-Packard Co for its high-availability clustered software, MC/ServiceGuard. The two products are integrated with MC/ServiceGuard to support node failure, enabling the automatic mounting of files onto nodes to restart applications. Maestro/Load Balancer recovers the scheduled processing for applications and migrates them to other nodes. Meantime Unison has grabbed the Year 2000 dilemma - converting date fields in legacy applications and custom programs - by the horns and added new date capabilities for all its workload and storage management products, including Maestro and RoadRunner. It's gonna make the Year 2000 compliant releases available to customers with support contracts free of charge.

JAVA SUPPORT FOR SRAPI SPEECH APPS

Java support is being added to the Speech Recognition API 2.0 (SRAPI), set by the standards committee that Novell Inc chairs and of which IBM Corp, Intel Corp, Lernout & Hauspie Speech Products NV, Kurzweil Applied Intelligence Inc Philips Electronics NV and Dragon Systems are core members. The support will mean that Java developers can add speech interaction to their applets and documents. SRAPI 1.0 currently supports Windows 95 and NT and Java will be added before the year-end. Also in the pipeline is support for OS/2, Unix, NetWare and OpenDoc, but these are not likely until next year according to committee chairman Bruce Armstrong, Novell's manager of speech technology. At the start SRAPI just covered dictation, but has since expanded to include command and control systems and the committee is meeting this week to mull over speaker verification systems too. Armstrong said the interface is "much easier" than Novell's own TSAPI in that it has an object-oriented C++ front end and Microsoft's TAPI is sticking to Windows platforms. SRAPI supporters include Voice Pilot Technologies, Kolvox, Interactive Products, Voice Processing Corp and Speech Technology Laboratories, part of Matsushita Electric Industrial Co's Panasonic. The body will add telephony support compliant with the Enterprise Computer Telephony Forum (ECTF) in the future.

PLANNING SCIENCES REVS EIS TOOLS

London, UK-based Planning Sciences Inc has released Version 3.0 of its Gentia client/server EIS development and decision support environment including the GentiaDB multidimensional and OLAP database engine. Key features include a new business model for logging the creation and modification of working models, a enhanced GentiaDB capable of holding more data plus a reconsolidation mechanism for handling very large data volumes. The company says it's work includes a multi-cube architecture for inheriting base cubes from a central meta-data repository which avoids the OLAP downfall of each cube containing both structure and data. It includes a SuperSmart consolidation engine to speed record changes and join cubes; supposedly the equivalent of relational table joins for OLAP cubes. It supports NextStep on HP and Sun, most Unixes and NT. Prices go from \$132,000 for 50 licenses. Planning Sciences officially swaps the Gentium nomenclature for Gentia at the end of the month. Intel Corp objected to Gentium being too close to Pentium (UX No 580).

Odessa deep-sized

Unisys has also canned development of its graphical tools for Osmos, code-named Odessa, in favour of Platinum Technology Inc's Paradigm Plus graphical modeling environment, which the Oakbrook Terrace, Illinois-based company will sell as the Osmos Object Analysis and Design Tool. It will allow customers to develop database schemas with graphical models and diagrams rather than text editors. Paradigm Plus supports a variety of programming languages and components created using it can be posted on the Web. Unisys isn't reselling the ParcPlace-Digital or Platinum technologies but will refer interested customers to the respective partner. Six months after announcing Osmos (UX No 567), Unisys still can't name any more than the one user it trotted out back then although Bellcore is now also reselling Osmos in the US as part of its Locatelt address analysis software or standalone.

UNISYS ADDS OLE SUPPORT TO UNIVERSAL REPOSITORY

Meantime, Unisys is adding Microsoft Corp OLE/COM support to version 1.2 of its Universal Repository (URep) due at the end of next month, claiming it's the first object-oriented repository to support OLE and Unix environments and provide fine-grain versioning at the object level. An object-oriented repository stores applications and information about applications. The idea is to allow developers to use the same code in different applications, say PowerBuilder and VisualAge. A repository is built around a metamodel that describes all the types of data stored in the repository. We're told object repositories differ from non-object repositories by allowing developers to extend or customise the metamodel and use a wide variety of tools. Unisys claims URep is already far ahead of Oracle Corp's Sedona and the repository Texas Instruments Inc and Microsoft Corp are working on for Cairo. Its nearest competition appears to be IBM Corp's TeamConnection for OS/2, R&O's Rochade Information Repository and the Platinum Technology Inc repository. Unisys is publishing URep's C++ and OLE APIs on the Web in the hope of building ISV momentum. ANSI C support is also available. Unisys says the APIs provide everything from import/export to encapsulation, object wrapping and full distributed object integration. Unisys says it'll allow Visual Basic, PowerBuilder and other OLE desktop developers to create, access and manipulate objects stored in Unix or Windows NT implementations of the repository. Unisys says URep is designed to store business rules and logic and metadata and is targeted at ISVs and large organisations building object development environments, data warehouses, meta data management and business object management. Versant Object Technology Corp's object database is used as URep's persistent storage mechanism; URep won't support Unisys' own Osmos database until a future release. URep's distributed interoperable services layer supports a variety of object request brokers, including Iona Orbix, Post-Modern ORBeline and ICL Dais, for distributed object facilities although support for OMG Corba 2 objects is due in a future URep release.

Mobius

UK's National and Provincial Building Society is implementing URep as part of its Organisational Design Facility and Unisys has licenced back add-on tools the Society's has created for business process re-engineering and system modeling as the Mobius toolset. Another UK company, Software One, used URep to build its Marlow meta data infrastructure toolkit. The toolkit allows around 20 third party tools to plug into URep. URep is up on Solaris and NT servers and Windows clients. Java support via a language binding will be added in a future release. Unisys is submitting the URep APIs to the Object Management Group's Meta Object Facility and Object Oriented Analysis and Design RFPs which call for metadata APIs that will allow meta objects to be exchanged between Corba frameworks. Unisys expects to be competing with Platinum, IBM and Rational in the RFPs. As far as we could understand, neither Osmos or URep work with the USoft object repository and development environment which Unisys picked up with its acquisition of TopSystems International NV in February 1995 (UX No 526).

SUNSOFT PUTS SOLARIS-ON-POWERPC BEHIND IT, TOUTS SOLARIS x86 INTERNET TAKE-UP

SunSoft Inc insiders say the development cost of that failed effort to establish Solaris as a general purpose Unix operating system for PowerPC was not borne entirely by SunSoft Inc and that IBM Corp coughed up for a piece of it, although SunSoft will eat the balance (UX No 593). SunSoft claims it had been telling customers for some months that all previous aspirations for the general purpose Solaris-on-PowerPC were null and void. It blames IBM and its OS/2-on-PowerPC disaster for pushing the Solaris release so far back it fell off the shelf. It says Solaris could have been ready quite early but didn't think it could lead the PowerPC operating system charge to establish a volume market; that was what OS/2 and MacOS were supposed to do. "Once IBM pulled the plug on OS/2 that lack of confidence doomed Solaris' broader efforts," it says. It acknowledges it would have been much more expensive to capture all of the ISVs and put SunSoft middleware up on Solaris PowerPC though; it was a tough enough sell anyway given the lack of common PowerPC installed base for ISVs to aim at. The company claims its Solaris x86 implementation is fairing better although with most PC companies whittling their R&D to nothing SunSoft says their sales channels have problems selling - as opposed to offering - complex solutions. For SunSoft's Intel vendors, including Dell Computer, even a standard server sale is complex, making it tough to have them push Solaris x86 it says. It's even more difficult to capture sales on platforms such as Compaq Computer because Compaq is not only tied closely to Microsoft Corp but also has strong ties to rival Unix vendors SCO and formerly Novell. SunSoft says some OEMs (particularly Compaq) are concerned about the SunSoft/SMCC relationship though it believes they ought to be more concerned with Hewlett-Packard and Santa Cruz Operation becoming direct competition, as well as Intel. SunSoft says most of its recent Solaris x86 successes have come on the back of its Solaris Internet Gateway and firewall solutions, citing IBM's PC Server team out of North Carolina. It reckons the Internet stuff is outselling Microsoft by two or three to one on the IBM PC servers and far outselling OS/2 internet technology.

ORACLE EUROPE; MORE CHANGES TO COME

Looking to douse the flickering fires of resentment amongst its European satellites Oracle Corp top brass including CEO Larry Ellison, head of worldwide operations Ray Lane and senior VP of server technologies Jerry Held went on a tub thumping tour of five European cities in five days a couple of weeks back (UX No 593). The so-called "Oracle Future Tour" was the aftermath of a reorganisation of the European ranks around lines of business, in which sales directors and consulting, support and education division managers in each country now report directly to California rather than to a country boss or European chief. Oracle top brass argues European management was top heavy, costly and inconsistent across national boundaries. The idea, according to Jerry Held, is to develop a common market message, product delivery mechanisms, reporting structure and pricing. "The European reorganisation is a result of a worldwide reorganisation began four years ago," he said. The message from Held is that there's more to come, presumably after the company does the math on its year-end results due June 20; he says Europe can expect another shake-up within a couple of months. Disgruntled Euro executives claim the "business lines" model ignores the complexity and variety of the European market. Reorg casualties include senior VP Europe, Loek van den Boog who'll be replaced by a European product and sales manager; and Franz Niedermaier head of Oracle Germany. Oracle UK managing director Mike Harrison had already jumped ship to rival Informix (UX No 521). Oracle Europe was previously organised into 25-odd regional subsidiaries, each with its own managing director overseeing sales, support, consulting and education. At last year's Oracle User Conference US executives showed how Europe was only growing at 30% compared to 45% in the US.

RATIONAL SCALES SUMMIT FOR SOFTWARE CHANGE

Rational Software Corp, Santa Clara, California, is shipping its Rational Summit change-management software for use with the Apex Ada and C/C++ compiler it offers for mixed language development and high-end configuration management. Summit is meant to extend Apex's configuration management by enabling the presentation of physical file changes into tasks - units of work such as software bugs in which the allocation, scheduling, monitoring and managing of work can be related to a software development project. Rational Summit supports its own Rational Rose object modeling tool, SoDA its automated documentation and reporting tool and Microsoft Corp's Project and Excel project management tools. It comes with predefined process models and templates for definition of task layout, policy and roles. It's up on DEC, Sun, HP, IBM and SGI and goes from \$2,500 per license.

PEER LOGIC AWAITS DISTRIBUTED OBJECTS, PLANS WEB VERSION OF PIPES MESSAGING

San Francisco, California message-oriented middleware (MOM) company PeerLogic Inc expects its day to come when distributed object computing is implemented on a large scale. Its eight-year-old Pipes reliable messaging system has found favour with about a dozen companies who have wised up to its high-speed and scalability, plus software vendors such as Computer Associates International Inc, Texas Instruments Inc and Intersolv which are using Pipes as the messaging component of various software development products. But to drive Peer Logic from the \$5m to \$10m company that it describes itself as today, all this object technology has got to happen.

Components

Pipes, Peer Logic's version of MOM, supports communication between different distributed programs using an asynchronous store-and-forward mechanism. Pipes kernels are installed on each node and store details of the network, automatically forwarding data objects through the optimal route based on network conditions. Pipes' dynamic naming service allows application components to advertise their availability, find one another, and communicate independent of their physical location or type of network or operating system. Applications don't need to know the name of a resource to use it and if servers are relocated, client applications can find the server automatically without being reconfigured, the company claims. Peer Logic believes its technology will come into its own when the industry begins to adopt distributed object frameworks and services and create applications or applets that need to send and retrieve large numbers of components over networks. It reckons Pipes is still five years ahead of its time. Peer Logic says it perceives ten times as much interest in Object Management Group's Corba flavour of distributed object computing than Microsoft Corp Network OLE. The problem is that distributed object environments are still largely developmental endeavours. Plus not all of the standards Pipes and other MOM implementations will need to work with have been defined. OMG doesn't yet have definitions for naming and asynchronous event handling for starters, says Peer Logic. Those distributed object applications that do exist are using what it describes as blocked non-procedural facilities; two one-way calls. OMG's use of TCP/IP-based protocols as the transport layer and the shift of the industry's focus and innovation to the internet technologies is leading Peer Logic to create a Web-enabled version of Pipes for reliable messaging over the internet, though it won't say how far away that product is.

Pipes 3.7

This week Peer Logic introduces a dot release of Pipes which now allows a developer to use a single buffer to receive the next incoming message on any session with a single function call. It's Pipes' thirteenth API. Pipes 3.7's resource management has also been enhanced to reduce network traffic and increase the number Pipes machines that can be supported over WANs. Peer Logic says 3.7's name service can restructure itself more quickly with the enhancements and there are new event, status and error messaging services plus a resource allowing developers to initiate multiple asynchronous queries into a namespace from a single application. There's new support for HP-UX 10, 32-bit Windows 95 and Sinix 5.4. Prices start at \$250 per desktop.

SYBASE "ALREADY DEAD" CLAIMS ORACLE

In London two weeks back as part of Oracle Corp's whistle-stop tour of Europe (see "Oracle Europe") senior VP server technologies Jerry Held said he believes the relational database market can only sustain two or three major players and that long-term Informix Software Inc and Sybase Inc will be left "slugging it out for fourth position" behind Microsoft Corp SQL Server and IBM DB2 by the end of the century. "Oracle has more developers than they [Informix] have employees. Sybase is already dead," he reckons, with both companies still swallowing their respective Illustra Technologies and Powersoft Corp acquisitions. Meantime Held confirmed the company's next generation Oracle8 object/relational database will go into production in the first half of next year (UX No 580). It goes to beta next month. Oracle 7.3 is the last major release before Oracle8. The Sedona application development environment and repository that will include Visual Edge Technology Ltd's ObjectBridge bi-directional object translation facility and facilities for managing applications from disparate sources will ship around the same time as Oracle8.

HP OADAPTER MORPHS INTO DEPOT/J DYNAMIC WAREHOUSE

Hewlett-Packard Co has found a new use for its Oadapter object/relational adapter middleware. It's sprinkled some magic Java dust on it, added some graphical tools and repackaged the whole thing as Depot/J: a "dynamic warehouse." **Depot/J pulls data from disparate data sources, adds some business logic to it to create business objects that Java programmers can then include in their World Wide Web pages and other such applications.** The data remains in its original store, rather than being copied to a central location and the business logic is stored and executed on the server, leading to smaller client applications, according to HP. The metadata can be stored on either Oracle or Sybase. Oadapter was created in 1991 as a bridge between Smalltalk and C++ applications. It was re-launched in 1994 as an overlay for Oracle 7 that enabled object-oriented applications and their data to be stored in an Oracle7 database. To do that, HP stripped the object development and query component out of OpenODB, which itself was the combination of the AllBase/SQL relational database overlaid with a range of object technologies. HP Depot/J will be up on SunSoft Inc's Solaris and HP-UX in late summer, with Windows NT following before the year-end. It supports all the major databases as well as Symantec Corp's Cafe and Rogue Wave Software Inc's JFactory (UX No 578) Java development tools. The price won't be fixed until the current beta programme is over, according to Cyndi Nickel, Depot/J's product manager.

INFORMIX OFFERS DATABLADE DEVELOPER KIT AND PAGE BUILDER TOOL

Informix Software Inc developers can write snap-in modules for the company's Universal Server, as well as the Illustra Server with the Universal Server DataBlade Developers Kit that the company is shipping now. There are already DataBlade snap-ins such as HTML, audio, video, geo-spatial, statistical analysis available, but the new APIs will enable third-party developers to add their own. The kit contains tools that generate SQL and C for the snap-ins, deployment tools and Universal Server migration guide and is available to developers now for \$150. Informix Universal Server, the combination of Illustra's content management system and Informix's Dynamic Scalable Architecture relational database is slated for the end of the year. Meanwhile, Informix's new DataBlade module, which will ship in July, is a development environment for creating and updating Web applications, enabling Web content and logic to be stored in an Illustra server so developers and Webmasters can collaborate on applications. It will also support the Universal Server when that comes out. It has a new Application Page Builder tool that can generate applications on the fly from databases, by-passing Common Gateway Interface (CGI) programming and scripting. It supports Netscape's NSAPI and Microsoft Corp's ISAPI. Version 2.2 will cost \$675 per user for development and \$500 per user for runtime.

HOME ACCOUNT NETWORK READIES JAVA SKIP TOOL FOR SECURE BANKING

Sun Microsystems Inc has got together with the latest recruit for its Simple Key Management for Internet Protocol (SKIP) - Home Account Network Inc (HAN). HAN, based in Charleston, South Carolina, is developing a Java-based SKIP tool to enable PCs or other clients to communicate with bank or financial institutions servers that sit behind Sun's SKIP-based Sunscreen SPF-100, the company's intranet security and firewall system (UX No 592). Sun's End Systems SKIP engine will sit on the client, which manages and generates keys, and the HAN application will interact with that. Rogue applets will not be able to connect to bank's servers without HAN's banking service broker Java classes that connect to an End System client, according to Sun. The two companies are also working together to enhance the SKIP standard for home banking purposes. Smita Deshpande, director of marketing and business development at Sun's Internet Commerce Group said that SKIP requires no prior handshake preventing exposure of the keys. Sun is promising more signatures to the SKIP cause this week.

IBM SUPPORTS MULTIMEDIA OBJECTS IN DB2

Like the rest of the relational crowd, IBM Corp's adding support for video, audio and images to its own database, claiming that new extenders will allow DB2 users to store, search and manipulate multimedia objects. There are extenders for AIX, Windows NT and OS/2 servers and Windows 3.1 and Windows 95 desktops. The extenders are available next month as part of a cross-platform development kit for DB2 on AIX, NT and OS/2. The SDK is \$500. The DB2 Text Extender for AIX is now also available for DB2 on OS/2 and NT. It's also now offering DB2 Parallel Edition 1.2 said to provide a 50% increase in query performance and a 200% increase in OLTP speed over previous versions. IBM says a new Outer Join capability enables simpler SQL coding whilst SQL Case statements provide reusable expressions. 1.2 costs from \$26,400 and ships on June 28.

SENSE8 HAS NEW VERSION OF WORLD UP VR TOOL

Virtual reality pioneer Sense8 Corp has released the next version of its World Up interactive development environment. The small Mill Valley, California company has been quietly winning over some major players for its 3D application development tool. **Computer Associates International Inc uses it for the virtual reality interfaces within CA-Unicenter TNG edition of systems management tools, and Sense8 is known to be talking with Oracle Corp and Sybase Inc as well (UX No 585).** World Up is built on top of the company's WorldToolKit, and contains an interactive modeler, an interpreted environment, a delivery vehicle and a Netscape communications Corp plug-in for Internet deployment. It supports most 3D file formats, stereo and 3D sound, OpenGL, Direct3D, and has a BasicScript interpreted language. Out now for Windows NT, including the Netscape plug-in and World Up Player, it costs \$3,500. It's also available now for SGI workstations and will ship for Windows 95 in the fall.

MAINSOFT OFFERS MORE MAINWIN DOT RELEASES

Mainssoft Corp, one of the companies licensed by Microsoft Corp to provide Windows APIs on non-Windows platforms is shipping MainWin XDE 1.4, its eXtended Development Environment, and MainWin Test 3.0, both components of the MainWin Studio cross-platform development tool suite. MainWin XDE 1.4 includes support for Microsoft Foundation Classes 4.0 (MFC), Winsock Common Desktop Environment, support for MainWin Test 3.0 and Windows 95 common controls. It enables developers to re-use Windows, MFC source code, resource and help files across Unix platforms. MainWin Test 3.0 is an automated testing tool compatible with Microsoft Test 3.0 for porting Windows applications to Unix. It has a testing library complete with the Windows controls, TestBasic scripting language and an integrated environment with a visual syntax editor, compiler and debugger. It's currently up on SunOS, Solaris and HP-UX, and of course Windows. DEC, SCO and SGI are promised, but no dates yet. MainWin XDE 2.0 will be out at the end of July 1996. Meanwhile, another dot release, MainWin 1.5, available late June, will include support for MFC 4.1, with MFC 4.2 support available in version 2.0. That version will also include support for OLE and RichTextEdit.

HDS DELIVERS FIRST NETWORK COMPUTER

As expected, HDS Network Systems Inc was first out of the Network Computer (NC) blocks last week (UX No 592), launching its @workStation and sounding off about the plans fellow travelers IBM Corp, Sun Microsystems Inc and Oracle Corp are cooking up for their own NC flavours. It claims HDS @workStation will provide access to mainframe, Unix and PC applications whilst Oracle and Sun are off running Java applets for word processing, spreadsheets and presentation graphics. The company is banking on users' reluctance to throw away existing applications and a shortage of Java applications. HDS says its initial hostility to the NC Reference Profile was its anti-WinTel orientation (UX Nos 589,592). It plumped for the netOS operating system NC-compliant tag only when it realised how little work it had to do with what it already had. It's pushing @workStation into the banking and education markets and is looking to pick up a bunch of OEM deals. @workStation is a \$750 (£650) Network Computer combining integrated Internet access, Java and can run applications on any server platform: mainframe, Unix or PC, says executive VP Michael Kantrowitz. It runs HDS' 300kb POSIX compliant, multitasking, multithreaded netOS operating system and includes a Spyglass Inc Web browser and a Java Virtual Machine to support Java applets. It has an Intel Corp i960 RISC processor and comes with 4Mb RAM, upgradeable to 128Mb. In theory netOS could run on any processor, it claims. Internet access comes with a choice of service providers via a TCP/IP stack with a Point-to-Point Protocol driver. The operating system comes with an optional hard drive with up to 1Gb of storage and an optional floppy drive. It's currently geared up to manufacture 2,500 systems a month, says the company and claims it has the capacity for up to 20,000. Its opened offices in the UK and signed up UK-based distributor Xanadu Systems. It plans similar deals in Europe. It sells direct in the US.

SYBASE WANTS EVERYBODY TO LOVE IT AGAIN

By Gary Flood

If Mitchell Kertzman is the answer, what is the question? Easy, if you're Sybase Inc chief executive Mark Hoffman: why has everyone - especially Wall St - fallen out of love with "number two" relational database company Sybase of Emeryville, California? Sixth largest independent software company in the world, over 6,000 employees worldwide, 25% market share in the US (although about half that in Europe), over 27,000 customer sites, and many of those ~~prestigious sites in world financial centres: everything should be rosy in the Sybase garden, yet for some reason it can do no right by press or analyst right~~ now. Back to the answer - no-one likes Sybase because it is "bad" at marketing; so fix that by making the ebullient former Powersoft powerhouse EVP of sales and marketing, and hey presto, you get a new and improved \$957m database company. Pardon us - we mean Internet, data warehousing, database publishing and "new workplace" (desktop/remote site) leader, and thus a behemoth not at all to be compared with those other vowel rdbms stalwarts Oracle, Informix, IBM (DB2/x) or (CA) Ingres. That was the message from Hoffman et al on high this week, as the company gathered analysts and press to its bosom in a hotel in Waltham, Massachusetts, just a couple of miles from Kertzman's crib (and a long way from the old centre of Sybase gravity in Emeryville). A "new" Sybase with a "new" message was unveiled, all MC-ed by the admittedly personable former disk-jockey Kertzman, and let us be among the first to unveil the tagline of "Create. Integrate. Communicate" as the battle cry for this somewhat ailing corporation.

Bumps

Is Sybase really ailing, though, or is it still just going through the speed bump analyst Curt Monash pointed out all the other database companies go through - like Oracle's stumble due to its unchecked growth and general adolescent testosterone problems in 1990 and Informix a year or so earlier with acquisition indigestion? Indeed yes, that is a serious question, since the bump was seen in the highway by Monash way back in the summer of 1994, and the company's been running back and forth over it the last 18 months by general consensus (including Sybase executives). Sybase had a stinking 1995, and it's not on smooth tarmac yet. After net losses for the year up to end of December of \$19.5m, which looked a bit sick compared to 1994's \$87.1m net profits, it saw revenue up a modest 16% to the aforementioned \$956.6m, a result hardly improved by the revelation that database licence sales fell between 4-5% in the second half. For its first quarter reported at the end of April the company's revenue only climbed 13% in what is universally held to be a high-growth market, up to \$243.7m, and instead of the forecast \$3.7m profit it bled red ink to the tune of \$6.9m. Wall St promptly tore 25% off the company's value overnight, seemingly a tad worried that despite the much-heralded new and improved System 11 core database release tail end of fiscal '95, database revenue continued to slip, with what growth there was coming from the lower-ticket Powerbuilder GUI-based client/server tool division.

Groans

In response, a worried Hoffman shuffled his cabinet, as all good troubled premiers are expected to do, and has propelled Kertzman forward to win hearts and minds, while enough customers finish (worryingly long) evaluation cycles with System 11 to shore up the bottom line. "Our past messages were that we were the Enterprise Client/Server company, or that we represented the Architecture for Change," twinkles Kertzman. "These were certainly accurate and intellectually honest slogans, but had no emotional component. We needed a tagline with more punch." Read: a public presence in general with more punch, since, to slight groans from those of us who've heard computer companies in trouble say this stuff before, Sybase is seemingly chock-full of "best-kept secrets," like the fact it is the database behind some of the heavy-hitter Web sites from such as Fed Ex, Time Warner's Pathfinder, Lombard Securities, Carling/Bass Brewers, c/net and of course the ultra-Web-chic HotWired. This sotto voice success is thus the seed for the company's tilt at the emerging Internet/Intranet commercial market, and an opportunity to get back some momentum from pretenders to the number-two-behind-Oracle slot Informix: How many hot Web sites have been built with that? its officers sneer. "On the server with Sybase and on the client with Powersoft, both companies had a history of transforming their respective platforms into ones capable of supporting real business applications. The Internet is in a similar state to where those platforms were before we got to them, and we'll do the same there," Kertzman declares. "After us, the Internet's going to be a lot more than just an electronic billboard for a few marketing campaigns."

Winning smile

That remains to be seen, but unlike many of the underimpressed pundits in Waltham, we'll give Sybase the benefit of the doubt. Granted the company has stumbled with quality, performance, and product delivery this past couple of years, but what short memories we all have - time was when Hoffman's mob could do no wrong, it was seen as technology leader, and ironically the previous administration's Stu Schuster regularly won awards for his marketing genius. The database market seems to have some inner dynamic where one company at a time has to be seen as slipping while the others in the pack race past it, but it only takes a bad quarter, a mystifying acquisition or two and a stuttering product cycle for the dunce's cap to pass to one of the erstwhile leaders. If Informix slips up on its very ambitious

and oft-stated plan to meld its rdbms with the totally different Illustra database by calendar year end; if Ellison distracts Oracle from its ruthless Darwinian business practices with the Network Computer; or if Microsoft flubs BackOffice - then Sybase will regain its place and the affection of all those brokers. But that will also require solid, real, delivered engineering, not simply a winning smile and a slicker PR package. We're still worried that the Californians think the Bostonians around Kertzman have written the book on turnaround marketing. That's as far from proven as saying Sybase is dead in the water, as Oracle and Informix are telling anyone who picks up the phone. But marketing isn't enough - you also need good technology and aggressive selling - and let's hope those sides of the business aren't being neglected in favour of the Kertzman Fix.

Sybase still fixing the pipeline

Among other turnaround topics, Kertzman and co revealed that the Sybase field sales force reacted poorly to the first tactical realignment forced on them from the top this past January, but that the second phase, due next month, will involve a lot more managerial warmth and fuzziness. The object is to switch Sybase sales folks away from what Kertzman dubbed the "baseball bat" confrontational approach - attempting to knock out rival rdbms products feature by feature - to a vertical (industry) focused one depending more on the surrounding products, such as Sybase middleware (Enterprise Connect), data warehousing (Sybase IQ), Web stuff (web.sql, which helps Web page/HTML generation from relational data sources), or the Powerbuilder line (which includes the Watcom/SQL Anywhere low footprint database).

Sybase inks web deals - at last?

Sybase's two main Internet-related news announcements of last week hinged on deals with established Internet players Netscape Communication Corp and Verity Inc. Sybase will license, service and support Netscape servers for the Internet and will integrate them with its other Web offerings. But Informix was able to announce just as good a partnership with Netscape last July, if not better, since Netscape said it would use Informix software internally in place of Oracle to build its corporate Web server products, and one has to wonder why Sybase has left what seems such an obvious Internet-business deal so late in the day, comparatively. Not surprisingly Sybase gets mighty sniffy when this is pointed out, with Dennis McEvoy, president of the Enterprise Business Group, saying that the main difference between the two agreements is that "we have the better database." And as scooped by our sister publication *Client Server News* last week, the latter case involves Sybase integrating the Mountain View, California-based company's full text search engine into its evolving object-relational Adaptive Server product, announced at its user group in San Diego in May. Internet search engines are starting to be acknowledged as grown-up applications. The deal is seen as bringing the creation of personalised content based search facilities closer for users, with a full text search being able to be made across distributed Sybase databases from a single application, or across the Internet. Yet just as in the Netscape deal, Sybase found Informix calling cards all over the desk of its new partner, since Verity has already agreed to help its Illustra arm create a Verity-enabled DataBlade module for its Illustra object-based Server. This gave McEvoy a prompt to note aloud that all Oracle has in this area "are five people in some lab who think they're better at this than all of Verity."

Sybase loves its partners too?

Another part of its renewed assault on all our affections is for Sybase to become a better partner for ISVs and value added resellers, and it points to recent close buddiness with emerging SAP competitor Baan NV and client/server HR and financials mavens Peoplesoft as examples of better behaved channel discipline. Spearheading this is Leith Anderson, who was partner czar at Oracle 1984-90.

PEOPLESOFT STRIKES OUT FOR DISTRIBUTED APPS, ELECTRONIC TRADE...

As reported (UX No 593), Tuxedo's new master BEA Systems Inc has won Peoplesoft Inc, Pleasanton, California for its OLTP middleware. Peoplesoft will integrate and bundle Tuxedo with its full suite of applications for manufacturing, distribution, materials management, accounting and human resources. It'll use Tuxedo's RPC and publish/subscribe messaging technologies to provide application partitioning. Tuxedo will be offered with Peoplesoft 6 in September (UX No 587). Future releases will include partitioning of online, interactive applications said the company. Peoplesoft has also snared Cambridge Technology Group spin-off Business@Web and Spider Technologies Inc for their OpenScape (UX No 579) and NetDynamics (UX No 585) software. OpenScape integrates OLE, legacy, Internet/intranet, and TP monitors as well as environments such as SAP R/3, DCE and Corba. It includes a Kerberos security add-on. Palo Alto, California-based Spider's NetDynamics is a Java-based Web/database development system that automatically creates server-side Java code for application runtime. It allows users to access and update Java-based applications leveraging existing databases from Web pages. OpenSpace and NetDynamics tools will provide custom interfaces to Peoplesoft applications. Peoplesoft is also developing an Electronic Data Interchange architecture for business-to-business transactions partnering with a bunch of transaction software and services types including Frontec AMT Inc, Premenos Corp, Sterling Commerce and the EC Company. Sterling will design an EDI gateway for electronic commerce, Frontec will integrate its AMTrix Intelligent Messaging Engine with Peoplesoft applications, Premenos will provide Unix and AS/400 translation software and Templar authentication agent for EDI on the Internet and develop a bunch of EDI templates for integration with applications, while the EC company will deliver its electronic commerce network via an integrated link to Peoplesoft users. Peoplesoft is not putting a time frame on the work.

...ADDS NEW APPLICATIONS TO HR SOFTWARE

Meantime the company was showing off early versions of its Time and Labor and Pension Administration modules at the International Association for Human Resources Information Management Conference in Orlando, Florida, last week. Peoplesoft Time and Labor includes tables and rules, scheduling, reporting time, prior period adjustments, updates to paysheets, labor distribution and attendance reporting. It can record information to support time related needs such as compensation, cost accounting and organization administration, says the company. Its Peoplesoft Pension Administration is meant for US private-defined benefit plans including traditional, cash balance and contributory plans. It enables automation of pension admin functions such as data storage, benefit calculations and estimates, employee communications, flexible system design, retiree administration and reporting and data extraction. Currently in beta the applications are due for delivery in Peoplesoft 6 at the end of the year. Peoplesoft claims it has an installed base of over 1000 customers with 75 companies implementing its HRMS in three countries or more including BP, Hewlett-Packard and NCR Corp.

ASYMETRIX CLAIMS IT'S 5 TIMES FASTER THAN THE FASTEST JIT

Our new sister publication *Online Reporter* reports Asymetrix Corp as the latest entry in the wide-open Java tool field with a C++-performance-level interactive development environment it says will shake up the early frontrunners, Borland and Symantec. The SuperCede tool set, comprised of a virtual machine and an interactive development environment, is powered by the Flash Compiler, a device that Asymetrix claims runs Java code five times faster than the fastest JIT compiler and 50 times faster than interpreted Java code. Flash Compiler, the brainchild of engineers recruited from NT father Dave Cutler's team at DEC, was developed in a three-year "secret project" for C++ and can now compile both Java and C++. SuperCede product manager Peter Kellogg-Smith claims it's "not a JIT" compiler, and compiles all code at machine level where JITs use a hybrid approach. Asymetrix is poised at the confluence of the two Internet movements, the Microsoft and Sun camps. It's one of those rarest of birds, a profitable Paul Allen company, and after living up to its name for years with unfocused efforts that included developing screen savers, it was set on the Internet development tools path by a new management team headed by CEO Jim Billmaier, former VP and general manager of Sun's Network Products Division. The SuperCede virtual machine is in beta as a Netscape plug-in, with release July 22 as an OEM product, the only way the company figures it'll make money on it. The IDE will beta in July with release in October. Meanwhile, we couldn't help but notice how many Sun personnel - including CEO Scott McNealy - were clustering around the Asymetrix booth at JavaOne watching SuperCede demos. And we don't think it's just because they're all old friends.

LONG MARCH TO IBM CHRP-COMPLIANT POWERPC MOTHERBOARD DESIGN

IBM Corp has finally unveiled its design for a motherboard based upon the long-gestating PowerPC Platform specification, formerly the Common Hardware Reference Platform, which it will license to vendors building computers using PowerPC 603e, 604, 604e and future versions of the RISC which can boot AIX, Mac OS and Windows NT. The design, called Long Trail, is described as the flagship offering of Apple, IBM and Motorola's effort to enable the PowerPC marketplace and stipulates the use of VLSI Technology Inc logic chips and FirmWorks' Power firmware boot software. Too little too late is how observers described Long Trail, which comes more than a year after the PowerPC Platform spec finally united the original PowerPC Reference Platform (PReP) with Apple Macintosh. IBM says a new Mac OS technical support office it's opening in Tapei, Taiwan, is evidence that it's still serious about growing the Mac OS marketplace. It will open similar support centers in California and Europe.

CHECK POINT FLOATS TO FUND NORTH AMERICA GROWTH

Israeli Internet security provider Check Point Software Technologies Ltd has filed to go public on NASDAQ offering 3.4m shares for the US and 0.8m internationally at \$13. The firm's shareholders will retain approximately 86% of the company after the offering, Check Point's book value was \$7.8m on March 31. After losses of \$116,583 in 1993, its first year of operation, the company made a profit of \$4.8m on turnover of \$9.5m for the year ended December 31, 1995. Its most recent results show profits up 228.4% at \$2.8m on turnover up 195% at \$4.8m for the three months ended March 31, 1996. Total investment in the company was \$7.8m as of March 31, 1996, with working capital of \$7.2m and total assets of \$11.3m.

Lower Margins

Check Point expects its margins to decline this year due to the lower price of its latest security product, FireWall-First!, compared to its Internet gateway and enterprise security packages. It claims to have shipped 40% of all firewall kit in 1995. Royalties to third parties and increasing competition will also contribute to lower margins. The 49-person company plans to use proceeds from its IPO to develop its North American sales and marketing and spend more on R&D and its administrative infrastructure, further cutting into its operating margins. Check Point spent \$1.1 million last year on R&D and \$378,000 for the three months ended March 31. It plans to move to more platforms and is beta testing its FireWall-1 for Windows NT, the FireWall-1 Management Module for Windows 95 and SecuRemote client encryption software. It has almost completed porting FireWall-1 to Bay Networks routers. It plans to enhance its graphical user interface and support additional encryption standards. The firm is heavily dependent upon three resellers, which together accounted for 80% of its last years revenue, and says it will continue to rely on a narrow channel for its products. Its largest reseller, SunSoft Inc represented 64% of Check Point's revenues last year, Forval Creative Inc represented 13%; and Internet Security Corp accounted for 11%. SunSoft has the right to terminate its contract with Check Point with 12 months notice anytime after the end of next year. Check Point believes its relationship with SunSoft is stable, but SunSoft's parent, Sun Microsystems Inc, has developed a rival product, SunScreen, which may endanger the arrangement. In the network security arena, the company says its main competitors are America Online Inc subsidiary Advanced Network and Services, Border Network Technologies Inc, Harris Corporation, Morningstar, Raptor Systems Inc, Secure Computing Corp, Sun Microsystems and Trusted Information Systems Inc. Its enterprise network market rivals include Cisco Systems Inc, DEC, IBM Corp and Microsoft Corp. Another competitor on the horizon is AT&T Corp, which will soon launch a line of network security products. An additional threat comes from Compaq Computer Corp, which recently took a financial stake in Raptor and agreed to bundle Raptor's network security software with some of its line. Check Point could face problems in light of its OEM deal with RSA Data Security Inc, from which it licenses encryption technology. RSA is in litigation with Cylink Corp, which claims RSAs encryption technology infringes on its patents and therefore it has no right to sublicense. If Cylink wins, Check Point may be required to pay damages and royalties. Check Point established a US subsidiary in 1995. It's incorporated under the laws of Israel, where its R&D and main offices are located.

CENTERVIEW POSITIONS ITSELF AS INFORMIX DESKTOP PARTNER, TOUTS WEB-BASED DATABASE ACCESS PROTOCOL

Informix Software Inc's about to get itself a desktop partner *a la* Sybase Inc's Powersoft in the shape of Visual Basic house CenterView Software Inc, at least that's how CenterView would like to view the arrangement. Informix isn't arguing with that interpretation although it's not buying the San Francisco, California-based company. It will bundle CenterView's new Windows- and Web browser-to-relational database connectivity architecture called Data Neighborhood (DN) with its future Universal Server NT mold of Informix Dynamic Scalable Architecture database and the Illustra Technologies server later this year. In fact CenterView has grandiose plans to make the Neighborhood - a name borrowed from Windows 95's Network Neighborhood - ubiquitous by giving the thing away if it needs to, but Informix is its first significant endorsement. CenterView's aiming to sell its Data Director 2.0 VB application development environment (formerly Choreo) and Active SQL data access control for ActiveX plus future development tools on top of DN wherever it's in use. Other VB tools can plug into DN too, the idea being they'll all use the CenterView technology to deploy web and client/server applications over intranets and pay something along the way. CenterView's already planning a Unix version of the development tools for Informix and is talking to Sun about other Java and Unix work.

Database connectivity over HTTP

CenterView touts DN as a means for corporate intranet users to access all of their relational database resources from Visual Basic without developers or users having to become intimately familiar with every database they access. CenterView has created a Data Source Transfer Protocol (DSTP) to run over HTTP which it claims provides full support for executing SQL commands from a browser's Internet URL finder, retrieving database results into HTML and maintaining database connections. It supports ActiveX, Java and ODBC database connectivity and CenterView says it's currently hustling up the kind of industry support that'd make it a credible protocol to take to the World Wide Web Consortium.

Tax

The server piece, for which there will be an unspecified charge that CenterView describes as a tax on the driver vendors who will use it to connect their specialty data stores, runs NT versions of Microsoft Internet Information Server or Netscape Server. The DN client includes an ODBC driver which is installed dynamically whenever an ActiveX or Java application is accessed from Windows or browsers. Applications can be accessed through a URL address, the ODBC driver or a Data Director Object API. There's no development charge - deployment will cost between \$5 and \$40 depending on volume. CenterView is seeking bundling deals for DN and the other products. Its existing Choreo partner LogicWorks Inc has already committed to selling a new Web-enabled Choreo 2.0 release - now renamed Data Director - from July. Logicworks, claims to have 45% of the OLE data modeling market, has 60 sales people on it and aims to sell 22,000 licences over two years. CenterView has integrated TV Object's VBnet software for converting VB forms into HTML with Director, which it claims is effectively a VB development extension. What Director is claimed to do well is link groupware or shared client/server applications through its repository, a low-end Forte Software Inc if you like. CenterView will go the distributed object route - Network OLE and Corba - in future. The \$1,300 Data Director is a C++-based data access engine built around an object repository and data modeler. CenterView will recode the thing in Java later this year. Developers will use ActiveX to bring to Java applications the same kind of visualisation currently created with VB. The \$200 ActiveSQL, described as a data control language for ActiveX, allows developers to embed database access into any HTML page and display data in grids, lists or text fields or in any other data-bound ActiveX control. CenterView claims this avoids the need to maintain CGI and server-based templates. Data from multiple databases can be accessed in the same page. It requires an ActiveX plug-in for Navigator to run. Although CenterView will lever its installed base, just 2,000, as well as Logicworks' channels, its intent is to ride its VB credentials in the Microsoft space and wherever DN gets deployed. Its aim is to capture 60% of the browser market for the database access protocol. Its Unix obstacle isn't technology but the channels, controlled by the server vendors. CenterView will support the JDBC API by plugging DSTP into the placeholder JavaSoft has left in the API to allow third party protocol connections. Data Director is available next month; ActiveSQL ships in the third quarter; DN betas in July and will go gold in September.

Net-based

Other Web-based database access mechanisms, such as Oracle Corp's PowerBrowser technology which require an Oracle database, are proprietary, according to CenterView president and CEO Mark Douglas who should know about such things since he was formerly on Oracle's Internet team. He says Unix companies moving to net-based solutions simply don't understand database connectivity issues. CenterView plans to move from intranet products to next generation enterprise - inter-company - technologies using distributed object services to create and distribute programmable workgroup objects and what it calls line-of-business components. It claims its average sale is up to \$5,000-plus from \$500 in 1995; customers are buying ten times as many licences it claims. Two and a half year old CenterView will grow from 45 employees now to 80 by the end of the summer using part of an

additional \$3m or \$4m VC funding it will pick up later this month. It garnered \$1m of private financing and \$2.6m first round of venture money last year although it claims to have just as much debt as credit through attractive revolving bank loans. It hopes to go to the market in a year or so, or whenever an underwriter swallows its net gambit.

INFORMIX OFFERS NETSCAPE-ENABLED WORKGROUP PACKAGES FOR INTRANET APPS

CenterView is one of four partners Informix will trot out at its Workgroup Solutions unveiling today, Monday. The others are Spider Technologies Inc, Business@Web and Netscape. Like Sybase Inc - *see page 5* - Informix is trotting out Netscape-enabled versions of its database. The Online Workgroup Server includes version 7.12 of the Informix database plus ODBC tools and optional Netscape server technologies aimed at corporate intranet application development. It's \$300 per user. There's a \$500 workstation edition with Navigator technologies. The Workgroup packages are up on NT initially - where corporate developers are doing their workgroup development according to Informix - Unix versions follow within 90 days. Informix will use CenterView as its partner for customers that want to use Visual Basic to get data from Informix databases. CenterView also allows developers to drop ActiveX into Web pages access too. It's likely to bundle CenterView technologies in Online in future. It's using Spider's NetDynamics for Java database application development.

DG TAKES EARLY LEAD IN ccNUMA RACE

Data General Corp appears to have stolen something of a march on its cache coherent-Non Uniform Memory Architecture (cc-NUMA) rivals. First DG is to be Santa Cruz Operation Inc's first port of call for ccNUMA support in Gemini, the second quarter merged UnixWare/OpenServer Unix. Second, DG's won ICL Plc as the first OEM customer for its ccNUMA technology that links four-way Intel Corp Pentium Pro SHV boards in distributed shared memory configurations. DG's so pleased it's turned the technology out into a new business unit called NumaLine *a la* its Clarion RAID division. VP Phil Gerskovich is charged with winning other OEMs and creating distribution interest. ICL likes DG's ccNUMA approach because it says it's the simplest way of linking SHV boards. ICL claims the NUMA-based versions of its own systems that it will ship in the middle of next year will be the first UnixWare/ccNUMA systems on the market. Meantime DG's said to be working to a schedule that'll have its own DG-UX-based ccNUMA interconnect shipping before Sequent Computer Systems Inc delivers its NUMA-Q variant on December 3 (UX No 588). SCO says it isn't like Gemini won't support other ccNUMA flavours, it's just that others are more difficult to work in. In descending order of difficulty they are Dolphin Interconnect A/S' SCI, Tandem Computers Inc's ServerNet and Sequent NUMA-Q. SCO's aim is to make ccNUMA transparent to symmetric multiprocessing applications. To achieve it the operating system scheduler has to be re-fashioned to understand that where necessary processes must be re-run on local boards rather than remote nodes to avoid latencies. It must also be able to schedule processes that are dependent on each other to run close by, SCO advises. As far as its concerned clustering over LANs will be just as important. It's just a different type of interconnect to support. SCO believes NUMA will apply best to OLTP environments and that decision support and prediction-type work is better suited to SMP. SCO will announce support for clustering via Oracle Parallel server in September.

Bi-lateral

Data General Corp and ICL Plc have, as expected (UX No 593), joined SCO's 64-bit Unix development club. There's claimed to be one other partner still under wraps. We don't know how much any of them pay but SCO says it's according to what they contribute and what they want out. The relationships are with SCO only. No other firms will join SCO's 3DA Summit architecture axis with Hewlett-Packard Co. However both SCO and HP are likely to enter other bi-lateral relationships; that will be the path to get other technologies into 3DA where required. SCO also expects some NEC stuff to "make it over the wall" without a new agreement because of NEC's close ties to HP in Japan where it sells HP kit.

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Java byte-code is two or three times smaller than the RISC code generated by a C++ compiler, says **Sun Microelectronics** as it tries to convince manufacturers of embedded devices to build using its forthcoming picoJava chips.

Versant Object Technology Inc proves it's open season for the clutch of object-oriented pioneers born five or so years ago to go public: the Menlo Park, California company has filed with the US Securities & Exchange Commission for an initial public offering of 2.27m shares at a target price of about \$12 per share, and will use net proceeds for working capital. Cowen & Co, Soundview Financial Group and Volpe, Welty & Co are underwriters.

It's hard enough when the floodgates open each January, April, July and October and the majority of major US companies report quarterlies within a few days of each other - but pity the poor analyst in Japan, where virtually the entire country reports year-end figures over about 10 days in May: this is one of the single achievements of Japan's sokaiyya organised criminals, who routinely demand protection money on the threat that they will otherwise cause the company to lose face by turning its annual meeting into a chaotic shambles - this year, a record 1,757 major listed Japanese companies - 94.2% of the total - will neutralise the threat by holding their annual general meetings on June 27.

There are still very few 64 Megabit memory chips about but **Fujitsu Ltd** is already working three further generations ahead, and claims to be the first to have perfected the photomasking technology that will be required to fabricate to 0.12 micron design rules needed for 4G-bit memory chips. Current excimer laser exposure technology used for development of 256M-bit dynamics at 0.25 microns cannot produce satisfactory resolution for 1G-bit of higher capacities, Fujitsu says, so it is using an argon fluoride excimer laser for the photo exposure.

Sun Microsystems Inc has persuaded 24 Taiwanese concerns to form a Java Alliance, dedicated to winning broad acceptance and deployment of Java in Taiwan's computer industry. A Java Center in Taipei and a Java Lab in Hsinchu, northern Taiwan will open.

Netscape surveyed 20,000 of its corporate customers and discovered their plans for intranet/Internet server platforms are evenly split 50-50 between Unix and NT.

433MHz Alphas are supposed to ship late next month in what passes for volume at **DEC**. It's one of the ones that only runs NT. A 466MHz model will run both NT and Unix but will cost twice what the 433 costs which means that DEC Semi is gouging its own sister SBU. DEC is criticized for being focused now on producing cheaper parts rather than premium performance ones in a misbegotten effort to attract a top PC maker - anyone will do - whose willing to catch hell from Intel just to take on Alpha. One would think its only chance would be maintaining Alpha's performance lead lost last week to HP however fleetingly.

Unisys Corp subsidiary Usoft has acquired exclusive rights to Walnut Creek, California-based **Soda Creek Technologies'** document imaging system SCT Filer, for an undisclosed sum, renaming it USoft Image and taking a bunch of development and personnel to help integrate it with Unisys' suite of object software tools for iterative development process.

Electronic design automation outfit **Mentor Graphics Corp** has acquired **Meta System**, Saclay, France. It expects to take a one-time hit of \$10m in the second quarter for the deal. Mentor gets Meta's SimExpress hardware emulator for real time language.

Data General Corp's created a ThinLine business dedicated to selling what it calls 'thin servers,' from early next year. It's the brainchild and responsibility of SVP advanced development Tom West and has been a year in the making. We understand it's going to peddle Intel boxes dolled-up to serve all types of network devices, computers, clients and appliances with their Internet processing and other services. It's presumably being fitted with a thin Unix but will house Java work too. It's not just packaging, the company wants us all to understand.

Cambridge, Massachusetts-based **Pilot Software Inc** has launched the data mining component of its Decision Support Suite as Pilot Discovery Server (UX No 593). It's designed for sales and marketing executives and includes segmentation capabilities and algorithms for predictive modeling. It's up on Microsoft SQL Server and HP-UX with Oracle. Due later in the summer prices go from \$100,000.

Sources tell us second generation development house **Forte Software Inc** is readying a new piece of workflow middleware for use with its Forte toolset that it's got from DEC. The technology apparently comes out of a project in DEC's Palo Alto Labs called Object Flow.

Compagnie des Machines Bull SA has set up a US data warehouse business in Phoenix, Arizona, with sales and support in four other cities as well.

Mainframe development tool vendor **Softlab GmbH** has stopped reselling Platinum Technology Inc's CASE Paradigm Plus tool after less than glowing reports from customers. **DEC** which resells Paradigm Plus as Object Plus is also understood to have its finger on the trigger.

Faximum Software Inc, Vancouver, British Columbia, is offering a suite of Swift tools it claims can fax-enable most Unix-based web or email servers on the Internet. When added to a web or email server, Faximum says Swift allows users of that service to send and receive faxes by using their existing web browser or email. Swift supports personal telephone books, default parameters stored on a per-user basis (including signatures), broadcast lists, and arbitrary file attachments. A Swift beta is up on Solaris; production versions ship in 90 days. HP-UX, Linux, SunOS, SCO OpenServer and others ports are underway. Prices go from \$2,300; there's an introductory price of \$1,885. Customers using Faximum Client/Server software can get Swift for \$400 for limited period.

Themis Computer, Fremont, California OEM supplier of Sparc and PowerPC-based VME machines and fault tolerant systems has acquired **VI Computer Corp** of Sand Diego, which makes single-board PowerPC computers and custom boards on undisclosed terms. VI retains its identity within Themis.

Aside from Romeo and Juliet, what do you suppose they'd call them if little Maverick McNealy grows up and marries little Jennifer Gates? The word going round is rich, very rich.

Atria Software Inc, soon to be subsumed into the **Pure Atria Software Inc** (UX No 593) is to integrate its Enterprise Desktop Manager (EDM) Adapter for ClearCase developed by Novadigm Inc into the ClearCase software configuration management system. The pair will embark on a joint marketing effort. When the integration's complete next quarter ClearCase will send every build to EDM for deployment. EDM then manages the configurations through their distribution on the desktop, eliminating lost updates, mis-labeled releases and the like, according to the companies. The EDM Adapter for ClearCase will be out next quarter from Novadigm.

Mobius Management Systems Inc of New Rochelle, New York has released version 2.1 of its Infopac-RDS for Networks, which it says enables users to move IBM MVS report archives to Unix, Windows NT, Novell, AS/400 and OS/2 platforms. The company previously had a version that gave access to MVS documents from an icon on the desktop. With 2.1 users can use the distributed environments for low volumes of document, image or report viewing, and mainframes for high-volume data.

Sun Microsystems Computer Co is positioning its Netra i servers as one part of a trio of Java servers the company plans for next year, according to Dennis Tsu director of Internet product marketing. The Netra is what Sun calls an applet server, which will eventually be complemented by an applet catcher, which process applets and an applet server for thin clients, which will be a higher-performance box that the stripped down device will look to for its browser, OS and other system software.

Sun Microsystems Inc's getting its foot in the retail door; **ICL Plc's** Retail Systems division is going to sell Sun systems running its retail software in the US, focusing on retail data management and the forthcoming use of Internet-based electronic commerce.

Integrated Computer Solutions Inc, Cambridge, Massachusetts has got a beta of release 4.0 of its Builder Xecessory GUI builder up on Solaris, Sun OS, Irix, HP-UX, DEC Unix, AIX and SCO OpenServer. It will support **SunSoft Inc's** Java, so front-ends can be built for Java applications and applets. A pre-release version will be available at www.ics.com in August and will ship in September.

Analysts working on Merced say they're convinced Intel will follow its PA-RISC decoder with similar configurations for Mips and PowerPC. RIP RISC?

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RAID LEVELS TO DISAPPEAR AS ADVISORY BOARD SETS NEW SCHEME

The RAID Advisory Board (RAB) is set to replace the long-established set of seven RAID (Redundant Array of Inexpensive Disk) technology levels with a new classification scheme, emphasizing the practical functionality of systems rather than their underlying technology. The RAB membership, under chairman Joe Molina, will meet in Colorado Springs on July 17, and is expected to vote in the new six-level scheme, most of the details of which have already been hammered out over the past few months. RAID levels 0 to 6 will subsequently be referred to from a historical standpoint only, and RAID level conformance logos for the original levels will no longer be issued. The new levels, if accepted, will consist of three main categories and three sub-categories. At the low-end is Failure Resistent, described as "pure RAID"; if a disk drive fails the data is preserved and access to the data is maintained "in a timely way" so that an application will still run at acceptable performance levels. Failure Tolerant is the middle category, where all of the components within a system must be redundant. At the high-end, Disaster Tolerant describes a disk system which is zoned, allowing the other zones to take over seamlessly if one is destroyed. Each of the three categories can have a plus-mark appended to it to signify additional functionality. For example, Failure Tolerant Plus adds a requirement for the provision of an additional external power sources, and Disaster Tolerant+ specifies that each zone must be at least 10 kilometres apart. Although they seem like they've been around for ever, the original five RAID levels were first defined in 1988 by David Patterson, Garth Gibson and Randy Katz in the Berkeley paper A Case for Redundant Arrays of Inexpensive Disks. Levels 0 and 6 were added later. Over the years vendors weighed in with their own extensions, mainly to improve I/O performance and provide high-availability, and things became somewhat confused. Storage Computer, for instance, trademarked the name RAID 7, while EMC opted for RAID-S. Following the July meeting, the RAB will expand its performance and functionality testing to fit in with the new classification.

IBM THINKS AGAIN - WILL DO FULL VISUALAGE C++ FOR UNIX

IBM has changed its mind over Unix versions of its VisualAge C++ development toolset, and says it will after all be porting its full development environment over to AIX, Solaris, and maybe HP-UX if the demand is there. IBM already has the compilers across all of its own platforms as well as Solaris and NT. Now the complete environment, including the Visual Builder interface and Open Class Libraries, will be ported, timed to come out when VisualAge for C++ Version 4 comes out in early beta by year end on IBM proprietary platforms and Microsoft Windows 95 and NT. "We had planned to build a target-only version for Unix", said Allan Friedman, manager of object oriented strategy at IBM's Toronto Labs, "but the huge growth in Java and the Internet has changed things". IBM is already porting the tagest stack class libraries over to HP/UX, and may follow up with the complete toolset. It has already begun showing demos of its VisualAge for Java, due out during the second half of this year, and that's also likely to become available on AIX and Solaris.

MASPAR BECOMES NEOVISTA; INTRODUCES DATA MINING TOOLS

One-time massively parallel hotbox outfit MasPar Computer Corp has emerged from its latest metamorphosis as a data mining software company complete with \$6m in equity financing, a new name - NeoVista Solutions Inc - and a new bunch of marketing and distribution deals with the likes of Perot Systems, Hewlett-Packard Co and Informix Software Inc. Junking the old Maspar nomenclature and next generation MP-3 machine as well as over fifty per cent of its existing workforce - the new company is down to 40 employees- NeoVista's added a bunch of algorithms and interface standards to its old Data Parallel Decision Inc Decision DB relational database software (UX No 517) and repackaged the lot as a data mining solution for detailed, low-level analysis of large scale warehouse data. It claims Data Parallel - Maspar held a 27% stake in the company - has dissolved and the Decision Series represents a 'subset' of the original software. NeoVista says it will continue to provide support for its existing 250 customer base and deliver technology upgrades for its existing Maspar MP1 and MP2 machines. The company sucked up nearly \$60m in equity financing in its six-year existence. It claims its reached agreement with its remaining creditors. NeoVista expects the service and upgrades business for its installed base to continue to bring in around \$10m in revenue. The new company includes Maspar alumini Ken Simonds who's chairman of the Board and president and CEO John Harte. Long suffering Maspar-backers Kleiner, Perkins Caufield and Byers, and Perot Systems Inc get a seat on the board, with the rest of the cash coming from Dallas, Texas-based Sevin Rosen Funds and Geneva, Switzerland-based group headed by Index Securities SA. (continued on p5)

SUN BOLSTERS OPENSTEP; BUYS OBJECT HOUSE LIGHTHOUSE

Sun Microsystems Inc is still making in-filling acquisitions, and the latest is San Mateo, California-based Lighthouse Design Ltd, which developed its ObjectPlan object-oriented analysis and design system for NeXT Inc's NeXTstep and OpenStep (UX No 552). Terms of the deal were not disclosed, but Sun will take a fourth quarter charge "not expected to exceed \$0.10 per share" to write off in-process research and development at the acquisition. Lighthouse Design will operate as a unit with its present chief executive Jonathan Schwartz as its general manager. He reports to Sun's chief technology officer Eric Schmidt. Sun says that the acquisition fortifies its OpenStep on Solaris and enhances its commitment to its NEO object-oriented network environment. Founded in 1989, Lighthouse ships off-the-shelf spreadsheets, presentation tools and object-oriented framework components, API's and source code libraries including a Backpage framework for building web-based applications, Quantrix analytical and graphics framework and ObjectPlan its analysis and design tool for object applications. The products are aimed at corporate developers deploying custom solutions for the web, Windows NT and SunSoft's Solaris. Quite how this will play with Sun's declared aim of making Java its "primary target" for internet-client/server solutions is not clear. Sun has said all other mechanisms should be considered "transitional" and that users of Sun object solutions should be steered towards Java, not OpenStep. Most of the NEO development tools are now supposed to be housed alongside Java and C++ in the recently introduced Internet Workshop suite (UX No 583), rather than as standalone environments.

ICL GETS ROSS HYPERSPARC OFF THE GROUND

ICL Plc is finally expected to get its long gestating Ross Technology 142MHz bin-end HyperSparc-based Js SuperServers off the ground in the next two weeks (UX No 558, 582), replacing its existing 12 model one-to-four 50MHz, 60MHz or 75MHz SuperSparcs Ks SuperServers. The new machines come as three versions, the single processor J820s, the dual J822s and the quad J824s. Each comes with up to 1Mb of cache and 1Gb of memory. Entry level prices go from £23,000. It'll offer 200MHz HyperSparc units to replace the existing one or two 50MHz, 60MHz or 75MHz H-type SuperSparc II-based TeamServers at the end of the year. Now that its abandoned its UnixWare-on-Sparc implementation it will rev its own Unix SVR4.2 MP-based NXV7 operating system in the third quarter, to include software hot pull and mirrored system disk support and support for Computer Associates Inc's CA-UniCenter. It'll introduce a NXV8 version in the second quarter of next year with support for large file systems.

ORACLE TAPS OMNIMEDIA FOR MULTIMEDIA TOOL KIT

Omnimedia Plc, Kingston-upon-Thames, Surrey is best known for its CD-ROM titles but the company has developed a whole suite of proprietary tools and compression algorithms, and it is some of these that have caught the eye of Oracle Corp. Oracle has signed Omnimedia to develop its interactive MPEG authoring tools for Oracle's Video Server environment in the hope that it will enable corporate users of the Video Server to play interactive MPEG software applications over the Internet and corporate Intranets more effectively. Omnimedia says its tool kit produces fully interactive multimedia content and that in combination with the Video Server enables distribution of broadcast-quality interactive content. Based on OmniMedia's existing MPEG tools, the new kit, called Rainbow, will enable users to produce on-line as well as CD-ROM content without any additional work. Users will also be able to add dynamic on-line capabilities. Omnimedia expects to demonstrate a prototype of Rainbow at Comdex/Fall in Las Vegas in November and aims to launch it at the National Association of Broadcasters show in Las Vegas in April 1997. The tool kit will be sold both by Omnimedia and Oracle re-sellers. The news was good for a sevenpenny jump to 70p on the Alternative Investment Market, but that was before the unexpectedly strong US jobs data came out and caused markets east of New York to swoon.

- **Oracle Corp** has unveiled its Pegasus intranet answer to Notes and Exchange as InterOffice last week. InterOffice includes tools for searching by theme, linking database and Web files, replication and security. It includes multimedia messaging, automatic workflow routing and organising corporate documents into Web-based files searchable thematically as well as by word. It is due out next month at \$95 per user.

- **BMC Software Inc** and **Unison Software Inc** have inked a joint development and integration agreement for their backup and recovery products. Unison's RoadRunner product will support BMC's Patrol Recovery Manager and offer a single point of control across a distributed network. Both databases and file systems will be able to be backed up from a central point with the combined offering. Due in the second half. No pricing.

- Santa Monica, California-based **Isocor Inc** has signed a couple of alliances in the last week. The first will see it link up with World Wide Web software developer Process Software Corp. Isocor plans to include the Process Purveyor WebServer with N-Plex, its new backbone software for intranet-Internet applications. Isocor has also allied itself with Oracle Corp to announce a range of X.400 communications systems for Oracle Office and the forthcoming InterOffice messaging server. Oracle's X.400 Gateway will feature Isocor's Isoplex X.400 message transfer agent technology, and is due to ship this month.

- Manufacturing software shop **Avalon Software Inc**, Tucson, Arizona is building what it claims is the first integrated business and compliance solution for the medical device manufacturing industry. It's signing a bunch of software houses for the effort including San Jose, California-based **Consensus Software Corp** for its Consensus Open rapid product change environment.

- **RadMedia Inc** has released version 3.0 of ScreenPlay video and audio recording and publishing software for Unix. Its compatible with Microsoft Corp's AVI Audio Video Interleaved standard so content can be delivered to any AVI client over the Web on Unix, Windows or Macintosh platforms. ScreenPlay 3.0 24-bit colour playback and recording and 50% better compression than the previous version, according to the company. It costs \$1,900 and is up on Solaris, HP-UX, Silicon Graphics and AIX and the viewers cost \$30.

- **Insci Corp** and **Datawatch Corp** are working to integrate the latter's Monarch for Windows report mining and analysis software into Insci's Coinserv Unix-based document management systems. Coinserv is used to store, index and retrieve large amounts of page-formatted data and the addition of Monarch means data can be filtered, sorted and charted to build data models that are then refreshed by new data from Coinserv.

- "They probably said the same thing about MS-DOS" was Bud Tribble's reaction to IDC Germany's assertion that Java was nothing more than a "lucky break" and a "mistake" by Sun.

EDIFY AND INPOWER TEAM FOR HR ONLINE

Privately owned human resources management systems outfit Inpower Inc has inked a development and reseller agreement with Santa Clara, California-based Edify Corp to enable intranet-enabled human resource modules to access InPower's Human Resource application server. The InPower HR series is based on a forward engineering solution using repository based information modules for both human resources and payroll enabling design, implementation and evaluation of human resource policies to business strategies. InPower features include an object oriented toolset, event driven workflow, optional models for business process reengineering and security management. Edify's Electronic Workforce 4.0 provides self-service human resource applications for the development and deployment of interactive online HR services. Unisys Corp is already using Edify's Electronic Workforce 4.0 to develop online interactive service applications that allow employees access to their records using PeopleSoft's HRMS system. Under the terms of the agreement the new self-service application will be delivered as a set of HTML pages to end user desktops equipped with standard Web browsers. The user accesses the application by providing an ID or PIN to enter an employee site. The Employee self service application will be available in December. No prices.

500 PINK SLIPS AT DEC'S PC BUSINESS

Digital Equipment Corp intends to lay off 500 more people in the Personal Computer Business Unit, according to several company employees and two analysts. DEC has 60,000 employees now, down from 120,000 at peak, and about 6,000 are in the personal computer sector, where 500 have been already made redundant since January. That may be just the tip of the iceberg however. According to a report in our sister publication ClieNT Server News, Maynard's also making noises about letting another 10,000 go - others say it could be double that number - with cuts in direct sales, multivendor support and engineering thought most likely. Sources say there may also be another reorganisation in the works and there are tales circulating about senior executive staff being under signed internal NDAs about such a thing. It seems that a lot of stuff is getting shifted over to the Systems Business Unit these days anyway and the vaunted Alpha RISC-dedicated SBU, we hear, may be allowed to sell Intel Corp boxes under certain circumstances. Brokerage house Goldman Sachs is even saying that if DEC lost the PCBU altogether it would be rewarded on Wall Street. The unit is reported to have lost around \$60m in DEC's third fiscal quarter to March 30. The climate of unease is perhaps most acute in Europe where DEC Germany is apparently afraid that there won't be any DEC Germany after all the pink paper stops flying. DEC watchers believe the September quarter, the company's fiscal first, will sour on it and it'll turn in losses.

AT&T OFFLOADS PARADYNE EMBARRASSMENT FOR \$175m

AT&T Corp, which decided to sell its AT&T Paradyne unit in Largo rather than include it with the Lucent Technologies Inc manufacturing spin-out (UX No 557), now has definitive agreement - via Lucent, into whose charge Paradyne temporarily passed - to sell the data communications systems and equipment business to Texas Pacific Group Inc for an embarrassingly low \$175m. The price is embarrassing because highlights the Floridian as yet another in a long string of failed AT&T acquisitions - the price paid to acquire the business back in 1989 was \$250m. Paradyne now has annual sales of \$275m, and the old business and the one being sold are not strictly comparable, because Lucent is hanging on to the Paradyne data equipment service business, but that does only \$92m a year. Texas Pacific Group, based in San Francisco and Fort Worth, Texas, manages TPG Partners LP, a private Fort Worth investment partnership that has stakes in the airline, health care, food and drink, telephone and energy industries. The sale is expected to be completed in two to six weeks.

IBM USES CANON, FUJI XEROX ENGINES TO TAKE ON LEXMARK

IBM Corp this week makes good on its threat to re-enter the mass printer market in competition with its offspring Lexmark International Inc (UX No 582). The new IBM Network Printer family comprises three black and white printers, running at 24 pages, 17 pages and 12 pages a minute and one colour printer. The print engines are coming from Canon Inc and Fuji Xerox Ltd. IBM's "unique selling proposition" is that the same printer fits all: you don't need different versions for the Macintosh and for Windows, and they are also attachable to IBM's mainframes. They will be sold through a network of resellers including the IBM Personal Computer Co and the IBM Printing Systems Co's distributors. IBM said prices would be "competitive". Unlike IBM, Hewlett and Apple Computer Inc, Lexmark makes its own print engines: Lexmark says IBM offered to buy the engines for its new printers from Lexmark, but the latter declined, saying that the forecast IBM gave it would keep its factory busy only a few weeks out of the year."

ARBOR'S ESSBASE WAREHOUSE FOR PARALLEL FUJITSU SPARC BOX

Fujitsu Ltd is making its pitch for the data warehousing market with a new Sparc-based parallel database processor, Sunnyvale-based Arbor Software Inc's Essbase multi-dimensional database analytical processing technology and its own SymfoWare software suite. Fujitsu chose Arbor as its partner because of its "open" stance to integration with other technologies and its key position as the leader in the on-line analytical processing field, according to Fujitsu director Tatsuzumi Furukawa. SymfoWare integrates relational and object-oriented models of Fujitsu's relational RDBII and object-oriented ODBII. It handles various data types, including multimedia data such as image and audio. Fujitsu has developed a SymfoWare Navigator to link the relational capabilities with the multidimensional Essbase; use of the tool will mean that users will not have to write applications to take data from relational databases to create multi-dimensional views. The views can be explored using Excel. The TX5000 may sound familiar, but that is only because it's conceptually similar to Fujitsu's new AP3000 parallel scientific Sparc-based machine (UX No 583); the TX5000 is positioned as a parallel database server for data warehousing, supporting Terabyte-class storage with retrieval throughput of 100Gb per hour; it also sounds a bit like ICL Plc's parallel Goldrush machine, but there is no indication that it is. Fujitsu says it has a retrieval performance 140 times that of existing mainframes, through use of a full-phase parallel algorithm. The architecture supports a variable number of processor modules, each of which contains four Sparcs with associated memory. It is scalable from the Model 20 with two processor modules to the Model 80 with eight modules. Fujitsu is also working on an UltraSparc-based model. The TX5000 will not be available until next March; pricing for the base model is \$1m. Fujitsu forecasts sales of 300 machines in the next three years, with 1,200 copies of its SymfoWare Navigator and 1,000 copies of Arbor's Essbase.

SUN FIGHTS SHY OF SWALLOWING NUMA WHOLE

Despite having its own serial link implementation S3.MP (UX No 552) and the patents from failed massively parallel house Kendall Square Research (UX No 583, 593) in hand it seems Sun Microsystems Inc is shying away from swallowing a whole cache-coherent Non-Uniform Memory Architecture (cc-NUMA) *a la* Data General Corp and Sequent Computer Systems in favour of what it's calling an "incremental adoption." The critical element for a NUMA-type implementation, according to Jeff Rulifson, director of technology development at the company's SMCC hardware arm, are the RAS - reliability, availability, servicability - characteristics of the operating system and the tuning of the architecture for efficiency. "There's a difference between making it [NUMA] work and demonstrating it can't fail," he said. Instead Rulifson expects the technology to trickle into future versions of Solaris over time, although the strategy isn't set in stone. "We can't yank out the kernel and guarantee backwards compatibility," he admitted, and "having been through the experience once before, we have no desire for a repeat," referring to the Motorola x86 to Sparc transplant in 1988. Sun is also concerned about the scalability of its serial link and the way the interconnect controller, S-Connect, would perform. Sun's added what its tagged as a simple COMA implementation to its original cc-NUMA architecture including typical COMA-type dynamic data migration and replication, but with reduced hardware and protocol complexity. The key to the technology, according to Sun, is the use of the Memory Management Unit (MMU) on a commodity processor to build the COMA cache or 'attraction memory'. A compute node of a simple COMA machine uses local memory as a cache of a greater shared virtual memory - a cache in which space is allocated and reclaimed at a page granularity, but which is fully associative. Each memory page is subdivided and a state is attributed to it. A hardware protocol controller controls processor accesses to these subdivisions with responsibility for maintaining fine grain coherence. The operating system, through interaction with the MMU, becomes responsible for coordinating the allocation and replacement of data space in the attraction memory. The migration of complexity from hardware to software, claim Sun, simplifies the memory system and protocol requirements and enables more flexible cache management strategies. Quite where the Kendall Square stuff plays, if at all, remains unclear. Sun has a bunch of other potential clustering mechanisms in hand, including Dolphin Interconnect A/S Scalable Coherent Interface-based interconnect (SCI) for clustering its commercial servers (UX No 573), Fibre Channel and ATM GlobalWorks parallel software Thinking Machines Corp has fitted to its Ultra Sparc servers.

OEC BREAKS ENTERA INTO POWERPACK MODULES FOR MAMBO WEB DEVELOPMENT; REWORKS RPC SUPPORT

Open Environment Corp (OEC), the Boston, Massachusetts-based three-tier application company currently being swallowed by Borland International Inc is breaking its Entera second generation development environment into discrete PowerPack modules it says will allow developers to create specific types of application servers on top of a new Web-enabled toolset it's offering called Mambo. OEC is using SoftQuad International Inc's HotMetal Pro 2.0 world wide web authoring tool in Mambo for creating partitioned applications that are accessed from web browsers. OEC has stripped the relational connectivity technologies from Entera and is bundling them in the initial version of Mambo for creating web-enabled relational database applications. The \$2,500 Mambo suite is said to run on all web servers and four PowerPack modules will be available late summer for building transactional servers, adding mainframe application integration, management facilities and others functions on top of it. There's a run-time charge of \$500 for each additional database system supported. Mambo, which is available now, generates C, C++ and HTML code, common gateway interface executables and HTML template forms that act as application clients that read and write to application databases. OEC has no plans to offer the Verity Inc Topic Search text retrieval engine SoftQuad will include in a new version of HotMetal Pro later this year and says Mambo is aimed at MIS shops rather than webmasters. Mambo can also be used to web-enable applications being developed by existing Entera customers. OEC claims to be in talks with Open Market Inc and Netscape Communications Corp about creating web server packages that include Mambo and the PowerPacks. Meantime OEC is re-working Entera's connectivity options, abandoning its own proprietary remote procedure call as well as the requirement to run the whole of the Open Software Foundation Distributed Computing Environment if DCE RPC is used, in favour of a stripped-out native DCE RPC that vendors such as DEC, HP and IBM are embedding in their operating systems at no additional charge. OEC says it's also interoperable with Microsoft Corp's DCE RPC variant. Sun is supporting the RPC as a federated service option. OEC says the native RPC will allow customers to create applications using Entera without having to licence the whole DCE kit and kaboodle. It'll continue to support existing users of its own RPC where required. In addition OEC says it's now got a prototype version of Entera integrated with its future parent's Latte Java development environment. The plan is to offer a complete enterprise-class Java development environment with Entera at the back-end and Latte on the front. It may offer a similar combination of Entera with Borland's Delphi and other C++ technologies though that's not yet been decided, it says. Borland's \$64m acquisition of OEC through a share swap is due to complete in early August.

SUN PONDERES ULTRAJAVA STRATEGY

How will Sun Microsystems Computer Company position its forthcoming UltraJava-based machines? Ever since the processors were announced it was obvious that there was potential overlap with the Sparc/Solaris workstations. It appears that the company is still uncomfortable with the question. Bud Tribble, now computer company VP and chief architect of the Java Systems says that "the home consumer market will be the main driving force for these multimedia, UltraJava-based PC". As for the core technical workstation market, he contends that the traditional suppliers of Sparc applications are not particularly interested in porting their existing applications over to the new language. But when it comes to new applications, he acknowledges that "our newer applications that we are writing to run on top of Solaris are written completely in Java... we think we have what is a strong transition story... we don't see Solaris going away". Which makes Solaris sound like a textbook example of a legacy system - despite the fact that the UltraJava chips aren't expected until late '97. To an extent he agrees: "It's hard for me to talk about Windows as a legacy system - which I do - and not talk about Solaris as a legacy system too", adding that this doesn't mean he thinks either system will disappear soon. What is unknown at the moment is whether high-Sparc/Solaris machines will be able to run Java applications faster than the UltraJava based boxes. The new Just In Time (JIT) compilers appear for the Sparc machines seem to be able to deliver around twice the performance of conventional Java execution, he says. This makes the speed question too close to call: "so it may be that these Java chips that can directly execute Java code will primarily end up saving you RAM, rather than running faster."

POISON PILLS DRIVE UP IT TAKEOVER PRICES

From our sister publication Computer Business Review

'Poison pills, 'exploding pills', and 'flip ins'. These words first joined the colourful business lexicon of Wall Street in the mid '80s. Aggressive, corporate adventurism meant that mergers and acquisition (M&A) activity was at an all time high, and companies fearing a hostile takeover first began to ask their lawyers how they might legally defend their independence. After a year of unprecedented M&A activity in the IT sector, poison pills are just as likely to be discussed in Silicon Valley as in Wall Street. Dell, Wonderware and FTP have just amended their constitutions to include a poison pill. Many software companies who once thought that they were immune from hostile takeovers because their staff might leave under new management, are also planning to put a defence in place. Lotus Development Corp, taken over last year by IBM, attempted to use a poison pill as part of its initial defence.

Machiavellian mechanism

But how do they work? And do they work? A poison pill is designed to damage any unwelcome bidder interested in 'swallowing' the target company. The concept was created in the court rooms of Delaware, at the heartland of North American corporate judiciary - and has been the subject of continued refinement for more than a decade. By 1990, around 40% of companies in North America had approved some variant in their constitutions. In its simplest form, a poison pill authorises the automatic issue of cheap shares to existing shareholders should an unwelcome shareholder build a stake up to a certain percentage of the target's issued equity - usually somewhere between 10% and 20%. Critically, it is only the existing shareholders who can buy the new equity - which is usually priced at half the current market price per share. This simple, Machiavellian mechanism has the potential to deliver a devastating blow to the predator company. Not only does the unwelcome bidder see its percentage stake in the target suddenly reduced, but the absolute value of the investment collapses as under-priced stock floods the market. It is this modern form of poison pill - colloquially termed the 'flip-in' - which has become the first line of defence in any bid. A darker, rarer version is the 'exploding poison pill'. This too triggers an issue of rights to existing shareholders. But the rights are priced so high that they would never be exercised. An additional clause in the rights document states that should the bid be successful, the shareholder can force the bidder to repurchase the rights at a substantial premium.

Improved Flavour

The flip-in remains the vanilla form, however, and in the last few months, several North American IT companies have made sure that poison pills bolster their constitutional defenses. In February, when its share price fell to an all time low of \$16, Wonderware, a Windows-based industrial automation software supplier, set up a poison pill that would give shareholders the right to buy additional shares at half the market price if a bidder purchased 15% or more of the company's stock. Lee Kim, Wonderware's chief financial officer, believed that the pill would double the acquisition cost of an unwanted bid. FTP Software, a communications software company, set up a pill in December which it described as a measure to "protect shareholders from attempts to acquire FTP on terms, or by using tactics, that could deny stockholders the opportunity to realise the full value of their investment." In the same month Dell, the PC manufacturer, set up a flip-in at the 15% level. The poison pill is uniquely North American. In the UK, any attempt to use a flip-in runs counter to the principle that all shareholders must be treated equally. Indeed, the chance of using a poison pill defence in Europe is receding fast following the recent publication of the EC's Proposal for a 13th European Parliament and Council Directive on Company Law concerning Takeover Bids. The proposal reiterates the principle of treating all shareholders equally - making flip-ins impossible - and sets out to reduce the possibility of poison pill defenses. Corporate markets and corporate control, it argues, should remain unfettered by such artificial devices. There are, of course, other defenses, such as ensuring that the company remains permanently in private hands. Poison pills are, in a way, a paradox: designed never to be used, yet they must work. The deterrent effect is key. Poison pills serve to extend the time available to the target company either to muster a defence or attract a more acceptable rival bid. At the very least, they force the bidder to enter negotiations with the target company's board. In nearly all cases, the bidder will instigate court proceedings to have the pill legally dismantled and invite the target board to the negotiating table, on the same day. At the heart of the poison pill debate lies the question of conflict between the interests of shareholders - who are offered the opportunity to realise their investment when a bid is made - and the interests of management - who are usually faced with redundancy. What role do poison pills play in this conflict other than to serve management's interests? There are two answers to

the question, neither of which are wholly satisfactory. The first comes from recent research on the effects of poison pills in M&A activity and its outcome undertaken by the National Bureau of Economic Research, (NBER) based in Cambridge Massachusetts. In the opinion of the NBER, poison pills could not explain the decline in levels of corporate activity between the late '80s and the early '90s. It was other, structural and economic effects which were to blame, said the NBER. In other words, poison pills do not affect the number of takeovers. The second factor is that the legislation underpinning poison pills, while being complex and mature, is only partial. It is perfectly legal for a board to create a poison pill and often without shareholder approval - but this does not mean that the courts are obliged to uphold them. That will only follow if the court - assuming a bidder has sued to remove the pill - believes that the pill exists more to serve the interests of the board than the shareholders. Pills very rarely survive the courts. As a result, proponents of poison pills argue that they do not deter M&A activity or dilute shareholder value. On the contrary, by giving a defending management additional time, bidders are usually forced to bid higher in a quid pro quo trade off for the redemption of the poison pill. Shareholders are, maybe, the real winners.

MICROSOFT POSITIONS CIFS AS WEBNFS RIVAL

Microsoft Corp has mounted a hostile response to Sun Microsystems Inc's cute WebNFS (UX No 589), a browser-based implementation of the network file system (NFS). Redmond's Common Internet File System (CIFS) is an enhanced version of the Server Message Block distributed file sharing system found in Windows, Windows95, WindowsNT and OS/2. It enables PCs to access network information over TCP/IP nets. WebNFS and CIFS allow users to share files directly on the Internet without requiring users to download or copy them to a local machine first. Microsoft has taken the spec off for consideration as an Internet standard. It rustled up Data General Corp, DEC, Intel Corp and Network Appliance Inc to endorse the protocol. Mountain View, California-based Network Appliance says it will launch a data access technology this fall to link WebNFS and CIFS and will integrate it into its NetApp file servers as well as selling it to third parties.

DATA GENERAL FORMS NUMA, INTERNET COMPUTER UNITS

Data General Corp has been stuck in the rut of just over \$1,000m in annual sales, and wild oscillation between small losses and small profits for most of the decade now, but the company is determined to break out of the cycle of deprivation, and use the model of its CLARION storage array success to exploit other latent skills within the company. The ingenious model is to buy commodity products in OEM, add value to them, and sell them on again, also on the OEM market. Late last week, it announced formation of two more business units, THiiNLINE Internet Appliances to push the Data General concept of the Internet access terminal from early next year, and the absurdly-named NUMALiiNE Business Unit to push its Non-Uniform Memory Access technology for multiprocessor servers (UX No 594). On the Internet front, the company also plans a slimmed-down line of servers that will act as a single high-speed Internet connection point for its smaller, low-cost iAPX-86 appliances. The Data General servers would be priced from \$1,000 to \$5,000, well below the \$7,000 to \$8,000 cost of the lowest-priced in its current line of general-purpose AViiON servers. The plan is to offer a slimmed-down server with enough intelligence and data storage to support a string of lower-cost appliances. The NUMALiiNE Business Unit will be responsible for forging OEM relationships and a worldwide distribution network for the NUMA Non-Uniform Memory Access server technology and systems. Data General's implementation links multiple Intel Corp Standard High Volume Pentium Pro boards.

NEOVISTA DECISION SERIES

(continued from page 1)

NeoVista's Decision Series comes as a suite of data mining tools for generating prediction models, explaining associations in data and generating optimal business patterns. The company is pitching the suite at existing data warehouses which are looking to extend traditional query-based analysis tools ~~with predictive and proactive analysis capabilities. NeoVista admits the metamorphosis has taken longer than it would have liked - its been testing its software since September 1995 - but claims it "wanted to get all its ducks in a row" before it came to market.~~ The Decision Series suite connect to query-based analysis tools including MicroStrategy's DSS Series, Business Objects Inc's BusinessObjects and Brio's BrioQuery and include; DecisionAccess, a framework for enabling automated translation between relational databases and discovery tools, encoding of database types into knowledge discovery types and sampling or conditioning of data values; DecisionNet, a neural network technology for predicting business scenarios based on previous accounts; DecisionCL a clustering algorithm for finding groups of related items; DecisionGA a set of algorithms for creating potential cases based on loosely constructed models and DecisionAR, an association rule system for determining the likelihood of events occurring together at an instance or logical progression in time. The company's won Perot Systems with a non-exclusive distribution deal for its Decision Series, joined HP's data warehouse project OpenWarehouse and signed a joint sales and marketing agreement with Informix's OnLine Dynamic Server parallel database. First versions of the suite ship in the third quarter on HP's HP9000 platform with DEC and Sun planned thereafter. Pricing goes from \$45,000 to \$500,000 depending on configuration and number of tools purchased. Its already signed up Wal-Mart Stores and the Army Air Force Exchange for the stuff, it claims.

PRISM UPDATES WAREHOUSE AND DIRECTORY MANAGER

It's got a whole host of technologies waiting in the wings for later in the year (UX No 588) but in the meantime Sunnyvale, California-based Prism Solutions Inc has delivered a point upgrade to its Prism Warehouse Manager meta data manager and Prism Directory Manager extending the list of platform support and delivering a new metadata exchange. Prism Warehouse Manager extracts and "scrubs" data from legacy applications into target databases and Version 4.4 comes with new automatic source-to-target field mapping for same name source and target environments, data type support for zoned decimal data types to support warehouse field definitions and user exit routines including statistics to track the movement of data from source to target environments. Additional platform support includes Windows 95 and NT; DB2 Parallel Edition as a target parallel database option, Informix and Oracle as both source and target databases on Digital Equipment Corp's AlphaServer's, Unisys' Opus massively parallel system and SMP servers. It ships in August and prices go from \$130,000. Meantime its Prism Directory Manager 2.5 includes a meta data exchange capability called MetaLink which establishes a common layer of meta data between Prism's Directory Manager and data warehouse and analysis tools. 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. MetaLink provides an SQL interface for accessing meta data in the information directory. It works with Brio Technology's BrioQuery, Business Objects BusinessObjects, Cognos Inc's Impromptu, Information Advantage's DecisionSuite and MicroStrategy's DSS Agent. It ships at the end of the month and prices go from \$40,000.

TIRED OF WAITING, DIVISION SELLS PFX TO HEWLETT

Division Group Plc has finally sold its PFX high-end graphics technologies to its partner in the venture, Hewlett-Packard Co for \$6m less expenses, but plus unspecified royalties. Bristol, UK-based Division's marketing director Pierre duPont said in May it was looking to sell the technology as it "couldn't depend on HP to do their bit" and added somewhat audaciously that it "would give HP a future that they need." Hewlett considers itself king of the graphics system castle at the moment with the recent announcement of the first PA-8000 RISC-based graphics workstations (UX No 593). Division and Hewlett have worked for two years with a team at the University of North Carolina at Chapel Hill on the PFX hardware, based on PixelFlow technology that Division licensed from the University. The 25 people at Chapel Hill will join Hewlett's workstations group. PFX uses a so-called massively-parallel-processor-per-pixel approach to achieve super-fast three-dimensional graphics. Division also resold Hewlett workstations as part of the deal - greatly annoying its other partner, Silicon Graphics Inc. That deal will continue. HP said the first products using PixelFlow will arrive next year and Division will concentrate on its DVS and dVise virtual reality run-time and authoring software.

SEAGATE COMES TO LONDON TO PAY \$84m FOR HOLISTIC

Seagate Technology Inc has bought Holistic Systems Ltd of London for \$84m cash. Holistic will join Seagate Software's Information Management Group, which markets the Crystal line of leading query and reporting products, including Crystal Reports and Crystal Info. Holistic Systems' principal ~~global and US offices will remain in London and Edison, New Jersey~~ respectively and will retain its name and all its staff. Holistic's Holos data mining and OLAP product reportedly generated revenues of around \$25m in the year to March, with almost half coming from the US and about 30% from the UK. The enlarged unit will integrate the analytical capabilities of Holos with the open architecture of the Crystal product line. The first project is to take part of the Holos OLAP engine and put it into Crystal Info. The resulting OLAP-enabled Crystal Info is due by the year-end. Holistic's chairman and CEO Derek Taylor will report to Greg Kerfoot, president of the Information Management Group. Taylor said that total integration is not really the aim as the products are too different. Crystal Info is really a shrink-wrapped product while Holos is aimed squarely at the high-end and sold direct, he said. But migration paths will be established in time from Crystal to Holos. The Seagate muscle will help Holos compete more successfully with Oracle Corp, its main competitor, said Taylor.

INFORMATION BUILDERS' CACTUS BLOOMS

As expected, Information Builders Inc (IBI) has launched its Cactus development tool for three-tier client-server systems (UX No 590). The Cactus Workbench includes an application manager, partitioning manager, object browser, and a 4GL scripting language. The partitioning enables business logic to be placed close to the deployed application leading to lower network overheads, the New Yorker claims. Cactus includes OLE coupling enabling two-tier OLE-compliant products with OCX controls to have three-tier capabilities. It enables CICS, MVS or IMS transactions to be invoked by an OLE-compliant application, says IBI. Cactus uses Information Builders EDA technology to access all major databases and platforms, including Unix, Windows NT and MVS. The application manager uses a repository for business logic and presentation components, with a partitioning manager enabling users to drag procedures and drop them on servers across multiple platforms. The file printer builds data access components, the object editor enables developers to create business logic and the form painter does the same for presentation components. Cactus supports Windows 3.x, Windows 95, NT, OS/2 Warp. Cactus Workbench costs \$3,250 with the run times for free. Cactus Server on NT, Unix, MVS and VM/CMS costs between \$5,500 and \$100,000, depending on platform and number of users.

HAL SOFTWARE TAKES THE CHISOLM TRAIL

The fallout continues from Fujitsu Ltd's Hal Computer Systems unit's decision to pull out of the general purpose workstation market last month. Fujitsu has spun off HAL Software Systems to form the wholly-owned Chisolm Technologies Inc and has got Michael Machutt from IBM Corp's PSP Development Services business at Austin, Texas - which is also Chisolm's base - to be the CEO. Ron Fountain, Chisolm's marketing director said the company will initially focus on the US intranet market with its intranet tools, and also announced availability of version 1.5 of its DCE Cell Manager. DCE Cell Manager, first released in 1994 is a set of Motif-based graphical user interface tools to manage Distributed Computing Environment services, automate execution of DCE functions and centralise administration of a DCE cell. 1.5 introduces centralised management of Windows NT DCE clients, integration of DCE administrations with existing network administration systems, centralised replication of DCE servers, templates for adding, adopting and editing user profiles and compatibility with OSF DCE 1.1-based networks. The company name comes from the Chisolm trail which ran from southern Texas through Austin up to Kansas in the old West. But the company won't be totally US-centric. It already has reseller agreements in Europe and wants more, before tackling the Asia-Pacific area. DCE Cell Manager 1.5 is up on DEC Unix, HP-UX, AIX and Solaris. No prices.

SUNSOFT ADMITS NEW SOLARIS RELEASE DOESN'T SUPPORT JAVA-BASED NC'S

SunSoft Inc confesses that its newly-shipping Solaris 2.5.1 release does not contain the necessary mechanisms to support Java-based network computers, be they Sun Micro Computer Inc's own JavaStations or any other devices. The prevailing Network Computer model - remember we're dealing in Internet time - has devices plugging into intranets and being activated by data packs downloaded from servers that may include Java virtual machines, JavaOS, TCP/IP stack, a browser and applets. Solaris 2.5.1 doesn't even include a Java Virtual Machine.

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Arun Taneja, the man credited with coming up with the name Sparc, and launching it into the marketplace, has joined Franklin, Massachusetts-based **Invincible Technologies Inc**, maker of Alpha-based NFS servers as VP of marketing, leaving the same post at **Axil Workstations Inc**.

Reuters Holdings Plc's Tibco Inc has Java-powered its Rendezvous Information Bus messaging system. It enables Java applications to communicate with one another on an event basis, eliminating the need for polling of servers or other applications, claims the Palo Alto, California company. The package has classes integrated into the Rendezvous API. In beta now, it will be released in the fourth quarter. Prices start at \$500.

San Francisco-based Java development tools company **Dimension X** has got its Liquid Reality tool kit in beta. It's claiming it to be the first platform-independent implementation of VRML 2.0 and the only VRML 2.0 tool kit written entirely in Java. Its 3D Java class libraries will be used to write 3D content for the Web, said the company. Liquid Reality is available on Solaris, Linux, Windows 95, Windows NT, with Macintosh and Pippin to follow. It can also be implemented as an ActiveX control for use with Microsoft Corp's Explorer. The beta version can be downloaded from www.dimensionx.com.

We doubt whether he amuses himself by taking in an operation at the local hospital when he has an afternoon spare, but James Clark, founder of **Netscape Communications Corp** and **Silicon Graphics Inc** turns out to have something in common with Princess Diana - an interest in health matters, and he has now formed **Healtheon Corp**, an Internet-based health care enrollment and information service: "I had a lot of interest in pursuing a vertical market that could use Internet or Intranet technology," Clark told *Reuters* in an interview - "Health care is one of the largest industries in the world and yet it is tremendously inefficient;" Clark stepped aside as chief executive of Netscape last year to give himself time to dream up other ideas while continuing in the role of chairman.

Mountain View, California-based **Network Appliance Inc** is claiming NFS performance, for its F540 275MHz Alpha RISC-based system can deliver 2,200 NFS operations per second at less than nine milliseconds and more than 900 operations at less than four milliseconds.

IBM Corp's Tivoli Systems Inc price structure for TME 10, which is available now, is called 10/Flex. The model is said to eliminate product overlap. TME 10 is the combination of Tivoli Management Environment and IBM SystemView. TME 10 pricing applies to all distributed TME components, 25 products in all. Existing TME and SystemView customers get free upgrades to TME 10. The second phase pricing and packaging will be out in 90 days.

Silicon Graphic Inc's problems with the Mips R10000 chip has Wall Street worried about whether it will make its quarter. Reportedly SGI stuck a sock in Toshiba's mouth after it started telling people how poor its own R10000 performance was. No such problem with Sun. The Street is pretty confident it'll make its numbers even though it had some manufacturing hiccups with its Ultra Servers at the beginning of the quarter. Those seem to be resolved now but reports indicate supplies are tight despite round-the-clock shifts and it's filling not European orders much to Europe's chagrin because US direct has dibs. It also looks like if you didn't get your order in by June 3 you're on backorder.

IBM Corp has announced its lowest-priced PowerPC chip, the PowerPC 401GF embedded controller, pitched at makers of Internet terminals, set-top boxes and wireless communications devices. Costing just \$13 in 10,000 quantities, samples of 25MHz, 50MHz and 75MHz versions should be out next quarter with the 100MHz version following early next year. **Microware Corp**, Des Moines, Iowa will port its OS-9 real time operating system to the part and is developing an Internet version of OS-9 with Java support, browser technology and network protocols.

International Data Corp's rather surprising finding after surveying 750 consumers and businesses is that one-third of those that use the Internet shop while online spend more than \$50 and \$500 per month respectively. It says the amount of cyber shopping it found is surprisingly high, but that actual spending is still relatively low. It was not able to say what kinds of products and services the electronic shoppers were buying.

America Online Inc, Reston, Virginia confirms that it has been called in for a chat about its business practices by the attorneys general of several US states: at issue appears to be the rounding up to the nearest minute per-minute rates.

As we went to press **Microsoft Corp** and **Texas Instruments** were due to announce the design specification for their long awaited joint repository technology.

Dolphin Interconnect Solutions A/S' PCI/Scalable Coherent Interconnect chip that the Norwegian company is building for **Siemens Nixdorf Informationssystemes A/G's** RM600 line, has been pushed back to the second half of next year. Originally targeted for release in the new Mips Technologies Inc R10000-based RM600s at the end of the year (UX No 575), the chip will be used to increase scalability for remote I/O subsystems, says SNI.

Darmstadt, Germany-based **Software AG** founder Peter Schnell is to step down from his position as management board chairman after the privately owned company reported a \$33m (50m marks) loss for 1995 compared with a 12m marks loss in 1994. The company immediately announced plans to cut its workforce by 10% this year. A replacement for Schnell has not been found. The loss came despite a 13% increase in group sales to 788m marks from 699m marks in 1994. Software AG pointed to an unexpected 21m mark bill in back taxes between 1989 and 1992 as one reason for the heavier than expected losses. It expects to be profitable by 1997.

OneWave Inc is the new name of Cambridge, Massachusetts-based **Business@Web**, which announced plans to float under its old name last month. It's filed to offer 3.75m shares, 3m of them new, at a target price of \$13.00 to \$15.00 per share. The company's OpenScape products are designed to enable organisations to extend their current computing capabilities to conduct "new, dynamic and interactive communication and transactions with key audiences of their extended enterprise, including customers, suppliers, distributors and business partners." Goldman, Sachs & Co and Hambrecht & Quist LLC are the managing underwriters.

Chorus Systemes SA has released the first of its Chorus real-time microkernel (Chorus r2.1) and Chorus/Classix PowerPC VME boards for telco and embedded distributed applications (UX No 583). Chorus/Classix is designed for single system environments that have multiple boards or distributed configurations. Each system is supposed to be capable of running multiple real-time applications and supporting different operating system APIs. Classix r2.1 is an enhanced binary version of the original Classix (UX No 509), and also runs on iAPX-86, 68000 and Sparc. It's also going up on UltraSparc and the microSparc IIep from the fourth quarter. Classix r3 will be up on iAPX-86 in the fourth quarter with PowerPC and Sparc ports following three to six months later. Prices go from \$9,400 to \$25,000. Runtimes are \$25 to \$163 for 1,000-up depending on functionality included.

Insignia Solutions Inc and **Hewlett-Packard Co** have struck a deal which includes technology collaboration and reference selling of Insignia's NTrigue Windows-on-X technology. Co-developed with **Network Computing Devices Inc** NTrigue 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 or Mac.

Network Peripherals Inc, president and CEO Pauline Alker has resigned from **Insignia Solutions Inc's** board of directors. She cites pressure of work.

Sun Microsystems Inc vice-president for Internet Strategy Bud Tribble says we ought to think of the company's Joe Corba object request broker, which is implemented as a Java applet as a "remote procedure call for objects." Tribble believes it inevitable that the **Object Management Group** and **Microsoft Corp** distributed object models will co-exist in much the same way as TCP/IP and IPX/SPX do today, with companies such as Iona Technologies Ltd building the bridges.

Ah, how history is re-written. Arthur Van Hoff, one of the departed **JavaSoft** members who formed the start-up **Marimba**, claims he once tried to convince Java inventor James Gosling that the language had to be released to the public domain to become truly ubiquitous. Gosling resisted, he says, saying in effect that some control had to be maintained so that Java didn't become Unix-fied and spawn dozens of variations. Ironically, Gosling devoted much of his keynote speech at the recent JavaOne conference to enumerating how the free-distribution model had been responsible for Java's success.

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SCO DISBANDS UNIXWARE SUPPORTER'S CLUB

The Santa Cruz Operation is killing off its OEM organisation, UTG Inc, successor to the old Unix International operation, the consortium that came into existence during the height of the Unix wars to balance the schismatic Open Software Foundation. Ironically, though SVR4 won, UI and now UTG are dead and OSF soldiers on as part of the OSF-X/Open-Open Group triptych. The second of the two votes needed to disband the UnixWare front organisation was cast unanimously by the UTG board of directors on Thursday June 27. Reports suggest that SCO was reluctant to continue funding it because of the money. It'll say that it's formed an internal group called the Enterprise Computing Forum or ECF to replace it "at the request of UTG's membership" who will now be asked to participate in ECF's activities along with the narrow band of ISVs currently supporting UnixWare. ECF is supposed to evangelise Unix, invite OEMs to contribute technologies for possible inclusion in future releases, suggest areas of collaboration and evaluate technologies under consideration, as UTG and before it UI had done. ECF is also supposed to be a vehicle for getting vendor input into the standards and specifications developed by the Open Group and other similarly minded consortia. SCO will say that ECF will provide OEMs with more timely access to new technologies and make for closer relationships. SCO senior management is supposed to run ECF but who exactly they have in mind remained unclear at press time. SCO will promise new OEM and ISV programs that ECF will play a role in. Although UTG managers such as CEO Larry Lytle and chief evangelist Michael Dortch are expected to be gone by the end of July, it'll probably be the end of December before UTG is completely dissolved. In UTG's case, there is no hint of the financial disorder that sources reported was found when they closed UI down. UTG was instrumental in formulating a draft specification for support of large files on legacy Unix implementations that has been forwarded to X/Open as a potential standard. UTG members were also in the midst of a review of the market requirements for Gemini, the forthcoming merger of SCO OpenServer and UnixWare, and the 3DA architecture, SCO and Hewlett-Packard Co's 64-bit Unix implementation.

BMC BUILDS REPOSITORY, SECURITY AND RUNS TO WEB; SEEKS NETWORK ACQUISITIONS

By Clare Haney

What exactly does BMC Software Inc of Houston, Texas do? Well, try asking the company, like we did the other week, and we'll guarantee you'll get some conflicting answers. Namely, BMC isn't in the systems management market, only the application and database management spaces and therefore has no competition. Or, it is in the systems management arena and numbers Platinum Technology and IBM's latest acquisition Tivoli Systems among its rivals. Confused? We were. We also got an interesting array of answers when we asked if BMC was at all interested in repositories, bearing in mind, sometime opponent Platinum is chock-a-bloc with at least two of its own via acquisitions. Not at all, we were told one day, because customers don't want a grand repository, because it leads to a single point of failure, and repositories are really only for data warehousing anyway, and of course BMC isn't into data warehousing, its recent agreement with Red Brick notwithstanding! But then the following day, the company fessed up that it is actually working on building its own repository because customers keep asking it to standardise on a single product! All this rather sad state of affairs leads us to agree with Marc Sokol, VP of advanced technology at Computer Associates, who breezed through London last week and whose Unicenter may or may not compete with BMC's Patrol. He concluded that the Houston outfit are just "a little schizophrenic." We did however get some straight answers out of BMC's senior vice president of research and development Jim Juracek who revealed that the company's first venture into all things Web-related will be via a Patrol Agent for the Internet and Intranet to be released July 1st, the same time frame for the next release of Patrol, version 3.1. This will be followed up by Patrol Knowledge Modules for Netscape's browser and Microsoft's Explorer. The company is also carrying out engineering work on how to repetitively extract data from legacy sources and propagate it to HTML pages. The whole Internet family goes under the banner of Patrol Watch, with the eventual aim of giving users the ability to completely manage Patrol via the Web. Version 4.0 of Patrol due out in a year's time will be predicated around Java and browser technology, he said. In case you thought BMC was rather behind the Web-enabling trend, company chief executive Max Watson told us, "We may be slow to announce our Internet strategy, but we're ahead on deliverables. Everyone else announced their strategy a year in advance because they're interested in seeing their share prices go up. It's typical of us, we don't do a lot of hype ahead of deliverables. We do things a little different." Juracek also told us that BMC is hard at work on developing its own security product to administer a wide range of software, including operating systems, applications and databases. The company is also looking to acquire itself some networking companies. One likely candidate would seem to be Network Catalyst of Irvine, California, a provider of network and system support software for Digital's VAX and Alpha OpenVMS systems. Interestingly enough back in March 1995, the company announced a strategic partnership and joint development agreement with OpenVision of Pleasanton, California, one of those companies with which naturally enough BMC doesn't compete.

DYNASTY BETAS DDE 3.0;

PUTS IPO SPECIALIST IN CHARGE

As expected (UX No 577), three-tier application development company Dynasty Technologies Inc, Lisle, Illinois, has sent Version 3 of its Dynasty Development Environment to beta. Version 3 includes support for third-party C++ libraries, seamless integration with PowerBuilder and Visual Basic (with Delphi integration to come), the Unified Modeling Language with bi-directional links to the Rational Rose and Platinum Paradigm Plus development environments and an integrated debugger. The new Dynasty Open Enterprise Series includes Open-VB and Open-PB modules which allow developers to add other middleware services to existing PowerBuilder and Visual Basic applications. Previously applications had to be rebuilt from scratch. Version 3 comes with a new partitioning assistant for integrating existing and legacy code. A Reusable Components Library provides pre-configured components including LU6.2 and MQ Series interfaces, microhelp and customisable widgets. Dynasty's added failover and load balancing through a new services request broker. For its Web story Dynasty is offering a new Open Internet Series of options - Open-CGI and Open-Java - allowing users to publish Dynasty-generated application services via Web servers and Java applets. The services can be local to the Web server or partitioned to other servers. The company says Version 3 will cost \$10,000 per development seat, in its mind bringing the realistic cost of a development group licence up to around the \$75,000 mark where rival Forte Software Inc has staked its entry price peg. Dynasty believes its sweet spot is developing applications that support between 500 and 700 users. It claims 78 installations - a handful of them production sites. Meantime, Dynasty co-founder and CEO Michael Lyons has stepped aside to allow Dynasty COO Mike Wilson - a claimed IPO specialist who has previously been with Uniface and Ingres before coming to Dynasty just over a year ago - to take the helm and assume both roles, presumably indicating an intent to go to market. Lyons remains chairman.

NOVELL SEEKS NETWORK SERVICES OEMs

Novell Inc has rolled out NetWare network services for third party platforms as Cross-Platform Services code for Novell Directory Services, NetWare File and Print services, with SMP support. It hopes they will become a de facto industry standard. However it has yet to win much industry support - the only two takers so far are HP and SCO for their 64-bit Unix, and they had already announced their intention to do so when Novell passed UnixWare to the latter last year. Novell claims to be in discussions with IBM Corp, Sun Microsystems Inc, DEC and others. Novell is planning related announcements in the next few weeks, possibly the NT port it has been promising.

UNIPRESS LAUNCHES POWERTERM TERMINAL EMULATORS

UniPress Software Inc, the Edison, New Jersey PC-to-Unix connectivity house, has launched the PowerTerm family of terminal emulators for personal computers, licensed from Israeli company Ericom Software Ltd. PowerTerm supports a long line of terminals and the new version has added Televideo 925 and 950 terminals, as well as 3270 extensions. These extensions means PowerTerm can communicate with SNA over TCP/IP, according to the company. The full version is available at www.unipress.com/free_evals for free for a month, after which it dies. PowerTerm 320 for connecting to Unix costs \$100, PowerTerm 420 for VMS, PowerTerm 3270 and PowerTerm 5250 are all \$200. PowerTerm Inter-Connect, including all the emulations and a TCP/IP stack goes for \$300.

CLARIFY ADDS ACCOUNT MANAGER TO CLEAR SUPPORT

Clarify Corp, the San Jose, California company jostling for position in the flourishing customer support and help desk markets, has added an Account Manager tool for users of its ClearSupport customer management system. It enables service managers to create reports with filters about their various customers held on the Clarify database. There is also a messaging facility and case browser. Out in the autumn, it costs \$15,000 per server licence.

MORE FOCUS FOR MICRO FOCUS WITH 60 MORE JOBS GONE

Micro Focus Plc has "streamlined" its structure, which of course meant job losses, 60 in all, taking the headcount to around 625. The Palo Alto company is concentrating on the so-called Year 2000 problem, main-frame offloading and enterprise client-server systems. Last year the company decided to turn itself into a web-based company, but that too has now been "kind of honed", as Peter Katz, general manager of the Year 2000 and offloading businesses put it (UX No 564). He said it's more of a Web-enabling effort a la Microsoft Corp, such as displaying business forms in HTML created with a Cobol compiler. But at least the company is now performing sufficiently well that pay increases have been re-introduced, following last year's ugly figures (UX No 537).

CENTERLINE READIES QC/ADVANTAGE LIFECYCLE TESTING TOOL

Centerline Software Inc, Cambridge, Massachusetts claims its QC/Advantage software quality testing system is the first open system to test right through the lifecycle, rather than just at the end of the development cycle. It comprises a uniform user environment, object-based test foundation, distributed test designer, parallel execution executive, consolidated results analyser and an open integration platform. QC/Advantage will be out at the end of July on SunOS and Solaris for Sparc and UltraSparc and HP-UX on HP9000. It also supports Windows 3.1, Windows 95 and NT clients. AIX support comes later in the summer with other Unices and full NT after that. The starter pack with five licences, costs \$38,000 with add-on seats available at volume discounts.

IBM CLAIMS BREAKTHROUGH WITH 0.08 MICRON PROTOTYPE DEVICE

All the evidence suggests that IBM Corp is brilliant at research, pedestrian when it comes to development, and utterly incompetent when faced with the challenge of getting its scientists' achievements into the market - after all, to take just two examples, IBM invented the floppy disk drive and the ink jet printer, the whole world uses both, yet IBM today makes neither. And such experience has to temper admiration at the news that the company has been describing a prototype 0.08-micron CMOS device that could yield GHz-range production chips within a decade. "We feel this is do-able," *Electronic Engineering Times* quotes Michael Polcari, research director for silicon technology at IBM, saying at the Symposium on VLSI Technology in Honolulu, where the achievement was announced. Using bulk silicon and conventional CMOS, an IBM research team built an unloaded inverter-delay circuit using 0.08-micron effective channel lengths, the paper says. The circuit exhibited a delay per stage of 22pS at an operating voltage of 1.8V. For low voltage operations, the technology can be run at below 1.5V, perhaps as low as 1V, said Lisa Su, lead device design engineer on the project. The test circuit can drive 0.8mA per micron of gate width, which Su said is the highest level of drive current for any sub-tenth-micron work presented to date.

UNIFY CLAIMS JAVA VISION ALLOWS TP APPS ACROSS THE WEB

Unify Corp is claiming that the latest version of its Vision application development engine can produce complex transaction processing applications that will run over the Internet or intranet. Due to be introduced today (Monday), Unify Vision 3.0 is currently in beta with final versions due by August - although the crucial Vision/Web component is running later, with volume shipments not expected until November. Riding off the back of the new version of Visix Galaxy (UX No 594) on which it is based, the new tools now generate Java code beneath the visual front-end developer environment, resulting in a better performance than run-of-the-mill HTML/CGI products, only fit for supporting simple forms and document-centric applications over the Web in Unify's view. The environment includes a Corba-standard IIP (Internet Inter-ORB Protocol) to support client/server transactions, coming either from Iona or Postmodern - negotiations were still continuing as we went to press. Also added to 3.0 is multi-tiered, drag-and-drop partitioning with replicated services for higher performance and fault tolerance: Unify has long been secretly jealous of rival Forte Software Inc's similar capabilities, and feels it has now caught up some ground. It reckons it may even be stronger in areas such as partition failover performance management and partition administration. The company has also integrated its previously separate Appman applications management toolset into the main product. And 3.0 also now supports Microsoft's ActiveX, DB2 on multiple platforms, and provides Year 2000 support. Unify has an incentive to get everything working properly by early September, as it's one of the first software partners signed up by Sun Microsystems for the JavaStation network computer launch, scheduled for around that time. 3.0 is currently in beta, and is due to ship in August, priced at \$7,200 for 5 development licenses. After that, the price drops to \$4,995 for additional seats. Vision/Web costs \$17,000 per development site. Vision 3.0 runs on Windows 95, NT, Windows 3.1, Mac, Unix and OS/2 platforms, while Vision/Web generates code to run on any system supporting Java. Unify is currently thinking again about its run-time charges, the sort of practice that is frowned upon amongst Web advocates. At the moment it sells for \$300 per user in packs of ten for run-time licenses, but may well end up abolishing the charges altogether.

ADOBE SAYS PRINTMILL WILL YIELD HARD CASH FROM CYBERSPACE

Adobe Systems Inc predicts revenues from its upcoming PrintMill technology - which allows printing over the Internet - will match that of its popular Acrobat product and said yesterday the new printer software will run on Windows NT and one or two other platforms. Adobe said the vast majority of its 65 PostScript OEMs plus other partners have told them they plan to include it with their printers. PrintMill consists of software that sits on both server and printer and will work with any browser, Adobe says, but its announcements so far have all included references to integration with Netscape Navigator. PrintMill was unveiled as part of Adobe's Internet vision in May and last week IBM said its new network printer line would incorporate the technology. The Mountain View, California-based company says PrintMill, which will ship before the end of the year, opens up an entirely new type of business model for the Printing Systems Division and is a chance to make hard cash from cyberspace. "This is not a product where we have to give it away for free. This is about commercial and corporate use and cost-savings," said Derek Blazensky, the Adobe division's director of product marketing. He added that most Internet innovations have involved only electronic communication, but said Adobe recognized that most offices are not paperless environments and is confident its Web-printing package will be first to market. What Adobe won't say is exactly how it will make money off PrintMill. Obviously there will be licensing deals, but the company wouldn't say if it will release PrintMill as a separate product as well. "We have several alternatives when it comes to pricing models," Adobe said. Another money angle; PrintMill needs printers with Adobe's PostScript imaging language, so that base - already six million strong - may grow as well. The product allows users to print directly from their applications or send a file or URL directly from the PrintMill browser interface to a printer anywhere on the global network. Expect a late fall beta.

SEQUENT BUYS DR CHEN, MOST ASSETS OF CHEN SYSTEMS - FOR NT

When he was at Cray Research Inc, Dr Steve Chen was famously described as having such a strong not-invented-here mentality that when designing his supercomputers, it was said that he wanted to start with the sand from which the silicon for the chips were made. So when his own Supercomputer Systems Inc venture failed and he was reduced to creating a Chen Systems Inc that would build two- to eight-way multiprocessor servers out of 133MHz Pentiums (UX No 544), his heart was clearly not really in it. Nine months after launching the super-servers, which were claimed to apply principles of parallelism and in-system switching developed for supercomputers, the Eau Claire, Wisconsin company has thrown in the towel and signed a letter of intent to sell the server business to Sequent Computer Systems Inc. Sequent will pay \$2m cash and 300,000 warrants for Sequent shares at \$21.50 a time to the remaining Chen shareholders. It is only buying the hardware assets, and a vestigial Chen Systems software company will remain, although Sequent has licensed the software too. It takes on Dr Chen as its new chief technology officer, along with his 30-strong engineering team.

Irony

Ironically, given Steve Chen's background, Sequent sees the deal as a renewed attempt at expanding from its high-end server business into the mid-range and entry-level enterprise server market running Windows NT. It's definitely not a UnixWare shot it says, as its move deprives Santa Cruz Operation Inc of another platform for its Unix aspirations. Sequent, proud of its own Dynix/ptx Unix and not currently one of SCO's Big E gang or a Gemini development partner thinks neither UnixWare nor its Hewlett-Packard Co-derived 64-bit follow-on has any future in glasshouses. However it is working with SCO to have its ccNUMA-Q interconnect supported in Gemini. At the same time SCO is supposedly using Chen technologies to scale UnixWare to support 32 CPUs from 10 currently (UX No 587). Sequent's initial low-end foray selling boxes under a deal with Tricord Systems Inc fell apart some time ago. Sequent will sell the current Chen-1000 server with NT and pick up the 20 resellers in 15 countries Chen claims to have amassed. It plans to expand that roster to create a significant indirect channel for a new generation of multi-quad low-end systems it'll forge from what it says it already has on the drawing board plus the Chen technologies. Sequent will also use Chen hardware and software for scaling linearly above eight processors in next-generation enterprise servers though it's unclear how this will play alongside the company's ccNUMA-Q implementation supposedly being readied for Christmas.

BULL DEBUTS SAGISTER IN US; TO ADD BLUE SAGE FOR MVS FLAVOUR

Compagnie des Machines Bull SA has announced the availability of its "mainframe-class" Sagister Unix boxes in the US. Formerly codenamed Madison, the AIX boxes are already shipping in Europe; they will cost from \$700,000 for six to eight processors, and from \$2m for 24 to 32 processors in the US. Sagister uses Bull's FDDI PowerCluster to interconnect 133MHz PowerPC 604 Escala servers. The idea is for Sagister to maintain, manage and support mixed environments of distributed AIX, mainframe GCOS and MVS applications. In the autumn Bull will introduce a package of technologies for tying Sagisters to IBM MVS mainframes. Under the Blue Sage program, Bull will resell four or five third party and IBM technologies for data exchange, screen scraping and transaction processing, and will also enhance some existing AIX-to-MVS links. It hasn't signed off on all the agreements yet, although it has beta'd the stuff internally and will send a customer beta out in July. Bull says it's similar to the technology package it's already offering to tie Sagisters to its own GCOS mainframe environment. It says it's not seeking to co-host other operating systems under one Sagister hood a la Unisys Corp Clearpath. It's selling the things into its existing GCOS base of 3,500 worldwide - 400 in the US.

HP OODCE BEING PORTED TO DEC'S XIDL COMPILER

The Open Software Foundation's kicked-off a new Pre-Structured Technology (PST) project aimed at providing Distributed Computing Environment developers with a mechanism for creating C++ objects for Corba or COM object models within around six months. The PST will see Hewlett-Packard Co's Object-Oriented Distributed Computing Environment (OODCE) implementation integrated to work with the latest 1.2.1 release of DCE. Specifically HP, DEC and OODCE user Lexis-Nexis are funding a project to get OODCE's class libraries working with the new version of DEC's XIDL interface definition language compiler which has been bundled in the C++-enabled DCE 1.2.1 released in March (UX No 581). DCE developers will be able to licence a set of C++ libraries for developing objects that are no longer tied to HP's own interface definition language compiler (idl++). HP had proposed OODCE to the Open Software Foundation's DCE Pre-Structured Technology group for inclusion in DCE version 1.2.x as long as two years ago (UX No 479). The way HP described it back then was that OODCE removes the need for working directly with the 400-odd DCE APIs that define how DCE applications communicate with each other and what use is made of DCE services like security. DCE API commands are encapsulated into C++ client and server classes (templates for creating re-usable objects) with a default DCE behaviour. "But they're not C++ wrappers," it said. The idea is that classes can be used to access DCE services at a higher level without having to learn all the details of the DCE API. In essence, HP mapped basic DCE concepts in C++ language features. C++ class functions are defined for each operation declared in the IDL specification. Client objects are based on the IDL API and generate remote calls to the server which in turn are managed by server objects. The PST will also create the necessary mechanisms to allow DCE users with the previous version of the DEC XIDL compiler to take advantage of the C++ libraries.

NEXT ADDS GUI BUILDER TO WEBOBJECTS, SHIPS PDO 4.0

Version 2.0 of NeXT Software Inc's WebObjects server-based development environment line is now shipping, 90 days after the first version (UX No 575). The main difference between this and the previous version, which Steve Jobs' company claimed would cut the time needed to create Web pages to a tenth of what it was, is the inclusion of a pre-release version of WebObjects Builder, code-named Tsunami (UX No 588). A production release of WebObjects Builder is slated for the next quarter. Product manager John Landwehr said the company thought it better to build a "rock-solid back-end", and then do a user interface tool, rather than the other way round. He said Java support for the server will be added by the next release, slated for around September, so Java applications running on the client could talk to the server. JavaScript and VB Script support will also be added at the same time.

Uncertain

Some have suggested NeXT's future looks uncertain, given the rise of Java, but Landwehr insisted the company had a future because of, rather than in spite of Java. Sun Microsystems Inc has already said that Java will be its primary target for object solutions, and all other technologies, including OpenStep/NextStep should be considered transitional (UX No 584). Landwehr said the company was always fond of Objective C, "and Java is pretty similar to that". But somewhat strangely, he predicted that users will never be allowed database access from the Internet: "it'll mean accessing their Oracle database through the firewall." But that is already starting to happen now. There are two version of WebObjects. WebObjects Pro enables developers to incorporate C, C++ and Objective C code into Web-based applications and access OLE datatypes stored in Windows applications. WebObjects Enterprise is meant for organisations that want to encapsulate data from existing applications into their Web sites and develop both internal and external Web sites. Existing customers of either WebObject Pro or WebObjects Enterprise will get their version 2.0 free, otherwise its 25% of the WebObjects purchase price: \$3,000 for Pro and from \$25,000 for Enterprise. Meantime, NeXT's Portable Distributed Objects 4.0 began shipping last week.

IBM's HURSLEY PORTING JAVA TO EVERYTHING THAT MOVES

Much of the work going on at IBM Corp's Centre for Java Technology isn't showing up in IBM corporate plans yet. With the pace of change, developments have fallen between IBM's traditional planning cycles says ~~Simon Phipps, the Centre's program manager. Or alternatively, as an~~ enthusiastic colleague puts it, "we do try to do cool things at IBM, but usually we get stopped. Here things are moving so fast that we can keep ahead of the stoppers." Given Java's West Coast proclivities, you might expect IBM's coffee-grinding operation to be sited somewhere in the Bay area. Instead it's in rural Hampshire in England, at Hursley the long-time home of CICS. It's there as a pure accident, derived from the fact that in mid-95 resident IBM Fellow Mike Cowlshaw was looking for a virtual machine to make the REXX language platform. He stumbled across the Java VM and a Java Centre was born. The fruits of that original search were made available for download last week as the hybrid language 'NetRexx' from <http://www2.hursley.ibm.com/netrexx>. The Hursley policy can be summed up as "porting Java to anything that moves - and quite a few things that don't", says Phipps. After that, it will be a question of getting IBM middleware to add Java hooks. Phipps is so open about IBM's Java plans that it is worth noting the things he doesn't want, or can't talk about. One is the size of the team dedicated to doing the Java work: "a mid-range two digit figure", is as close as he will estimate. Another taboo subject is JavaOS: IBM doesn't yet have an official policy on whether this is A Good or A Bad Thing. Neither can he say much about what IBM is doing with Java in the telecommunications arena, which is a shame since Hursley also plays host to the CallPath group; its computer integrated telephony offering. Publicly, the status of work at Hursley is that: An alpha version of the IBM port of Java for Windows 3.1 should be made available for download by the end of the month. It won't be particularly fast, Phipps warns, since it isn't optimised, moreover it is based on Win32s. Still, it should let Win 3.1 users run HotJava alright according to Phipps. The team isn't sure how it's going to make money from the implementation yet, the most likely option is to charge for support. The next Java implementation to arrive will be for the AS/400. Formally this won't be launched until year end, but will be available for download from Hursley well before that. The MVS port of the Java SDK will be formally ready mid 97 but will be ready well before that for download from the Web site. Phipps says he likes "the idea of main-frame guys downloading shareware stuff from a Web site." In terms of the larger, strategic picture, Java would seem to offer IBM one of its so-far unobtainable holy grails: a way of rationalising system software components across its disparate hardware platforms. IBM history is littered with the wreckage of attempts to minimise the differences between its various systems: Workplace OS and Systems Application Architecture were the latest incarnations. If the Java virtual machines perform as advertise, and are ported across multiple platforms, could they succeed where other attempts have failed? While not dismissive of the idea, Phipps says that Java has still got to prove itself before such grandiose plans are even considered by management. "They've seen too many virtual machines come and go," he comments.

TAZZA JAVA COMPONENT TOOL COULD SUPPLEMENT VISUALAGE

Our sister publication *OnLine Reporter* says there's a somewhat mysterious IBM Corp team working on a dynamic component assembly tool written in Java which, although a free standing Java application, could end up as part of the VisualAge toolset. The tool, codenamed Tazza is a part of IBM's Arabica component prototype, launched in support of Java Component Initiative at JavaOne a few weeks back. A demo was supposedly shown around PC Expo last week. Tazza allows developers to construct programs by dragging and dropping Java applets, and connecting them. It looks on the system for Java class hierarchies, or packages, discovers them, opens the class files, looks at what the objects and methods are, and makes them available to the programmer for visual program design. The latest beta is supposed to be able to display the innards of finished Java programs too. But some confusion may be caused by similar facilities already a part of VisualAge. Last week IBM said that VisualAge for Java, including editor, debugger, browser and a Java class library, would begin beta testing early in the second half of this year, with general availability by year-end. One of its features will be a Data Access Builder, for visually constructing data access through Java Database Connection (JDBC). The builder interrogates table and automatically generates classes. Version 4 of VisualAge C++ for Win32, OS/2 and Unix, due in beta before year-end, will also include the Data Access Builder, and will provide the option of generating Java, as well as C++ and IDL.

RED BRICK AIMS FOR 1,000 USERS ON 1Tb WAREHOUSE

Morgan Stanley's technology group was listening in to Red Brick Systems Inc's recent user meet and hears the VPT warehouse can accommodate databases of up to 400Gb range (excluding indices and scratch space, which competitors often include in their calculation of database size). Its goal is to be able to manage 1,000 users on a one terabyte database through better segment design tools, incremental reorganisation by segments, end to end compression, better memory management and advanced I/O technologies, as well as pushing the envelope on what's supposedly the next big area of data warehouse engine technology: life cycle aggregates. Life cycle aggregates are a database design decision to group records in a database into related aggregates which speeds queries since the query can reference an aggregate rather than calculating a record by record scan, which is often unnecessary. Life cycle aggregates is based on emerging research out of Stanford University in conjunction with the Industrial Affiliates program. Red Brick claims it can jump on top of some of the innovative work coming out of academia because it's so specialised. Some Stanford advances will be incorporated into the 5.0 release of VPT later this year.

OVUM AWARDS DEC TOP MARKS FOR DECMESAGEQ; ZERO FOR MARKETING

Digital Equipment Corp's DECmessageQ is by far and away the best message oriented middleware product in the market but is being let down by an "almost non-existent" marketing strategy according to a report from London-based market consultant, Ovum Ltd. The report is Ovum's second study of middleware after its examination of database connectivity middleware (UX No 584). It looks at IBM Corp's MQSeries and DEC's DECmessageQ because they command five hundred and six hundred customers respectively, Verimotion Inc's Vcom because the report regards it as a promising newcomer, Peer Logic Inc's Pipes because of its naming service, and Momentum Software Inc's X-IPC because of large installed base and support for shared queues, semaphores and shared memory. Ovum awards DECmessageQ a score of 15, Vcom 12, MQSeries 10 and X-IPC and Pipes eight each. The report is £1,500 in Europe, \$2,775 elsewhere. +44 (0)171 255 2670.

APPLICATIONS, SERVERS VAULT ORACLE TO RECORD REVENUES

Oracle Corp rode a worldwide wave of growth to surpass fourth quarter financial expectations and reach 50% revenue growth, its highest in six years according to analyst Morgan Stanley & Co. That figure excludes the effects of six percentage points of negative currency conversion and resulted in fourth quarter revenues at \$1.46bn and year-end revenues up 42% at \$4.2bn. The Redwood Shores, California-based company fared best in the Americas, with 59% growth, followed by Asia Pacific, with 47%; then Europe with 35% for the fourth quarter. Server product sales increased 49%, the applications business was up an encouraging 73% and tools rose 13%, the analyst said. For the full year, large deals over \$500,000 accounted for 30% of revenues, up 1% from last year. Oracle remains Morgan Stanley's only "strong buy" in the enterprise software arena. What's behind Oracle's rising figures? Morgan Stanley attributes growth to the company's thriving database business and its one-stop shopping strategy for tools, database, applications, middleware and consulting. Another growth factor - Oracle represents 80% of SAP's new accounts, despite the fact that R/3 has been ported to Microsoft SQL Server and Informix. Oracle had \$810m in cash at the end of the quarter, up from \$710m last quarter. Capitalized software was down year over year by \$2m. Expect a slow first quarter for Oracle, warned Morgan Stanley, as the company's sales force undergoes its annual territory adjustments and retraining exercises. Meantime European reaction to the slight rebound in revenue - up from 30% to 35% - was laced with relief. Still in line for further shake-ups following the worldwide common market message, product delivery mechanisms, reporting structure and pricing (UX No 594), Oracle Europe types we spoke to expect further reported shake-ups to be in line with a consolidation and increased emphasis on vertical sectors including telecomms, banks and finance and retail. A VP sales Europe to replace VP Europe, Loek van den Boog is said to be 'imminent'.

INTEL'S KLAMATH ROADMAP

The *Register* newsletter was recently slipped a copy of a presentation given by Intel Corp to some of its OEMs at the Computec exhibition in Taiwan, detailing its roadmap until May next year, and predictably enough, the rivers run through it. We already knew about Klamath and Deschutes (UX No 581), named after ~~two US rivers. Klamath is a cheaper Pentium Pro with MMX~~ multimedia extensions and Deschutes is a still-more shrunken Pro than Klamath. The *Microprocessor Report* had previously thought Klamath would be a single chip implementation, rather than the L2 cache on the Pro. But it now appears that the Klamath will have two L2 cache options of 256K or 512K, but only running at half speed: 100MHz compared to the full 200MHz on the Pro. But more significantly, the *Register*' claims it's "highly likely" the processor itself could eventually be the Merced 64-bit chip collaboration with HP (UX No 577). OEMs are being advised to target the Klamath chipset launch for the first quarter of next year. Intel will pass the cost price of the Static RAM onto the OEMs. The Klamath card will ship complete with PLGA processor component and T6 TagRAM, two or four SRAMs and a heatsink. It will be launched in 200MHz and 233MHz versions with the two L2 cache options. Compared to the Pro, aside from the MMX extensions, Klamath will run 32-bit Windows 95 applications slightly faster and will be the same as the Pro on SpecInt95 and Windows NT applications. And compared to the P55C, it will be 20% faster on MMX technology benchmark, 20-40% faster on NT and slightly faster for Windows 95. All comparisons are based on the 200MHz version, according to Intel. The Klamath will run cooler than the Pro: 22watts at 200MHz and 25 watts at 233MHz, compared to a stonking 35 watts for a 200MHz Pentium Pro. As far as prices to the OEMs, the Klamath 200 will be slightly above the Pro 200 in the first half of next year. They will be priced as a complete solution, the processor, card and Tag RAM, with the SRAM prices separately, as mentioned before.

IBM SERVES UP MORE RS/6000 PACKAGES FOR THE WEB, GETS CLOSER TO NETSCAPE

IBM Corp has added three new web server packages - the RS/6000 Internet Powersolutions Web servers, the Internet Powersolutions Firewall and Proxy servers and Internet Commercial Application Servers. All include an RS/6000 system with AIX 4.1.4 or 4.2 optimized for the web. IBM also announced future offerings which include a new version of the Internet Connection Secure Web Server for AIX that will include better performance, enhanced logging and reporting, Netscape Navigator and other features. IBM says it will release a Plug-N-Publish product to enable anyone to connect content to the IBM infoMarket Service as well as an RS/6000 Web Server Software Sampler CD to allow customers to quickly try out applications. IBM's also getting much closer to Netscape now, offering a choice of its own Internet Servers or Netscape Servers on the boxes, along with Netscape SuiteSpot and Netscape Commercial Applications for AIX. Meantime, in a five-day test on Netscape's Web site, an eight-node RS/6000 SP handled 40m hits, half of the total traffic on the Netscape Internet site.

SPECTRA LOGIC HITS PROBLEMS WITH SAP; ADDS IBM TAPE SUPPORT

It appears that Boulder Colorado-based Spectra Logic Inc has run into difficulty adding support for SAP to its Alexandria Backup Librarian software. The company said it's now got support for SAP on top of Oracle, but in trying to achieve native access, the company "ran into some performance problems", which it did not specify. It had been slated for this quarter (UX No 570). Informix support comes next, followed by Sybase R11, but SAP is "not really on the front of our plate", and has now slipped back to around the first quarter of next year. Meanwhile, the company has added support for IBM Corp's 3494 Tape Library Dataserver using the IBM Magstar 3590 tape drives to its Alexandria Backup Librarian software. The Boulder, Colorado company said each IBM 3494 may be shared simultaneously by up to 16 different hosts in heterogeneous Unix environments.

NCD OFFERS NEW PC X SERVER; WEB-ENABLED X NEARS

Networking Computing Devices Inc specialises in the X terminal business (network desktop it calls it these days), and everybody agrees that this is a business in decline. But X terminal makers like NCD think they've found a way out: re-fashion your X terminals as network computers. ~~But that doesn't really wash. X terminals~~ are not the same as the network computer championed by Larry Ellison et al. They don't really do anything locally and don't support such basics as HTTP or SMTP. That could well change, but in the meantime, companies can set-off down what could be a lucrative avenue with value-added software. And nothing adds more value to a piece of software at the moment than Web-enabling it. So NCD has launched PC-Xware 4.0 PC X server software for Windows 95 and Windows NT, and announced its Web-Enabled X technology, which the company hopes will be adopted across the X terminal world. PC-Xware enables PC users to launch X Windows applications from Web browsers and the users need no knowledge of the host location, login script and the like. However this stuff is not meant for the Internet, just corporate intranets using web browsers. NCD's marketing director Clive Prout said "there is no standard for putting X Windows through firewalls", hence the confinement to intranets at the moment.

Broadway beta

The X Consortium is due to launch a beta of its Broadway tools in September, slightly later than planned, with the full version coming by the year-end. These will enable X Windows desktops to run X Windows applications from anywhere on the Web (UX No 568) and embed X Windows applications into browsers, said X Consortium marketing director Paul Lavelle. With Broadway, no code will actually execute on the client, unlike the Java paradigm. The key components of Broadway are remote execution, Web browser plug-in, security, Internet audio system and X.fast high performance Internet graphics protocol. NCD's PC-Xware does not have the security sufficient to operate over the Internet, or low bandwidth support, but the company says this is not necessary for intranets. And anyway, according to Prout, PC-Xware and Web-Enabled X will leave users on the path to Broadway, when it is eventually released. The Web-Enabled X technology integrates X applications into intranets and provides for centrally managed X connections, rather than being administered on each desktop. Mountain View, California-based NCD believes it will be first out the gate with such a technology. It will publish Web-Enabled X APIs in the second half. Novell Inc has incorporated Web-Enabled X into its LAN Workplace product and NCD is promising others soon. PC-Xware 4.0 also has Open Group branding. The company is offering two version of PC-Xware, both available now. PC-Xware Classic comprises just the PC X server, while PC-Xware Suite is the X server software, together with an NFS client and server, terminal emulation, a graphical keyboard remapper and FTP client. There is also a Unix and Windows 3.1 client available. The Suite for both Windows 95 and NT costs \$545 for a single licence and \$245 per user in 100-user packs, while the Classic costs \$395 and \$178 in the same numbers.

SUN AND NETWORK IMAGING BEDROCK TOGETHER

Sun Microsystems Inc has teamed with Network Imaging Corp in an alliance dubbed Project Bedrock that brings together Sun's SunScreen firewall and security technology with NIC's IView storage management system. There's no new products, just a non-exclusive joint marketing and integration effort. The first systems integrator signed up for Bedrock is Lockheed Martin Information Systems & Technologies. The combination of Sun's SunScreen turnkey firewall with NIC's IView:WEB Multimedia Object Manager (WebMOM), which provides the link between corporate intranets and the IView storage management system, will, say the pair, enable the safe deployment of Web based applications across intranets and the Internet.

GENERAL MAGIC LETS AGENTS LOOSE ON THE INTERNET

General Magic Inc's original business model has had to go onto the back burner following the failure of hand-held communicators to catch the public's imagination as it had hoped, but the company now hopes that its early start on intelligent agent software will enable it to build a business on the Internet and steal a march on other companies working on similar technologies. The advantages General Magic has are that its Telescript-based Tabriz AgentWare scripting system can already create mobile agents capable of travelling from one Web site to the next, and includes built-in security and software for automating transactions. Tabriz AgentWare prospects through millions of Web sites to find data, and then notifies the user by pager, facsimile or electronic mail that the search is complete. It costs \$5,000 and runs on Unix servers. A test version running under Microsoft Corp's Windows NT server is expected in the autumn. General Magic is providing a package of development tools free of charge. Its Magic Cap-based Presto!/Links browser and Presto!Mail electronic mail software for the Internet are now also available for the communicators sold by Motorola Inc and Sony Corp at \$50. Investors in the Sunnyvale company include AT&T Corp, Motorola Inc, Apple Computer Inc, Nippon Telegraph & Telephone Corp and Sony Corp. As a result of its flotation in February 1995, it has \$97m in cash, which is going at \$3m per month.

CHECKPOINT SEEKS \$50M TO FUND NORTH AMERICAN GROWTH

Israeli Internet security provider CheckPoint Software Technologies Ltd, which filed to go public on NASDAQ, offering 3.4m shares for the US, 800,000 internationally at \$13, will use proceeds to develop its North American sales and marketing operations and spend more on research and development and its administrative infrastructure, further cutting into its operating margins. CheckPoint spent \$1.1m last year on research and development and \$378,000 for the three months ended March 31. It plans to move to more systems and is beta testing its FireWall-1 for Windows NT, the FireWall-1 Management Module for Windows95 and SecuRemote client encryption software. It has almost completed implementing FireWall-1 for Bay Networks routers. It plans to enhance its graphical user interface and support additional encryption standards. The firm's existing shareholders will still hold about 86% of the company after the offering; CheckPoint's bookvalue was \$7.8m on March 31. After losses of \$116,583 in 1993, its first year of operation, the company made a profit of \$4.8m on revenue of \$9.5m for the year ended December 31. Its most recent results show profits up 228.4% at \$2.8m on revenue up 195% at \$4.8m for the three months ended March 31. Total investment in the company was \$7.8m as of March 31, 1996, with working capital of \$7.2m and total assets of \$11.3m. CheckPoint expects its margins to decline this year due to the lower price of its latest security product, FireWall-First! compared with its Internet gateway and enterprise security packages. It claims it has shipped 40% of all firewalls in 1995. Royalties to third parties and increasing competition will also contribute to lower margins. The 49-person company is heavily dependent on three resellers, which together accounted for 80% of revenue last year, and says it will continue to rely on a narrow channel for its products. Its largest reseller, SunSoft Inc, represented 64% of CheckPoint's revenue last year; Forval Creative Inc represented 13%; and Internet Security Corp accounted for 11%. SunSoft has the right to terminate its contract with CheckPoint with 12 months' notice from the end of next year. CheckPoint believes its relationship with SunSoft is stable, but SunSoft's parent, Sun Microsystems Inc, has developed a rival product, SunScreen, which may endanger the arrangement. In the network security arena, the firm says its main competitors are America Online Inc subsidiary Advanced Network & Services, Border Network Technologies Inc, Harris Corp, Morningstar Inc, Raptor Systems Inc, Secure Computing Corp, Sun and Trusted Information Systems Inc. Its enterprise network market rivals include Cisco Systems Inc, Digital Equipment Corp, IBM Corp and Microsoft Corp. Another competitor on the horizon is AT&T Corp, which will soon launch a line of network security products. Another threat comes from Compaq Computer Corp, which recently took a financial stake in Raptor and agreed to bundle Raptor's network security software with some of its line. CheckPoint could face problems in light of its OEM deal with RSA Data Security Inc, from which it licenses encryption technology. RSA is in litigation with Cylink Corp, which claims RSA's encryption technology infringes on its patents and that it therefore it has no right to sublicense. If Cylink wins, CheckPoint may be required to pay damages and royalties. CheckPoint established a US subsidiary in 1995. Its research and development and main offices are located in Jerusalem.

APPLIX PROMISES DATA ANYWHERE ON THE INTERNET WITH JAVA

Applix Inc's morphing further from its real-time spreadsheet roots, claiming to be targeting decision support and rapid application development markets with the release of Applix Anyware tools for building and deploying applications over the Internet or LANs. In short Applix is giving its spreadsheet and existing Applixware tools a Java makeover as Applix Anywhere and targeting a number of verticals, including manufacturing, banking, finance, human resources and securities. Anywhere WebSheet is the Java-enabled spreadsheet, providing what Applix says are 600 functions and links to other relational and OLAP databases. It can read and write Microsoft's Excel and Lotus 1,2,3 spreadsheets. The spreadsheet applet uses about 1.5 Mb with downloads taking about a minute over a 28.8k connection. Initially Applix will sell it into its 5,000-odd existing financial accounts. The company's word processor, graphics, email and Applixware modules will also be Java-enabled. An Anyware server is up on Sun, SGI, HP, IBM and DEC Unices and costs \$5,000. Anyware RealTime WebData is needed for SQL database access and costs \$200 per concurrent user. It supports Oracle, Informix, Sybase and CA-Ingres, as well as Arbor Software Corp's Essbase. Anyware Web RealTime enables data to be retrieved from Reuters, Bloomberg, Dow Jones/Telerate, TIBco and other data distribution vendors and costs \$1,000 per user. The Anyware tools are Innovators Workbench, WebSheet Innovators Extension and WebRealTime Innovators Extension. The Workbench will go for \$2,500. There's also a starter kit for \$10,000 and volume discounts apply. Applix did \$32m last year and has added four new employees in the UK. It's also inked a co-marketing deal with Natick, Massachusetts-based Mathworks Inc for Applix Link - an interface between their respective Matlab and ApplixWare products. The deal will enable bond traders and the like to use the real-time spreadsheet to capture live data, process information via Mathlabs built-in math functions with 3D graphics. Applix Link costs \$1,000.

ADOBE GIVES OUT FREE 'HOTAMALES'

Adobe Systems Inc has released its HTML export utility for FrameMaker 5.0, its text-intensive publishing software, as part of a continuing revamp of the product it acquired after acquiring Frame Technologies last year. Adobe says it'll also change FrameMaker's interface to look more like its other products, adding more color options and improving useability with things like dialog boxes. FrameMaker already includes some HTML export capability, but Adobe's HoTaMaLe now allows users to save text and documents directly to HTML and uses a dialog box to adjust mapping of paragraphs and characters to HTML tags and formats. Users can download HoTaMaLe from Adobe's web site.

DEC CLOSURES COLORADO PLANT

The death by a thousand cuts continues at Digital Equipment Corp where the next limb to be amputated will be the manufacturing plant in Colorado Springs, Colorado; most of the work will transfer to its plants in Salem, New Hampshire and Ayr, Scotland. The plant integrates DEC's storage subsystems, which originally used drives made by the company, but has used disks bought OEM since DEC sold its disk manufacturing to Quantum Corp. "There will still be a little over 1,000 people employed in Colorado Springs," the company said, "But they won't be in manufacturing." About 250 permanent and 150 temporary employees will be affected. They will be offered a financial support package, including health coverage for their dependents and help in finding jobs.

DEC'S MYSTERY ALPHA SECOND SOURCE, PARTNER TURNS OUT TO BE SAMSUNG

Digital Equipment Corp has finally won another second source for the Alpha RISC in the shape of Samsung Electronics Co Ltd, which turns out to be the company that will take some space at the Hudson, Massachusetts fab. The aim is for Samsung to develop and support a high-volume market for products based on the Alpha RISC. Samsung is expected to produce its first Alpha chips in 1997, but as is usual in these cases, a potential conflict arises because Samsung is already a partner on Hewlett-Packard Co's Precision Architecture RISC.

DATAPRO REPORTS UNIX BUSINESS HEALTHY

A new Datapro survey suggests Unix spending will grow at a rate of 8% through the year 2000 whilst "non-Unix" purchases, including Windows and NT, will decline by 8%. It shows Solaris in use at 40% of the sites it surveyed, HP-UX at 36%, SCO OpenServer/OpenDesktop at 34%, AIX 31%, DEC Unix 18%, Unix SVR4 (presumably including UnixWare) 17% and Linux 11%. Datapro says Solaris is strongest in the Americas whilst Europe and Asia/Pacific markets prefer SCO Unix and HP-UX respectively. It believes the demand for Internet products is strangling growth of C-based development tools which it reckons has topped out at 61%, with 7% growth forecast for 1996. Java and HTML purchases will grow by 26% and 20% respectively in the same period.

D&B SOFTWARE GOES IN BAIN CAPITAL-BACKED BUYOUT

Dun & Bradstreet Corp, which put its Dun & Bradstreet Software unit up for sale at the beginning of the year, has agreed to let it go in a buyout financed by Bain Capital Inc of Boston. Dun & Bradstreet is splitting into three free-standing companies, but while Cognizant Corp, which will look after its high-growth information businesses will retain 27% of D&B Software, the \$160m in cash and \$50m in preferred stock that Bain is issuing to take a majority stake will go to the "new" Dun & Bradstreet, which is to be focused on financial information services. Principals and employees will also have a stake in the new company, which has found itself a new name - why not Management Science America? The software company is now headquartered at the old Management Science America base in Atlanta where it used to be run from the old McCormack & Dodge base in the greater Boston area. Bain Capital was also an investor in Gartner Group Inc. It is expected to float the re-born software company in the medium term.

BORLAND LICENSES TOOLS TO BUILD A BETTER C++ SUITE

Borland International Inc said it is still "moving full steam ahead" with C++ despite the industry's current Java-fever and yesterday announced it will add Object International Inc's technology to its C++ design tools suite to allow developers to design and code simultaneously. The Scotts Valley, California-based company has added Object International's object-oriented analysis and design tool (OOAD), called Together/C++, to its Borland C++ Development Suite with Design Tools 5.0. Borland shipped the 5.0 suite a few months ago, but said the OOAD technology wasn't ready at that time. Together/C++ includes three tools, a scenario view editor, object model editor and information export. Borland C++ with Design Tools 5.0 costs about \$850. Current development suite 5.0 users can upgrade for \$500 and Borland C++ owners can purchase the product for \$600. Borland says it expects to ship the product this summer; expect it at the end of July.

NETSCAPE ADVANCES PLANS TO TURN NAVIGATOR INTO OPERATING SYSTEM

Netscape Communications Corp is taking very seriously indeed the role in which it has been cast by the likes of Oracle Corp and Sun Microsystems Inc, that of last bastion against the seemingly unstoppable Wintel hordes, and according to *PC Week*, in the next month will create a new subsidiary to focus on creating software for non-iAPX-86 machines, primarily Network Computers, Personal Digital Assistants and television set-top boxes - and later in the summer, it will reveal a comprehensive strategy to position its server software and browser as a next-generation Internet-based operating system. "Major new releases of our browser is a 12-month thing," chief technology officer Marc Andreessen told the paper - "Major releases of operating systems like Cairo or Copland take five years," so that any developments like Java integrated into them is outdated the day the new release ships. The only difference technically between Navigator and a traditional operating system is that Navigator will not include device drivers, Andreessen told the paper.

OBJECT-ORIENTATION AND OTHER MYTHOLOGIES

by Les Hatton, Programming Research Ltd, UK. From our sister publication *D3*.

I have been threatening for a little while to put the boot into OO, so Joone seems a good time to write this. This article is therefore an open challenge to the many practitioners of OO out there to prove systematically with appropriate data that OO delivers any of the benefits which have been promised for so long.

Let me present my case first. OO is intended to mirror the way we think and is therefore considered to be self-evidently better than whatever it is we were doing before. In other words, it is once again a triumph of intuition as an alternative to the scientific method. It has generated an entire dictionary of poorly understood new concepts such as polymorphism, inheritance, encapsulation and so on. Enough money has been sacrificed on the altar of this particular belief and it is time that we saw some tangible proof or disproof. Here is some disproof. My own company happened to have two significant (both > 50,000 lines) but comparable projects, one written conventionally in C and one written using OO design and implementation methods in C++. Both projects were produced by experienced people. We have a complete change and fault history so I decided to analyse these records to measure the corrective maintenance benefits of using C++ instead of C. These benefits are supposed to include more reliable systems and ease of change. After going through over 3000 change records, I extracted the 12% relevant to corrective change to be confronted with the fact that the C++ system has a defect density some 25% MORE than the C system and that each defect took on average twice as long to correct. Even the simpler ones took longer, so the whole distribution is right shifted. In other words, using C++ instead of C has increased our corrective maintenance overhead by nearly 300%. (Note that on average 50% of all maintenance is corrective). Shortly afterwards, I read Watts Humphrey's admirable *Personal Software Process* book to find that he included data showing that C++ led to significantly higher correction costs than equivalent Pascal projects. Finally, I have just received further evidence from Professor Walter Tichy at the University of Karlsruhe, an authority on software measurement, which showed exactly the same effect. When I show this data to OO people, they usually say, "that's because you aren't doing OO right", to which I answer, "show me your data then", to which they answer "we don't have any". My current view is that the data suggests that OO does not deliver any of its advertised promise and is simply a different rather than better way of doing things. Now I have only seen C++ data and I know that many OO people are devotees of other languages, however there appears to be no data at all for these. So here is my challenge to OO developers. Please start acquiring data, because so far, things don't look promising for this paradigm, however much fun you're having. les_hatton@prqa.co.uk; <http://www.prqa.co.uk/>

SOFTWARE REGISTRY OPEN FOR BUSINESS

The painstaking process of creating and then getting software standards adopted by vendors isn't any guarantee that applications developed on those vendors platforms are then any more portable, so X/Open Co Ltd this week formally introduces its online Open Software Registry service ~~designed to supply software buyers with information about the inter-product dependencies, standards conformance and portability of any tested C code (UX No 582).~~ X/Open is offering a \$600 per-seat "Lite" implementation of MKS' Code Integrity API tester which ISVs can drop into their build processes to analyse source modules as the build proceeds. The tool, which MKS will also sell, includes an X/Open-supplied database of Unix 95, X Windows and Motif APIs initially. ISVs will pay \$1,000 to have API information from up to two of their tested applications recorded in the Registry; first applications will be listed in three months time. MKS' Code Integrity is a productised version of the TenDRA compiler technology developed by the UK's Defence Research Agency. A C++ version will follow in the autumn. The tool checks API calls like a C compiler but uses a set of supplied Architecture Neutral headers instead of vendor or third-party ones, thus pin-pointing non-standard items referenced by the code. The tool reports what percentage of an API set is called and which non-standard calls are being made. X/Open says that because the tool checks against a reference set of Architecture Neutral headers, the code for many different platforms can be checked just once on a single development platform.

Confusing

The tool is currently available for SunOS 4.x and Solaris 5.x for Sparc, Linux for Intel 86, HP-UX on PA-RISC and AIX on IBM RS/6000 initially. X/Open had expected to offer an ODBC API database alongside those for Unix 95, X and Motif but says the whole ODBC effort has become so confusing that it's deferring to its own Data Access Brand which will be published by year-end. It's seeking additional funding to make Common Desktop Environment and Distributed Computing Environment API databases available for testing against. It will also publish details of the mechanism for getting the API references into the MKS tool so other tool vendors such as Abraxus, Parasoftware and Knowledge Software could create similar offerings. X/Open hopes the Registry will eventually be expanded to test "socket" technologies as well as application "plugs" It's already using Sun Labs' Assertion Definition Language (ADL) to generate API test suite documents for OMG's Corba 2 "socket," its first large-scale use of ADL. Although TenDRA's Ptech notation is currently incompatible with ADL's C-like syntax (UX No 561), X/Open says it won't take too much work to bring them together in a future rev of ADL supporting TenDRA and other test tool syntaxes. However there isn't much point in trying to match plugs to socket specifications that don't yet exist, it observes. X/Open says a survey carried out on its behalf by World Market Strategies suggests 87% of users want the option of choosing software products which comply to agreed open standards.

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Shares in **Apple Computer Inc** have plumbed new lows, slipping below \$20 and putting them right into the territory that **Sun Microsystems Inc** said it might be prepared to buy.

Shareholders of **Concurrent Computer Corp** and **Harris Computer Systems Corp** both approved the merger of Harris's real-time computer business into Concurrent, of Oceanport.

NCD Software plans to propose its Web-enabled X technology to the industry as a means of integrating X applications with the Web. Its PC-XWare 4.0 will reportedly be the first X server to run X applications over the Web, giving PC users the ability to use X applications with a Web browser interface.

What with **IBM, Novell, Apple, HP, Hitachi, SGI, SCO, Tandem, Microsoft** and **SunSoft** all embedding Java in their operating systems, the Gartner Group frets that Java will go the way of Unix and fragment. Since licensees are encouraged to innovate and since JavaSoft may or may not make the innovations part of the base platform, Gartner says "this sounds suspiciously like the arrangements that have plagued Unix since its inception" and warns of proprietary extensions that diminish its interoperability. "In the long term," it says, "Java will not create any more of a standardised environment than Unix." Gartner has also recently cautioned its clients to expect incompatible Internet server API enhancements from the various vendors. It figures Netscape's inconsistent API strategies like plug-ins, Java, NSAPI and JavaScript "will create dead-end development paths."

Keenan Klinger, **Axil Computer Inc's** VP of North American sales has gone to Milpitas, California system integrator **Acropolis Systems Inc** as VP of sales and marketing.

Oracle has lit out after **Lotus** and **Microsoft** Exchange and tried to bar the door of the enterprise to Netscape's promised Orion kit, the next-generation SuiteSpot servers whose pieces are six to 18 months out, with InterOffice, the groupware once code named Pegasus (UX No 595). InterOffice is part of Oracle's BackOffice rival, the erstwhile InterOffice suite, now renamed the Universal Server Suite to avoid confusion. In the Universal Server Suite it is meant to be part of a total turnkey solution for smaller companies. Unleashed, it is bound for the enterprise. The InterOffice messaging server is \$95 per mailbox; the InterOffice document management server is \$395 per concurrent user. They'll debut as options to Universal Server.

Internal skuttlebutt at **DEC** has put Component King Charlie Christ in the running to take some of the titles CEO Bob Palmer has collected off his hands, according to our sister publications *Client Server News*. Armchair speculators wonder how long Palmer can go around being chairman, CEO and president. They also notice that the end of DEC's fiscal year is coming up. What better time to anoint a second-in-command, the reasoning goes. It's also believed Christ will edge Semiconductor overlord Ed Caldwell out. DEC, meanwhile, isn't having all that brilliant a time of it financially and has reportedly tightened its belt by not paying contractors and suppliers.

Giving aid and comfort to its **Sun** and **Oracle** critics, **Microsoft** estimates that 70% of Word users never touch its more advanced features and 85% never use its "solutions features" like embedding live Excel spreadsheets into text documents. It's a mere curiosity since in future it'll all be built as objects. Redmond's using the findings as a guide to how much to build into the core feature set, which uses about 4.5Mb of RAM and eats 9Mb of drive space. Features not in the core set may not even have to be installed on corporate desktops. Instead they would be downloaded from a corporate server on an as-needed basis.

Hewlett-Packard Co is to realign its computer sales and marketing around three customer segments: retail consumers, commercial resellers and enterprise accounts. The Consumer Sales and Marketing Organization will develop and manage a program aimed at individual and small business retail consumers; the Commercial Channel Sales Force will target value-added and high volume reseller channels serving businesses of all sizes with the Enterprise Sales Force focusing on the company's largest end-user customers.

The models for making money on the Internet look less and less convincing because everyone is so scared of asking users for any money that they all depend on advertising - and there just isn't going to be enough to go around, but few look more unlikely than the one proposed by **CyberGold Inc**, an Internet start-up company in Berkeley, California that has come out with a system that will pay Internet users to view ads that have been automatically targeted to fit their interests. The catch is that you get paid in CyberGold, digital currency you can only spend on the CyberGold system, although it can be used for paying Internet access charges. You also get tested on the ad before you get the CyberGold; the company and concept are the brain children of Nat Goldhaber, the company's chairman and chief executive, who formerly headed the **Kaleida Labs Inc** joint venture between **IBM** and **Apple**.

Chicago, Illinois-based **Cyborg Systems Inc** has released version 2.5 of its Solution Series/ST human resources management system, adding support for Oracle for SCO Unix, CA-Ingres for Unix and DB2/400 for AS/400, as well as so-called Visual Views of relational tables for expanded security and reporting capabilities. It costs from \$70,000 to \$400,000 depending on product options and number of employees.

DEC VP and corporate controller Mick Prokopis is joining **Iona Technologies** as CFO.

The **Open Group** has duly announced its Common Desktop Environment 2.1 snapshot for Motif 2.0 licencees (UX No 555). The cut integrates OSF/Motif 2.0, X11 Windows and CDE and standardises the presentation of applications between Motif and CDE GUIs. It also includes an X-based print dialogue manager for setting up print jobs and spool queues for printers; upgraded session management, 64-bit support, integration of login information and French, German, Italian, Spanish, and Japanese versions. OSF CDE 2.1 snapshot code costs \$5,000 to Motif 2.0 licencees. The fee is waived for Open Group companies which have full support.

KPMG Peat Marwick LLP is to resell **Thinking Machines Corp's** Darwin software as part of its data mining programme.

NCR Corp has taken McLean Virginia-based **Nat Systems International Inc's** NatStar C-based application development tool OEM to target the financial services industry looking to do business over the Internet.

Voting for the delayed Metadata Coalition interchange specification is to be completed on June 30th (UX No 583). The spec is supposed to standardise the input and export of flat file data formats so they can be accessed by different tools and across multiple systems. Compliant tools are expected by year-end.

In the UK **IBM Corp's** PC Server 320 running **SunSoft Inc's** Internet software and Netscape Commerce Server will cost £6,700.

Data General Corp's OEMing **Open Market Inc's** Internet software for use with its B2 secure DG/UX and NT offerings where it'll be used in conjunction with **BDM International's** CyberShield to manage, monitor, record, and analyse Internet-based transaction activities over the Internet on DG AViiON servers.

Sun Microsystems Inc's is to begin offering the fault-tolerant ft-Sparc machines from its **Integrated Micro Products** acquisition as the 1500 and 1600 models from August worldwide. Targeted at telcos, the one-to-four way server and rackmounts use 80Mhz SuperSparc IIs and start at \$100,000.

Following rival **Sybase Inc's** alliance with **Verity Inc, Informix Software Inc** is to bundle **Excalibur Technologies Inc's** RetrievalWare text search software into its Universal Server as a set of DataBlades for the Informix-Illustra hybrid. Informix says it'll allow users to index, search and manage text and visual data, as native data types. The software will come free of additional charge. Further development will see DataBlade modules created around Excalibur's semantic network searching for visual search functions; real-time message filtering and real-time news profiling; video indexing and scene change monitors; automatic categorization of search results based on personalised profiles; a Web and Server crawler and indexer, and security features. Excalibur has created a dedicated, Informix DataBlade snap-in technology team, to deliver the modules.

DEC will reportedly be rising to the bait provided by **HP's** PA 8000 chip, currently acknowledged the industry's performance leader, and on July 1 will wheel out a 500MHz 21164 said to fetch 15 SPECint and 21 SPECfp. We're not exactly sure what the 8000 really does. We hear the SPEC numbers provided were obtained on a server even though the chip's sold in a workstation. Volume for the 500MHz widget is forecast for September. Meanwhile, price adjustments should kill off the 300MHz and 400MHz Alphas - a 433 looks like it will come in at \$1,500, \$400 cheaper than the 400 whose price is unchanged.

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ICL TARGETS SY VME/UNIX/NT HYBRID FOR MERCED...

As expected (UX No 590), ICL Plc's High Performance Systems business unit is going to corral its Unix, NT and VME mainframe server lines into a stable of heterogeneous multiprocessing systems (HMP) a la Unisys Corp ClearPath lead (UX No 585). It's targeting what it calls the SY systems line for Intel Corp's next generation 64-bit Merced chipset, on which it will run all three operating systems, but will build versions incorporating Pentium Pro and mainframe CMOS processor versions to begin with in the same cabinet that'll run Gemini - the merged UnixWare/OpenServer Unix - and VME respectively. First SYs will appear in the second quarter of next year as a new range of CMOS-based mainframes with up to 16 nodes that also contain Pentium Pros to run Unix. They'll have new disk subsystems and tape drives, ICL and third party peripherals and run a new version of the OpenVME operating system single system image software. ICL says they'll do between 10 and 500 MIPS. A single node LY offering will be aimed at the low-end. SY and LY will replace the Series 39 OpenVME ECL-based systems which deliver 10-to-250 MIPS. Towards the end of 1997 a DY will be introduced to replace the DX CMOS-based OpenVME systems. They'll deliver from 1-to-10 MIPS. DY systems will use Pentium Pro and also support Gemini. By the end of the century the company expects to be able to offer OpenVME, Gemini - or whatever it's called by then - as well as NT on a single Merced-based system design. It expects OpenVME to be present in 50% of these systems, Unix in 40% and NT on at least 10%. The High Performance Systems (HPS) unit will sell the systems direct; the Volume Products Division is responsible for ICL's Sparc and Intel server offerings. HPS claims to have over 25% of the UK's 8,000-odd corporate accounts. ICL says the prohibitive cost of maintaining its own CMOS design and the lack of ISVs which will now port new applications to the series 39 has forced the consolidation upon it. It's talking up the suitability of heterogeneous systems for its local government and financial vertical markets and the so-called move towards centralised IT departments amongst Fortune 1000 companies.

....READIES NUMA AWARDS, DAMS NILE FLOW

In readiness for the hybrid systems, ICL will junk its OEM agreement with Pyramid Technology Corp under which it sells the company's Nile Unix SMP servers. There's a stay of execution currently hanging over its own Goldrush massively parallel processing system for which it's garnered only a small handful of customers. It spent \$42m developing the £300,000- to-£10m system. It says some of the Goldrush technologies may find their way on to the ccNUMA-based systems running Gemini that it is OEMing from Data General Corp beginning in the second quarter of next year. It'll call its own offerings the Award line. How much of Goldrush finds its way into the Awards depends upon how fast the DG plus Gemini combination scales beyond four nodes, configurations not expected until 1998, according to ICL.

WEB PUSHES X CONSORTIUM OUT OF THE WINDOW

The growth of the Web will send a vast number of technologies and organisations to meet their makers. The latest to fall to its clutches is the X Consortium, developer of the X Windows graphical networking system for Unix. The Cambridge, Massachusetts-based not-for-profit organisation will wind up all of its activities and pass all of its technologies and intellectual property rights over to the new-fangled Open Group software development-cum-standards body by year-end. The Consortium admits the Web has brought X to the end of its development life and has already detailed plans to allow X Windows users to access applications from Web browsers via a new X release due by year-end called Broadway plus plugins (UX No 568). X Consortium says that with most vendors' development resources going into building Web-based technologies, there's been less and less demand for innovative development on the Unix operating system and therefore on X Windows. Its own charter doesn't extend beyond the X world and it said it would have needed up to \$10m to begin to develop off-Broadway attractions, funding vendors weren't interested in providing. Although few applications are any longer developed exclusively for X Windows, it doesn't mean the graphical networking technology will be going away in a hurry. All of the Unix hardware vendors still ship X as the key graphics component of their Unix system software. Long-time X Consortium president Bob Scheifler says the technology "has matured to the point where a dedicated consortium is no longer essential to its on-going support." X Windows was created under the Massachusetts Institute of Technology's Project Athena programme; the first version was released ten years ago. The not-for-profit X Consortium was spun out of MIT in 1993 in the middle of the Unix GUI wars when Sun Microsystems Inc and Open Software Foundation members were trying to establish their respective X-based Open Look and Motif graphical windowing systems as the de facto interface for Unix. The rise of the Web is the biggest testament to what a waste of money the GUI wars were. By the time a peace settlement managed to bring a bastard child, the Common Desktop Environment (CDE) to life, most of the industry was already more interested in developing for the Internet. X Consortium became the prime contractor for development of Open Software Foundation CDE and Motif and will deliver final versions of both along with X Windows to OSF's successor, the Open Group, by year-end. X Consortium has more than 30 engineers, none of whom are expected to move over to the Open Group, although all are expected to find other jobs by the time the Consortium closes its doors. Remaining work will be sub-contracted out if it finds itself bereft of staff before then. Fujitsu Ltd is now responsible for the Consortium's project to specify a user-interface system in OMG's Corba Interface Definition Language.

OPEN GROUP TO CHALLENGE SUN WITH CLEAN JAVA CLONE

Unhappy with Sun Microsystems Inc's licensing policy for Java, the Open Group's Open Software Foundation Research Institute is working on a complete clean-room implementation of the language, reports sister paper *OnLine Reporter*. Creating a complete second source for the language, free from Sun's control will also open the way for Java to be considered as a de jure standard, according to Vania Joloboff, Java project manager at the Research Institute's Grenoble-based labs. Though Joloboff is based in France, the clean-room implementation, now code-named Osmosis (Javelin was already taken) will take place in Cambridge, Massachusetts. French researchers have examined some of Sun's source code and are therefore deemed "contaminated." Until now, the rush to license Java from Sun has been virtually unanimous, the one notable exception being OSF luminary Digital Equipment Corp, which is thought to be pushing the project. "Just because people have paid the fee doesn't mean they are happy" said Joloboff, who declined to name Osmosis' sponsors. The laboratory is seeking additional funding to speed the project's progress (UX No 577). Without it, the alternative Java implementation should be completed within 18 months. With it, progress will be much faster, he said. Unlike Sun, the Open Group plans to make its code available royalty free, after an initial payment. Licensees will receive unrestricted rights to its use. Sun will face a dilemma as it weighs up the benefits of being seen to be open on the one hand, and the potential loss of control and revenue on the other. Joloboff would not comment on any feedback he had received from Sun, but says he does not foresee Osmosis being halted by substantial legal problems. "Sun is protective of the Java trade mark, but I believe that Sun will actually put in place a programme to enable clean room implementations," he says. His concern is that alternative implementations should be free to describe themselves as being "Java" without getting a trademark suit slapped on them.

JavaLite

Meanwhile, OSF is also venturing into Network Computer OS territory with a JavaLite project. Though superficially akin to Sun's own JavaOS, JavaLite isn't that Lite - Joloboff says it is aimed at corporate desktops. The initial release of the operating system will need a gross 16Mb of memory or so, at least in the first iteration, but will get skinnier with time. It's based on OSF's Mach-derived microkernel, with an emulation of Sun's Java Virtual Machine on top. However the plan is for Osmosis eventually to replace all the Sun-derived components in JavaLite, giving the Research Institute a complete top-to-bottom Sun-independent Java execution environment. History buffs will note that the Osmosis (Javelin) project goes right back to OSF's roots as an organisation created to challenge what was then seen as control of Unix by AT&T Corp and Sun.

CHEN REFUGEES WILL RENAME COMPANY AND CARRY-ON REGARDLESS

As the dust settles round the proposed sale of Chen Systems Inc's server business to Sequent Computer Systems Inc, the software remainder of the company says it will change its name ~~and carry on regardless. Sequent is buying the hardware assets~~ of Chen and the yet to be renamed software concern will be lead by Chen's current chairman of the board Paul Limb, as would be president and chairman. It hasn't appointed a CEO just yet, but current manager of product development Kitrick Sheets is understood to be in the running. The new company will start life with twenty employees; the other 30 are going over to Sequent. It's promising more details in August, but claims it is already close to completing a port of its AutoPilot suite of dynamic performance and optimisation capabilities to Windows NT that's expected over the summer. It figures NT is where its best opportunity lies, but says it's also talking to a bunch of other possible OEM RISC vendors. AutoPilot is considered to be a key component of Chen's technology and in its original manifestation included hardware and software that automatically optimised I/O and processor performance and balanced the application workload across the one-to-eight way 133MHz Pentium Chen-1000 servers. Subsequently Chen developed the technology as a software only solution. AutoPilot enables system administration and application development with manual fine tuning and acts as an intelligent scheduler preventing increases in bus connections. It predicts bus saturation levels and impacts the way tasks hit the system bus enabling processors to operate at up to 80% of their capacity, claims the company. AutoPilot currently comes with the Chen-1000 systems running Santa Cruz Operation Inc's UnixWare 2.0. Sequent is said to be interested in AutoPilot and as part of its deal with Chen has licensed the software (UX No 596). SCO is also supposed to be using Chen technologies - including AutoPilot - to scale UnixWare (UX No 587).

OSF EVALUATES FUTURE INTERFACE REQUIREMENTS

Open Group's OSF wing says it's members are currently evaluating what to include in the next generation of desktop technologies that'll be delivered through point releases of CDE or as add-on items. These will arrive well after the X Consortium delivers its final cuts of X/Motif/CDE at the end of the year. Although the goal, OSF says, is to deliver technology that can be incorporated into a common, integrated desktop, it says it's unlikely that one of its pre-structured technology initiatives will be created to develop another complete desktop metaphor. As well as items for data execution independent of location, local and remote file access and common online tools, other work at OSF's Research Institute in Grenoble including, Java technologies - *see page 1* - are being assessed as future desktop releases. Indeed the same companies funding the Institute's work are expected to shell out for the next round of desktop PSTs.

PARSYS TO BUILD CUSTOMISED DEC BOXES

London massively parallel processing house Parsys Ltd is OEM-ing Digital Equipment Corp's 21066 and 21164 Alpha chips and a bunch of communications technologies - including DEC's 100Mbps PCI bus Memory Channel interconnect from Alpha partner Encore Computer - to build low cost, scalable, parallel processing systems. The new systems will be dedicated boxes, customised for application development in the scientific sector. It's studying the commercial market for opportunities, it says. Parsys admits the networked workstation has eaten into the traditional transputer market, and claims its dedicated approach is just what the scientific market needs. It'll include its DS -link for communications where required. The DS link includes a control transputer with up to 16Mb of Dram for disk and tape access via a SCSI interface. Parsys' current range of machines are based on the Inmos T805 and T9000 Transputers. Parsys' Supernode 9000 series uses a hybrid processor board combining Alpha for horsepower and T9000s for communication. It's still working on a price strategy for the customised boxes, but says its already shipped one system to Germany.

AFTER X TERMS, IBM SIGNS NCD FOR NETWORK COMPUTERS

After giving its X terminal business and installed base over to Network Computing Devices Inc (UX No 579), IBM is to farm out some of its Network Computer design and manufacturing ~~work to the company, although the machine in question is~~ described as a "network application terminal." Under the agreement, IBM will fund a portion of Network Computing's development efforts and will buy a substantial portion of its 1997 and 1998 requirements from the Mountain View, California firm - but only if key design and manufacturing requirements are met. IBM will be under no obligation to make any purchases until the development phase has been successfully completed and IBM has started volume shipments. Network Computing has already laid the groundwork for a Network Computer with its Explora terminal and its Citrix Systems Inc WinFrame-based WinCenter software, but it could be starting development of the IBM terminals with a clean slate. One usually reliable source suggests that the machine is the embedded PowerPC 403-based device developed by the AS/400 team in Rochester. That is a diskless unit that measures 1" by 10" by 8", and at start-up downloads Web browser, TCP/IP stack and Java Virtual Machine from a server (UX No 591). But it could be a device that includes Network Computing's WinCenter, which runs Windows and X Window applications over a network.

APACHE WILL BE CORE 64-BIT SOLUTION - NO DECISION ON 620; 604-BASED RS/6000 MULTIPROCESSORS DUE NOW

IBM Corp says its long overdue 112MHz PowerPC 604 upgrades for the RS/6000 G, J and R series servers will be generally available this month and will be supplied free of charge to 601 customers. The 604 was originally due mid-1995 (UX No 506). The PowerPC servers are based on the eight-way micro channel architecture (MCA) bus Escala system designed by Compagnie des Machines Bull SA and IBM. It reckons the things will go to around 5,700 tpmC. There will be a 150MHz upgrade six months later; the 604 is scheduled to go to 300MHz. As expected the 604 units will also become available for the SP PowerParels as the first PowerPC and SMP nodes the high-end solution supports (UX No 580). As for 64-bits, the RS/6000 SMP people tell us that its own design will be the core product offering, even if Bull does manage to create a workable PowerPC 620-based solution. It says it's made no decision whether it'll offer a 620 system yet. RS/6000's Castor design uses the Apache PowerPC 625 variant of AS/400 division's multi-chip PowerPC AS, with frame, power supply and other components coming from the PC Server group (UX No 593). For the technical compute workstation crowd, 135MHz Power 2 SuperChip (P2SC) workstations will be announced in a few weeks, with general availability by year-end. They'll also be available as SP nodes. Meantime, IBM denies Meta Group claims that the delay in introducing 604 SMP systems have hurt its market standing; it says IDC numbers show its has 20% of the mid-range and high-end commercial SMP space, with HP at 17% and Sun on 7% and it claims it's ahead of its 1996 forecast at this point. Its says most of its RS/6000 customers have told it they'd like to try out Windows NT on their systems, especially for workgroup environments; Big Blue expects NT-on-RS/6000 to become a significant business next year.

DEC RECLAIMS PERFORMANCE LEAD WITH 500MHz ALPHA

Last Tuesday's corporate announcement - *see page 3* - upset the planned announcement of a prized 500MHz Alpha chip scheduled for Monday July 1 which was to reclaim performance leadership from HP, whose PA 8000 has held it briefly. Corporate tried to postpone the announcement until next week but it got out anyway because of editorial briefings last week. The top-of-the-line 21164 is a 2 BIPS - 2,000 MIPS - machine capable of 15.4 SPECint and 21.1 SPECfp with volumes projected for September. An accompanying 433MHz 21164 is said to offer 13.3 SPECint and 18.4 SPECfp. The 500, sampling now along with boards and form factors, is expected to keep DEC ahead of Intel Corp even as the Pentium Pro goes to 0.28 microns next year, it said.

DEC TO FIRE 7,000 MORE AS PERSONAL COMPUTERS SOUR

By Maureen O'Gara

Digital Equipment Corp donned sackcloth and ashes again last week to lament the close of another bad quarter, its shares tumbling \$5.50 to \$41.37 on the day. This time the company's number two Enrico Pesatori, head of the chief trouble spot, DEC's PC operation, was made a living sacrifice, forced to resign effective immediately after three years with the company. However he's not going alone. DEC said it would dismiss another 7,000 people over the next 12 months, a solution that will immediately cost it \$475 million in charges. This 7,000 figure comes on top of the 8,000 jobs DEC now admits it quietly cut in the year just ended, 6,000 of them in the June quarter alone. Combining the 6,000 and 7,000 figures indicates that recent speculation of 10,000 jobs being lost, reported by our sister publication *Client Server News*, was in fact conservative. It is believed DEC will normalise its employee roster at around 50,000, down from a high of over 120,000 some time back. Half the across-the-board layoffs are expected to come from sales and technical support, with DEC reasoning that trimming will be easier since it has been collapsing units in on each other and they can share support. As we went to press there were also rumors of UK and Irish PC operations being sold. Final results of the June quarter, DEC's fiscal fourth, just closed last week, won't be available until July 30 but the company described early tabulations as "well below expectations." PC losses specifically were called "considerably worse than in March" when DEC hid much of its dirty linen and said only that PC sales were down 10% year-over-year. The PC unit is dragging down the entire corporation with earnings for the fourth quarter again expected to be "well below March" which were \$124m or 74 cents a share. Wall Street analysts believe all this rigmarole means the company will be 35 to 45 cents in the black in the fourth quarter, with PCs losing roughly \$80m and costing it 50 to 70 cents a share. However, they say the first quarter, the September quarter, a notorious weak time for DEC, will also suffer, with the corporation losing perhaps 5 cents a share and only picking up again in the December quarter.

Turning sour

Besides the PC crisis, DEC's also suffering from business turning sour for it in Europe where it's used to getting a whopping 43% of its revenues, more than most of its competitors, and where obviously a severe miss is critical. It's anticipating a revenue shortfall there of \$150 million, half of it due to poor sales; 40%-50% of it perhaps related to currency. Germany, a known problem, was described as "most disappointing," followed by France and Switzerland. The three countries represent a third of DEC's business. The stock market reacted immediately to the overall news and trimmed \$4.00 off DEC stock to about \$41.00 within a half-hour of DEC's early morning call to trading houses. DEC CEO Bob Palmer blamed the company's European showing in part on its failure to understand local distribution. There is no pan-European distribution vehicle yet it cut its direct sales effort too deeply without recruiting enough third parties to pick up the slack, losing it customers. It will now double the number of European accounts it handles directly and attempt to improve channels. It also said its printer and memory interests were unprofitable and that it would exit the \$125m memory business. Printers, responsible for some \$200m in revenues, could go by the same route.

Collapsing

DEC is now apparently willing to consider that its PC business, which it has been selectively collapsing in the face of continued losses, may now not be large enough to justify that the company make its own boxes though design and manufacture isn't its problem, according to Palmer, forecasts and distribution are. PCBU general manager Bruce Claflin, the PC guru DEC brought in from IBM at the end of last year, is supposed to come up with "risk averse" recommendations on what to do imminently. DEC may find it best to retreat, as NCR Corp has done, to an OEM PC model. Pundits are kicking three names around - Dell, Compaq and AST Research, whose financial backer Samsung recently cut an Alpha alliance with DEC. Wall Street has given every indication that it would look favorably on such a move. However, DEC obviously has to move with some trepidation in this direction so as not to upset its strategic Windows NT interests which depend heavily on it being able to field differentiated Intel Corp boxes. Palmer yesterday seemed inclined to retain servers internally and said he wants to continue supplying desktops and mobile units to its enterprise customers as part of the client/server paradigm. The best that DEC currently expects from its PC unit is that it be "back on track" in the company's second quarter, December. It hopes that by then it will at least break even, it said. To do so it needs to continue reducing inventory in the channel. It is now nine weeks out and needs to be at six weeks. Six months ago it had been at 12-14 weeks. It also needs to lower its cost structure and increase its revenue. It's simply not selling enough into the channel.

Goals

DEC said it was two months behind in achieving these goals which were set up at the end of the March quarter when DEC had the rug pulled out from under it by deep competitive price cuts that it didn't anticipate. DEC claimed that its Alpha, Unix, NT, storage and networking interests were strong in the fourth quarter. Alpha, for example, could show as much as 30% growth. Such growth, however, has

to be spurred a lot more to simply cover its PC losses, meaning that it may be on a downward spiral from which it never recovers. With that in mind, perhaps, and to capitalize on the growing NT wave, DEC's Unix operation is supposed to announce in mid-July an NT-Unix affinity program along the lines of what the company put in place for its VMS operation. (The name affinity is now lower case at DEC, sources say, because Unisys Corp has dibs on it.) Palmer, who is now going to pitch hit for the disgraced Pesatori for the next few months to size up the situation and the talent in the PC unit, admitted to taking his eye off the hardware ball. Still, he said, when asked, that he would remain with the company "as long as it continues to make progress" and claimed to have a recent endorsement from DEC's board. DEC said severance would be responsible for 70% for the \$475 million charge (10% of it from the PC unit). The rest would stem from "facilities" which wasn't defined further. Without saying so directly, DEC obviously believes the 7,000-man cut will be the last of the big layoffs, describing it as "completing the task" and being a "clean up" necessary to get to levels of return equal to 7% on net income and 20% on equity.

THE AGE OF PROGRESS?

Progress Software Corp was in London last week to shore up its component strategy for Progress Version 8, its new fangled component object-oriented development environment that is now due to ship on Unix in November. It was originally slated for this month (UX No 567, 590). The funny thing is that while the firm is pushing the components concept, Progress seems to have forgotten to put its database through the same paces. The database provides Progress, in combination with its development environment, two thirds of company revenue. It seems Progress has no intention of extending its database to incorporate object technology or complex data types. What it does plan to do is support BLOBs (Binary Large Objects). Surprised! we are, especially, since Oracle, Informix and Sybase have all decided to go down the complex data type route and opted for an object-relational architecture. Even the notoriously religious software development market has agreed that BLOB technology is not suitable anymore. People don't just want to access the object, they want to use it, integrate and manipulate it. BLOBs just don't have that functionality. As a riposte, Progress says its customers are not asking for object support in its relational-only database and it claims some 300,000 of them world wide. But, even one of Progress' users, Pepsi Cola Inc, said that it "would have a problem" in four or five years time with no object support in the database.

Reaching for the Stars

In the meantime, Progress has announced Mars, its Internet enabling technology for creating transaction-based applications that run over the Internet. Currently in alpha, Mars is a pure server intensive product configured for on-line transaction processing and business logic. What's interesting about this product is it's Javaless. Internal Java support is not an option says Progress, because it's so client oriented. If Java evolves and begins to deal with these types of functions then, and only then, will the firm consider it, it says. This is a brave statement considering the popularity of the technology. It remains to be seen whether they win out, or fall into line with the rest of the Java crowd. Mars goes to beta at the end of the month and shipments are expected in November. *Alison Hawkings.*

NEC, TOSHIBA FIRST IN LINE FOR ASYMETRIX'S JAVA TOOLS

Asymetrix Corp won NEC Corp and Toshiba Information Systems Japan as licencees for its SuperCede Java technology and says it'll announce several more OEM deals in 90 days when it has a final production version. ~~NEC will develop a localised, Japanese version of the~~ SuperCede development tools and will bundle SuperCede VM - Asymetrix's souped-up Java engine - with its software, hardware and so-called Internet appliance products that will be released this fall. Toshiba has licenced SuperCede VM, saying it needs the technology to handle larger Java applets that contain images or sounds and to improve execution time, but was lean on details about what products would result. The SuperCede tool set, comprised of a virtual machine and an interactive development environment, is powered by the Flash Compiler, a device that Asymetrix claims runs Java code five times faster than the fastest JIT compiler and 50 times faster than Sun Microsystems Inc interpreted Java code (UX No 594). Asymetrix says although its virtual machine often gets lumped in with just-in-time compilers from Symantec Corp and Borland International, SuperCede VM is different because it eliminates the need for an interpreter and compiles all code at machine level. SuperCede is the first interactive development environment with both C++ and Java and can seamlessly intermix ActiveX and Java, according to a diplomatic Jim Billmaier, president and CEO of Asymetrix, who added: "We're not sure how that battle will rage, but we think both Microsoft and Netscape will enjoy success."

DON'T BELIEVE THE CASSANDRAS: NETWORK COMPUTERS WILL WALK OFF THE SHELVES - HERMANN HAUSER

In his keynote speech to the Venture Market Europe conference in London last month, Acorn Computer Group Plc co-founder and non-executive director Hermann Hauser said scepticism about consumer acceptance of Network Computers like the NetStation is completely unwarranted. "I've been involved in a lot of customer trials, and I've never seen response like this. People are ready for this; they feel like they are missing out on something dramatic that is going on in the world. One guy pleaded with us to let him take it home, saying, 'I'll pay you more than \$500,'" Hauser said, before initiating a demo. Although the box is, in fact, ideally designed to fit into a home hi-fi set-up, the demo was a bit disappointing. It was not as fast at loading information as Hauser had indicated it would be, and the consumer interface, while indeed a simplified version of a personal computer, is not quite at the level of a television set or video recorder. Hauser blamed the slow load time on, as usual, the Internet itself. As for its ultimate success, he is optimistic. "Why is the Network Computer a fundamentally new category? For the same reason the PC became distinct from the minicomputer - it's half the cost and a lot easier to use. That's why it will appeal to a much broader market," he said. Hauser noted that the NetStation comes with an integrated Smart Card that has all the user's information on it, so that "you no longer have to travel with your laptop, but with the card. You just plug it into any Network Computer and you have your environment." He added that Holiday Inn has expressed interest in equipping its hotels with Network Computers.

PRAXIS SIGNS OMNIWAREHOUSE OEM DEAL

Praxis International Inc has finally found a taker for its OmniWarehouse data store, but it isn't naming names just yet. All it will say is that it signed a non-exclusive licensing agreement with one of its existing customers and is currently touting it to other potential OEMs. Cambridge, Massachusetts-based Praxis decided to concentrate on data replication at the start of the year and pass the marketing of OmniWarehouse to someone who could compete with the likes of Oracle Express and Informix MetaCube (UX No 574). The company says it will not release OmniWarehouse itself. It includes the OmniInfo querying tool. Gareth Taube, Praxis' VP marketing said it's "unclear what level of enhancements" Praxis would add to the product in the future, or whether it would leave it to the licensees. Praxis has also changed the numbering system for its releases of its OmniReplicator bi-directional data tool. What was to be version 2.0, is out now as 1.7, and supports Windows NT SQL Server and Informix. There will be quarterly dot releases of OmniReplicator, but the company wouldn't specify future enhancements beyond there being "new sources and new targets" on the horizon.

SUPERSCAPE ADDS SILICON GRAPHICS BOXES AS TARGETS

Superscape VR Plc, Hook, Hampshire is now shipping Visualiser for Silicon Graphics, which enables real-time three-dimensional virtual reality applications developed on a personal computer to run on Unix workstations from Silicon Graphics Inc under Irix 5.3 up, with all the benefits of superior rendering capabilities and subtle lighting, textured shading to create "a more realistic virtual reality experience than previously possible." Other features of Visualiser for Silicon Graphics include more than 40 world navigation styles, three-dimensional animation, configurable haze, fog and smoke effects, and anti-aliasing. The development products run on an 80486 with 8Mb and up with Super VGA monitor, keyboard and mouse. Silicon Graphics is available today from Superscape and some resellers at a special introductory price of \$1,200.

INFOSEEK POSTPONES ULTRASEEK, JEOPARDISES EXCLUSIVITY

Infoseek Corp has delayed the launch of its souped up search engine, Ultra-seeek, and in the process won't get the maximum benefit from its one-year exclusive licensing deal, signed last week, for Xerox Corp's linguistic analysis technology. Instead of having a site for Infoseek Guide and another for Ultra-seeek, the firm will integrate the two in Infoseek 3.0, according to our sister publication, *Online Reporter*. But Infoseek signed a contract to have exclusive use of Xerox's linguistics analysis technology for 1996, expecting to release Ultraseek in June. Its prospectus says now Ultraseek is due out "in the second half of 1996," possibly narrowing its window of exclusivity down to nothing. Other companies will be able to licence Xerox's technology beginning in 1997. Infoseek says Ultraseek will enable users faster searches of a wider number of sites than its current InfoSeek Guide. The company will pay Xerox royalties of up to \$200,000 per year in 1996 and 1997 and \$300,000 in 1998.

BARING, SUMITOMO EASE PATH FOR GLOBAL RISK MANAGEMENT SYSTEM

Thanks to Nick Leeson at Barings Bank Plc and certain copper trading irregularities by Mr Hamanaka at Sumitomo Corp, the timing of the launch of Midas Kapiti International's Global Risk Management System should be spot on. Regulators are now pushing banks to tighten up their risk management systems, or face having to put up more capital to underwrite risk if their systems are found to be wanting. Misys Plc's international banking software systems arm, formed from the merger of BIS International, Kapiti Ltd and Misys' ACT Group Plc acquisition (UX No 526), has launched Global Manager, a data consolidation engine, and Risk Vision, a global risk management application. The company has worked with four international banks, including Finland's state-owned Postipankki and the Luxembourg subsidiary of German Bayerische Landesbank, to develop the risk systems. Global Manager enables banks to exploit legacy and other systems by consolidating data from a wide variety of front and back-office systems into a common data format. It consists of a Global Data Model, Data Manipulation and Data Transport component. The global data model provides a centralised database containing all transaction and cash flow data needed to support risk management and other management information systems. Data manipulation enables the processing of this data and storage in a common form regardless of where the data originated. It also controls management of the data. Data transport handles the importing of the data from disparate systems and the exporting to external systems. It uses published application programming interfaces to facilitate the importing of data from almost any system currently used by banks, including other Midas Kapiti systems, third party products or applications developed in-house. The company says the 'warehoused' information can be used to produce a wide range of specialised reports or it can be used by other applications. The first of these applications developed by Midas Kapiti is Risk Vision, designed to give a bank-wide view of the total risk portfolio. It enables a bank to track and control its exposure across risk entities such as counterparty, issuer, country or industry. It has full drill down facilities, so that if a trading limit has been exceeded, the user can drill down into the detail to see where the problem has occurred. Global Manager and Risk Vision are written for client-server delivery, running on Windows95 or NT clients and currently Hewlett-Packard Co Unix servers. They are fully object-oriented, written in C++ with a Visual Basic front end. The data model is written using SQL on a Sybase database, but the company said it could equally run on an Oracle database. Midas-Kapiti product marketing director Joanne Shun said Postipankki has already implemented Global Manager, and is in the final stages of testing Risk Vision. Bayerische Landesbank's Luxembourg arm is about to start implementation. She said the company will obviously be targetting its installed base, but has already had enquiries from banks not currently using its products. The company will provide risk management consultancy if needed, and pricing depends on the scale of installation and services required, the company said.

TALARIAN REVS SMARTSOCKETS RAD TOOLKIT

Privately-owned cross platform software tools company Talarian Corp, Mountain View, California, has revamped its SmartSockets rapid application development toolkit, adding security, new middleware protocols and dynamic reconfiguration of routing tables. Talarian claims SmartSockets now includes hierarchical namespacing, dynamic routing of messages and recovery from transient network failures similar to techniques used by the Internet. SmartSockets encrypts messages and enforces authentication of programs and users. Users can customise applications by adding their own network protocols, the company says. SmartSockets 4.0 enables processes to communicate across different operating system platforms, through the use of messages. The communicating processes can reside on the same machine, on a LAN, on a WAN, or anywhere on the Internet, say Talarian. It's pushing its stuff as an industrial-strength package for taking care of network interfaces, guaranteeing delivery of messages, handling communication protocols, and for dealing with recovery after system/network failures. Components include a SmartSockets API for communicating between processes and monitoring distributed applications, a C++ library providing an object-oriented layer on top of standard SmartSockets services, a message router enabling applications to use a publish-subscribe communications model, an interface for monitoring and debugging distributed applications, reusable message types and a bunch of C and C++ programs to set the user on their way. It's the only messaging product that includes C API and C++ class library it claims. SmartSockets supports several communication paradigms including publish-subscribe, peer-to-peer, and RPC. Included as part of the package are graphical tools for monitoring and debugging applications. SmartSockets is available on most Unix, OpenVMS, Windows 3.1, Windows 95, Windows NT, and OS/2. SmartSockets is also included in the company's RTworks family of modular, stand-alone software tools for building high-performance real time scientific and technical applications. RTworks 3.5 includes automatic failover, non-stop maintenance for 24x7 operations and a Motif context sensitive development environment. The family includes RTie, a rule-based technology for high-speed data analysis, RThci a dynamic graphical user interface builder that requires no coding, SmartSockets, RTdaq, a data acquisition interface to external data sources, RTarchive, its high-speed data storage utility and RTplayback, its data playback utility. It's up on most Unix and selected modules run on NT and Windows 3.1 and 95. The company has recently signed up for the Message Oriented Middleware Association. Customers include British Telecom, IBM, Lockheed Martin, Loral, MCI, NASA, Nortel and Pacific Bell. SmartSockets 4.0 ships in September and prices go from \$16,000 for a developers seat on Unix with 20 connections.

CAMBRIDGE PARALLEL MAKES A GO OF OLD ICL DISTRIBUTED PROCESSOR TECHNOLOGY

Cambridge Parallel Processing Inc, Irvine, California and fellow privateer Khoral Research Inc, based in Albuquerque, New Mexico, have jointly adapted Khoral's Khoros image and signal processing tools for use with Cambridge's CPP Distributed Array of Processors (DAP) Gamma II massively parallel computer. The DAP technology was spun out of ICL Plc in 1986 to a company called Active Memory Technology, which was subsequently bought by Cambridge in 1992. The DAP box, which includes Cambridge's proprietary VLSI processor is used in various defence and civil applications, including mine and target detection, medical image processing, detecting faults in power lines and other real-time applications. Cambridge said it will have added a C++ compiler by the end of the month too. Khoral releases version 2.1 of Khoros this week with a new Cantata front end and Posix compliance. Khoros is used widely within the US defence department, the company claims. Cambridge does all its hardware design and manufacturing out of Irvine, while its software and architectural development is still done at its facility in Bracknell, Berkshire, a legacy of its ICL origins.

FULCRUM BUYS WAISERVER FROM AOL, SURFBOARD 2.0 RELEASED FOR UNIX AND NT

Fulcrum Technologies Inc has acquired the WAIServer software technology from America Online Inc and will take over the existing contracts with WAIServer customers and resellers. America Online will retain the World Wide Web production services business of WAIS. The technology is part of Wide Area Information Servers Inc, which America Online acquired in 1995 and is used in sectors in which adherence to standards is particularly important, such as the government and universities. Ottawa, Canada-based Fulcrum says it's committed to bringing the wide area search protocols available under Unix to Windows NT as well. Meanwhile, version 2.0 of the company's SurfBoard Internet search and retrieval engine is out now for HP-UX and Solaris, as well as Windows NT. It's \$12,500 for Unix, and other flavours of Unix will be out next quarter. It's \$6,250 for NT.

INTEL GOES TO EDINBURGH FOR COMPILERS

Scottish compiler house Edinburgh Portable Compilers Ltd (EPC) has inked an agreement with Intel Corp under which it will license its Fortran 90 compiler technology to Intel and Intel will license its Pentium Pro code generator technology to EPC. Terms of the deal were not disclosed, but it's understood the deal extends over the next two to three years, which covers the release date for the next generation Intel/Hewlett-Packard 64-bit Merced chip. EPC is keen to stress that the agreement is of a general nature and doesn't mention Merced specifically, but the company already has a similar deal with HP for its PA-RISC 8000 chip. The deal means Intel gains an industrial strength Fortran 90 compiler to deal with things such as arrays, says EPC. Put simply compilers have two halves; a front-end which performs language-specific syntactic and semantic processing, as well as language-specific optimisations, to create an "intermediate" representation; and a "back end" or code generator which takes the "intermediate" representation and produces optimal code for the processor-specific instruction set. EPC is providing Intel with the front-end technology and is receiving Intel's back-end technology in exchange. The deal includes enhancements made by Intel and EPC to their respective technologies. EPC will integrate the technologies with superscalar and multiprocessing optimising technology from Champaign, Illinois-based Kuck and Associates Inc into Unix and NT products at the beginning of next year, it said. EPC is a privately held company, headquartered in Edinburgh, with a staff of forty and focuses on high performance compilers for Fortran, C++, C and Pascal for Unix systems based on Intel, Sparc, Mips, Motorola and PowerPC. It claims supplier and sales deals with Data General Corp, HP, ICL Plc, Pyramid, Sequent, Tandem and Unisys.

PLATINUM ADDS VISION FOR FOREST & TREES

Oakbridge Terrace, Illinois-based Platinum Technology Inc has released Version 4.0 of its Forest and Trees database access and analysis tool including a new dynamic query manager with auto-query updating and report templates, a new C++ meta layer for customised applications and dialog based environment for rapid application development. It comes with a new graph engine enabling interactive 3-D graphs and business graphics for depicting numerical data for analysing trends and drill down for specific details. Cross tabulation tables let you slice and dice the data and analyse it for multiple dimensions. Automatic data monitoring comes with alarms and triggers for analysis, distribution such as e-mail and Notes and print-outs. An inheritance facility automatically propagates changes to existing applications. A meta layer provides links to other Platinum products and includes a new interface to Platinum's Repository through Platinum's read only graphical Windows tool, Data Shopper. Forest and trees can be used with Platinum's InfoHub to access data from mainframe sources. Platinum will include an Internet add-on pack by the end of the year for enabling HTML generation from reports, views and graphs, a net browser view type and a database interface to return data from the Web. Typical applications include sales, inventory and stock depletion tracking, the effectiveness of promotional activities including the comparison of sales results and linking results to the costs of promotions and monitoring retail store sales, track revenue vs. expenses, analysis of department specific budgeting information and the reviewing of historical figures. Forest and Trees goes from \$800 per enterprise seat and \$1,000 for the administrative version. Platinum claims Forest and Trees is licensed to more than 85,000 users. Meantime, Platinum's climbing aboard the Year 2000 problem and integrating San Francisco, California-based Adpac Corp's Year 2000 impact analysis technology with its Platinum Repository and CCC/Life Cycle Manager change management solution for MVS.

LEGATO ADDS INFORMIX BACKUP TO NETWORKER

Legato Systems, the Palo Alto, California network backup specialist has added an Informix backup module to its NetWorker storage software, now in release 4.2 (UX No 578). The module provides storage management services for the Informix-OnLine Dynamic Server's backup and restore utility, so administrators can backup up Informix databases while they are in use. It will be out in September for Solaris 2.4, with AIX and HP-UX versions following close behind. Meantime, Legato has got together with Hewlett-Packard Co for various support and marketing initiatives. Legato's NetWorker will support HP's new family tape backup subsystems, which are the combination of HP's robotics and Quantum Corp's DLT4000 digital linear tape drives (UX No 590), when they are released in August. The pair are also releasing a NetWorker MPE/iX client module that can backup HP 3000 enterprise servers to a NetWorker server running on an HP 9000. The MPE/iX client module will ship by November. Legato has also inked a worldwide support agreement with HP and is working to achieve certified and premier partner status in HP's OpenView Partner programme.

EUROPE'S EASTERN PROMISE

by Andrew Lawrence, *Computer Business Review*

When computer industry analysts draw their pie charts to show how the world's information technology business divides up, the big economies that once lay behind the Iron Curtain are frequently lumped together in a undistinguished group labelled "The rest of the World". To some of the aspiring business people and government officials in these countries this may seem unfair, even hurtful, but to the marketing people in the big computer companies, it is realistic: in spite of the profile and grand ambition of some of the politicians and economists, the combined buying power of all the governments, companies and individuals in Russia, the Ukraine, Poland, Hungary, the Czech Republic, Slovakia, Bulgaria and Romania only just added up to 1% of the world's \$514,000m market for computer systems and services in 1995, according to International Data Corp. And when it comes to measuring the contribution of these countries as producers, they do not even merit a blip on the radar.

Brutally

To put this more brutally, the total Eastern European market for computer hardware was worth about \$2,700m in 1994 - a large enough sounding sum, but less than the annual turnover of Cisco Systems Inc. In spite of this, however, many Western computer companies - notably IBM, Hewlett-Packard Co, Siemens-Nixdorf Informationssysteme AG and Microsoft Corp, view Eastern Europe as a land of enormous promise, and are stepping up their investments. It is, however, a gradual process, because after the collapse of the Berlin Wall in 1989, many companies invested too heavily. Not only did no dramatic sales boom materialise, but the many Western suppliers competing for the business were dogged by other problems, ranging from political instability through excessive bureaucracy, to a lack of funds, especially in the public sector. Both Digital Equipment Corp and Hewlett-Packard, for example, were initially unable to fulfil orders for minicomputer systems because the Russian Parliament was surrounded by tanks. And IBM paid security companies to accompany some of its more valuable computers after one of its RS/6000 systems disappeared as it passed through customs. A common problem in several countries was that government departments ordered computers, only to be forced to cancel them later when they failed to receive authority or funding. Another problem, although not one by any means confined to Eastern European countries, is the illegal copying of software. Surveys by the Software Publishers Association have shown that copying of personal computer software is even more prevalent in Eastern European countries than in the West. This is partly because in the years before 1989, commodity software was often difficult to buy and extremely expensive. The problems have not all been on the Eastern side. In spite of political change, the US government initially took a hard line on the export of leading edge technology to former Soviet bloc countries. Bizarrely, IBM was barred from selling one government client an RS/6000 but was given the go-ahead when it replaced it with a more powerful AS/400, reason for the bar being the use of RISC in the RS/6000. This meant that some Western computer companies, still forbidden to sell their most advanced systems attempted to use Eastern Europe as a dumping ground for their older systems.

Demand

But many cheaper leading edge systems had already made their way into the East, and the highly educated workforce were not willing to buy the older systems, even at a heavy discount. All of these problems, however, are of little consequence when set aside the potential business opportunity that Eastern Europe now offers. International Data Corp, which recently held a packed conference on the IT Business Opportunities in Eastern Europe, describes it as one of the fastest-growing regional markets in the world, and forecasts that it will continue to grow by 25% a year in terms of unit computer shipments and by 20% a year in value to the year 2000. After that, it is likely to accelerate fast. The market is all the more attractive because it has not yet stabilised, and there is a major opportunity for big suppliers to grab a leading market share. As countries move over to a market economy, IDC sees enormous demand for computers, software, services and telecommunications. Banking, insurance, retail, manufacturing, government and education are all sectors that are undercomputerised and will have to invest heavily to compete. When these organisations do computerise completely, they will have systems that compare favourably with the those in the West. Although Eastern Europe is still regarded as a place to dump ageing inventory, this is often done by brokers, rather than the manufacturers, who are pushing their latest, state of the art systems. Because of the low installed base of computers prior to 1989, and the budgetary constraints of

the buyers today, the Eastern European computer buyer is focused on personal computer-based networks and low-cost business servers. There is virtually no market for the mainframe systems that are the powerhouses of most of the West's large organisations. What of the fireside market? "In East and East Central Europe, Soho doesn't exist", says International Data Corp's Steve Frantzen, referring to the Small Office and Home Office sector of the market. Very few individuals in the Eastern European economies can afford to buy a machine, and there is no distribution channel to support individual buyers. But all this will change over the next five years, as computer buying spreads first to small businesses, then to middle class families, and finally to the same groups that now have their own computers in the West. One way to measure the size of the opportunity in Eastern Europe is to compare three sets of figures - its share of the world's population, of the world gross domestic product and of the world IT market.

Disparity

Eastern Europe and the former USSR make up 8% of the world's population, 11% of global Gross Domestic Product but only 1% of the IT market. The disparity between Gross Domestic Product and the IT market demonstrates the theoretical size of the opportunity. Another measurement used by IDC is the number of personal computers per head of population. In the US, there are four people to every personal computer; in Western Europe, there are nine per personal computer; and in Eastern Europe overall, it is one personal computer per 74 people (note that these are personal computers per person, not per household, and include computers installed in businesses). Given that most market analysts actually forecast that personal computers will eventually outnumber people, the opportunity size is seen to be enormous. The opportunities are not confined to Western or Far Eastern suppliers, although the leading name-brand Western suppliers in each sector are clearly dominating at present. In one or two countries - Poland for example - local personal computer manufacturers have emerged that are competing effectively against the leading desktop brands such as Compaq Computer Corp, IBM and Hewlett-Packard.

Scorecard

Three factors are likely to encourage the emergence of small personal computer manufacturers (confounding the forecasters who at one time thought only the big name brand leaders would survive in the long term). First, personal computers can be assembled with relatively little investment from standard, easily available components. Coopers & Lybrand recently warned the big US manufacturers that European retailers are starting to realise they can do just this. The trend is already being seen in countries such as Germany, where the local supplier Vobis Microcomputer AG is strong, in Turkey, where a local manufacturer, Escort AS, outsells IBM Corp and Hewlett-Packard Co, and in Greece, where the number one supplier is a Greek assembler, Altec SA. In Russia, VIST is strong. In the East, a local assembly market is being helped by the second factor, the availability of a skilled but relatively cheap labour force. The third factor is the national interest of governments: several countries are concerned that international companies are exploiting their markets, and as a result are encouraging establishment of local manufacturers.

Local labour

Many of the major international computer companies can argue, of course, that they already put a lot into the local economies. Partly to exploit the local labour, partly to reach local markets, and partly to placate governments, several now have manufacturing plants to match their eastern sales outlets. There is further cause for opti-

Europe's Eastern Promise - continued

mism for local businesses. All the evidence in the computer industry shows that, in the corporate market, if not in the home personal computer market, every dollar spent on IT hardware or shrink-wrapped software is at least matched by an equivalent amount of spending on installation, maintenance, support and local or specialist software. This will feed into the local economy, creating a secondary, if not a primary, industry based on information technology. Not all of this, of course, will go to local companies: major services companies such as Electronic Data Systems Corp, are highly active in the region. Given its large gross domestic product - \$618,000m in 1994, Russia has a tiny IT market. According to IDC, just \$1,000m of equipment was installed in 1994. But those suppliers that are active are reporting record revenues - among them IBM, Hewlett-Packard, ICL Plc, and Digital Equipment. The Russian market has attracted considerable inward investment, and most major hardware and software companies have established substantial subsidiaries. At present, personal computers account for most hardware and software sales, with strong focus on well-known international brands. This is being driven by the Government, which, while it wants to encourage development of local brands, also wants to encourage inward investment and be sure the systems it buys are of good quality. Although not as large as some of the brand leaders, VIST, a local Russian personal computer assembler, has proved a successful supplier. According to Russia Data Services in Moscow, some 590,000 locally assembled personal computers were built in 1995, with VIST taking the lion's share. Another local company, CROC, beat internationally successful distributors such as Merisel in the numbers of computers it distributed. The biggest IT market in Eastern Europe is Poland - in 1994, the market was worth \$804m. It is, according to Steve Frantzen of IDC, fundamentally different to other markets in the region. This is because of its relative maturity and the role of the government, which insists that local companies are involved in government contracts. This has encouraged the development of the kind of software companies and systems integrators seen in Western Europe and North America. A particularly strong sector is banking, where several banks have pledged themselves to develop systems equal to those in the West.

Satellite

The Czech Republic market has been booming for several years, and spends more as a percentage of gross domestic product than any other Eastern bloc country. In 1994, the market was worth just under \$1,000m. A significant feature is that it is not dominated by government policy or government spending. Large capital projects, especially in the financial sector, have helped to drive sales and have also encouraged the development of local software and services companies. As in Poland, these companies play a key role in generating new hardware sales. The Czech market is also not so entirely based on personal computers as some. The small size of Slovakia, with its population of just 5.4m people, makes it relatively insignificant as a computer market. But its recent economic performance, with low inflation and political stability, has encouraged growing investment. In 1994, hardware sales were in more than \$100m, almost entirely for personal computers. But "Growth can be related to where the government has agreed its budget" says Franzen. From 1989 to 1993, Hungary, like the Czech Republic, proved a highly successful market for those attempting to move into the Eastern Europe. But recently, its \$700m IT market has started to slow, partly due to overall economic factors, and partly because its first wave of computerisation has passed. In some respects, Hungary is the most mature market in the region, and as in Western economies, the biggest growth area is in services. As elsewhere, there is a strong focus on personal computers, backed by a local software industry, and Hungary has fostered an international reputation as a centre for skilled programmers. As long ago as 1981, it began to promote advanced software products and offered to complete difficult software projects for Western firms, but the opportunity for Hungarian programmers may be diminishing - Chinese and Indian programmers are far cheaper. As the second largest of the former USSR republics, the Ukraine has a large but backward economy. Sales, once again mainly personal computers, are among the lowest per capita in Eastern Europe. In 1994, says IDC, about \$90m of computers were sold. The approach of most Western companies is to deal with Ukraine through their Russian subsidiaries. Sales of computers to Romania totalled about \$69m in 1994, which is relatively large in relation to its Gross Domestic Product. Like most of the smaller Eastern European countries, Romania is viewed by many Westerners as a satellite economy supplied through Russian or German subsidiaries. Along with the Czech Republic, Poland, Slovakia and Hungary, Bulgaria has a relatively high level of computerisation compared with other Eastern European countries, partly because the government is attempting to encourage inward investment. A local company, Selenics OOD, for example, has developed a

digital video telephone using its own software, camera and computer board. It sells at a fifth of the price of equivalent Western components. Some Western companies - notably IBM - are also exploiting the fact that Bulgaria was one of the industrial centres for manufacturing computers supplied to the Eastern bloc. IBM has moved some of its disk drive production to Bulgaria. The Bulgarian Telecommunications Company is also aggressively pursuing a \$300m modernisation policy, and is installing a high bandwidth digital communications network in its larger cities.

The Internet

Market analysts all agree that sooner or later, the market in Eastern Europe must explode, rather than show the steady growth of recent years. It is this belief, rather than immediate profits, that is sustaining the steady interest and investment of the international computer suppliers, software companies and service companies. IBM, for example, is saving considerable amounts of money, and building up local goodwill and infrastructure, through its manufacturing activities. It began scouring the East for procurement possibilities as long ago as 1993, and is now able to source many components more cheaply than rivals. Two factors are expected to provide a surge in growth. First, the market for computers will move from the first to the second stage - when computers in the workplace become ubiquitous, rather than only for privileged users in the larger organisations. Second, the small office and home market must at some point take off. Sales in this sector are responsible for driving the growth of many of the world's top personal computer companies, and the same pattern should repeat itself in the East. The advance of the Internet could act as a catalyst, and encourage computerisation to advance even faster.

SYBASE TO STAUNCH CONTINUING LOSSES

Sybase Inc is taking drastic measures to try and stem the continuing flow of red ink, saying it'll eliminate up to 700 jobs amongst its 6,100-strong workforce after warning that based on its preliminary results, it expects to report a \$20m pre-tax loss for the second quarter, on sales of between \$245m to \$250m. According to First Call, analysts had expected the company to earn a profit of \$0.08 per share. Sybase lost \$6.9m on revenue of \$243.7m in the first quarter of this year and lost \$9.2m on sales of \$240m in its second fiscal quarter of 1995. The executive reorganisation Sybase announced back in April (UX No 584) doesn't appear to have shaken off the ghosts of System 10 because still not enough companies are buying its System 11 products. Sybase blamed lack of sales of its database software for the anticipated loss. The company reports its results on July 11. The depths of Sybase's discomfort may be such that no names started to circulate as potential acquirers even though last summer when its stock was depressed speculation was rife. Sybase shares closed down \$1.25 at \$18.25 on the day. As we went to press, analysts were speculating that Sybase may dump some of its peripheral and less successful technology including its massively parallel Sybase MPP, its long time germinating Highgate on-line analytical processing solution (UX No 543) and its UK-headquartered business re-engineering consultancy Oasis Group Ltd.

MICROSOFT CYBERBRICK PROJECT "WILL CHANGE THE INDUSTRY BY 2002"

The so-called "Cyberbricks" project at Microsoft Corp - first mentioned here last September (UX No 555) is gradually moving out into the light of day. Cyberbricks is a research effort that aims to build superservers out of commodity hardware and software components, and is the pet project of Gordon Bell and Jim Gray, both now working at Microsoft's San Francisco Research Labs. Bell is, of course, the architect of the DEC VAX, while database and transaction processing guru Gray, during a career spent at such companies as Digital, Tandem, IBM and AT&T, has had a key role in the development of such high-profile systems as DB2, IMS, NonStop SQL and Rdb. Gray, whose title at Microsoft is "senior database architect", has been talking about the project at various conferences recently. His main focus is on automatic parallelism and fault tolerance within an NT-based cluster. "Now, everything is networked and everything is built from commodity components (both software and hardware)", he explains in the abstract of one of his lectures. "Both clients and servers are built from the same commodity components - Cyberbricks". He goes on to predict that in the future: "Servers will be arrays of processors, storage and network components that provide automatic management, programming and parallelism". Meanwhile, *The New York Times* caught up with Gordon Bell last week in order to include him in a "minicomputer pioneers" article they were running. Bell told them that his idea of "scalable network and platform computing will totally change the industry by the year 2002", and believes the new architecture will finally deliver to desktop users the equivalent power of a mainframe.

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The most embarrassing indicator of **Digital Equipment Corp's** dismal failure - see page 3 - is that from being the second largest US computer company five years ago, it has now been passed by **Compaq Computer Corp**, which only makes personal computer-derived products where DEC was once a full-line manufacturer, while **Hewlett-Packard Co**, number three US company behind DEC five years ago, is now more than twice its size.

Reflecting the twin facts that AIX is now not the only RS/6000 operating system now that there is a hungry Windows NT cuckoo in its nest (and may even be a Mac OS one day) and that **IBM Corp** has failed to sell its AIX Unix on anything other than the RS/6000, we hear that the IBM AIX division was last week formally renamed the RS/6000 division.

Tandem Computers Inc's behaviour is decidedly flaky when it comes to **UB Networks Inc**, its data communications equipment subsidiary, which to go on and off the block as often as the proverbial professional's undergarments. This week, it's back on again, and Tandem has engaged Lehman Brothers to explore strategic alternatives for the Santa Clara company, which is claimed to have annual sales of about \$400m. Tandem this time wants to shed UB because it wants ServerNet to become a standard for all network technology vendors and not just UB.

Pure Software Inc, soon to be Pure Atria Software Inc (UX No 593), has released a Windows NT version of its flagship Purify run-time software testing product. The Sunnyvale said it can spot run-time errors and memory leaks in C and C++ applications, including any third-party applications, ActiveX controls OLE components and libraries that the applications may use. It uses the same Object Code Insertion (OCI) technology used in other version of Purify.

Spider Technologies Inc has put its NetDynamics interactive database application development tool up on its Web site for a 15-day free evaluation period (UX No 585). Technical support is also provided for the duration at www.w3spider.com.

Sterling Software Inc claims its SAMS:Expert 3.0 distributed storage management system, due out this quarter from the Sacramento, California-based storage management division, gives the kind of centralised system-managed storage found previously only on mainframes. SAMS:Expert offers management, reporting and automation for storage subsystems across Unix, Windows NT and Novell Inc NetWare environments from a central point. It costs from \$15,000.

Red Brick Systems Inc has promoted Bill Wagstaff to lead its software development for Red Brick Warehouse. He had been director of SQL engine development.

Seems nobody loves the Mac anymore. **SunSoft Inc** has subordinated its work on the Mac version of the Java Workshop development environment to work on the versions for Windows platforms to such an extent that Workshop for the Mac won't be out now until around the year-end, having previously been promised for last month (UX No 583). This is despite the Java Virtual Machine for the Mac being around since March.

The Message Oriented Middleware Association (MOMA) has formed a user group chaired by Sukan Makmuri, VP of information technology at Bank of America. Its first meeting will be at Object World in August.

Meanwhile, one of the founders of MOMA, Englewood, New Jersey-based **Momentum Software Corp** has added X*IPC Queue-Burst for speeding data transfer rates within its X*IPC flagship middleware. It uses read-ahead algorithms for moving messages and users can define the buffer size. It's intended for industries that require very high throughput, such as telecommunications, financial services and defence, and is available now for free to users of X*IPC.

Thinking Machines Corp says its Global-Works software for hooking Sun Ultra 1 servers and others into parallel application processing is still testing at two beta sites, and won't now ship until at least late summer or the fall. It was originally slated for June (UX No 584).

Phase one of **Forte Software Inc's** Web SDK is now available. It enables Web browsers to function as Forte clients and has an HTML-generating utility (UX No 584). It initially costs \$20,000 per site licence, but from September 1 the company switches to server-based pricing, at \$8,000 to \$15,000 per server, depending on users. The second Java interface-generating SDK is still scheduled for the next full release of the Forte application environment which was due by the year-end, but the company wouldn't commit itself wholeheartedly to that timeframe.

Data General Corp's newly formed NumaLine business unit (UX No 594) has won long-time scalable coherent interconnect (SCI) developer **Dansk Data Elektronik A/S** (DDE), Herlev, Denmark as an OEM list for its ccNUMA technology that links four-way Intel Corp Pentium Pro SHV boards in distributed shared memory configurations. DG snared **ICL Plc** a couple of weeks back (UX No 594) and says it will add to its list in the next couple of weeks. DDE will market DG's ccNUMA-based systems alongside its own Supermax Enterprise Servers which the company claims can run up to 56 Mips R4400s and Unix SVR4.2MP using SCI techniques. DDE has also signed for DG's Clariion RAID storage.

Cincom Systems Inc has acquired **Andersen Consulting LLP's** print division in Lyons, France. Terms weren't disclosed. Cincinnati-based Cincom said the acquisition furthers its reach into Europe and expands its line of software used to manage, print and archive documents.

According to a MIPS ABI Group newsletter both **Mips Technologies Inc** foundry **NEC Corp** and **Siemens Nixdorf Informationssysteme AG** have got 64-bit operating systems up and running in their labs.

"Ah, how history is re-written", we wrote in *Unigram.X* No 595. Yes, but unfortunately it was us doing the re-writing. That **JavaSoft's** James Gosling argued against the idea of making Java public domain, while today his a fan of the 'development through free distribution' model is completely consistent. Gosling and Arthur van Hoff - now of Marimba - point out that "public domain" and "freely distributable" are not synonymous and that the former would have ceded control of the Java standard away from **Sun**. The point that Van Hoff was trying to make was that Gosling was *right* to dig his heels in.

The Korean company that's purchased a \$10m licence to **UniSQL Inc's** object-relational technology turns out to be **Korea Telecom** (UX No 590).

Interesting to note that the 5,676 tpmC - \$136 per tpmC - **Microsoft Corp** achieved running Microsoft SQL Server on a four-way **Compaq Computer Corp** ProLiant 5000 6/166 with NT was front-ended by seven **SCO** OpenServer systems each with a 1,000 user licence described as clients to drive the benchmark's 5,000 PC client load.

KPMG Peat Marwick LLP is to resell **Thinking Machines Corp's** Darwin software as part of its data mining programme.

NCR Corp has taken McLean Virginia-based **Nat Systems International Inc's** NatStar C-based application development tool OEM to target the financial services industry, looking to do business over the Internet.

Data General Corp's OEMing **Open Market Inc's** Internet software for use with its B2 secure DG/UX and NT offerings. It'll be used in conjunction with **BDM International's** Cybershield to manage, monitor, record, and analyse Internet-based transaction activities over the Internet on DG AViiON servers.

Did **Hewlett-Packard Co** really have the performance lead? It rates its 180MHz PA-RISC 8000-based HP 9000 Model K460EG deskside workstations announced last month at 20.2 SPECfp95/18.3 SPECfp_base95 and 11.8 SPECint95/10.8 SPECint_base95 (UX No 593). But did anyone notice that those numbers were achieved using a dot release of HP-UX called HP-UX B 10.20 IC8 that doesn't actually ship until September. It's going to flesh out more details of its 64-bit Unix work in a couple of weeks.

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SCO OPTS FOR MICROSOFT'S CIFS FOR PC UNIX CONNECTIVITY

The Santa Cruz Operation has fired the next salvo in the emerging battle between Sunsoft's WebNFS and Microsoft Corp's Common Internet File Systems (CIFS), coming down firmly on the side of Microsoft. Today (Monday) the company officially begins shipping VisionFS, a port of Microsoft's Server Message Block (SMB) protocol that provides file and print sharing capabilities from Unix servers to PCs. It's a strategy that SCO believes will lead up to full Web support using CIFS when - and not if, in SCO's opinion - it becomes a standard. NFS, which has the virtue of simplicity, may be good for Unix to Unix connectivity, but a richer alternative is needed for Unix boxes serving PC clients, says Ray Anderson, senior VP of SCO's client integration product division. "People are beginning to realise that there is a far more elegant solution [than PC NFS]". The key advantage is that, by using the existing networking components in Windows for Workgroups, Windows95 and NT Workstation, there's no need to load anything else onto the client. PC NFS currently has to be installed and maintained on each client system, so a typical installation or upgrade of PC NFS on a five server, 100 PC client system could take up to a week (20 minutes average install per PC = 33 hours), compared to a claimed install time of two and a half hours for the five server install of VisionFS. SMB is more supportive of the file locking mechanisms and semantics that Windows applications expect; in VisionFS SMB locking is emulated using a dedicated file locking daemon. SMB is also a stateful, connection-based protocol (rather than stateless) and does asynchronous (rather than synchronous) write operations, giving it a performance advantage over NFS. And it includes built in support for printing, which has to be done separately under NFS.

PC-NFS sales "will plummet"

Internal SCO estimates suggest that the market for PC NFS clients is set to fall from \$150m this year down to around \$50m next year, mainly due to the increased use of NT Servers. SCO hopes to claw a significant part of that market back for Unix hosts with VisionFS. The product also includes a Profile Editor program that runs on a Windows machine for system admin configuration. It doesn't include the usual FTP, email, gopher and newsreader clients that often come with PC-NFS products, as SCO says its corporate customers regard these as "bloatware". Platforms supported include Sparc Solaris, HP-UX, SCO UnixWare and SCO OpenServer, with SunOS, IBM AIX, DEC Alpha and other Unix platforms expected by the end of the year. Evaluation copies are currently free from <http://www.vision.sco.com/>, with prices set at under \$100 per user, lower for more users.

OBJECT MODELS: THEN THERE WERE THREE. UNIX AGAIN?

The Object Management Group wants JavaSoft to stand up and declare in no uncertain terms its unequivocal support for Corba and the IIOP transport, so that Java and Corba objects can seamlessly interoperate Martini-style; any time, any place, anywhere. In its mind, that kind of endorsement, with the support of folk like Netscape and IBM, would forge a "virtually unstoppable" distributed object bandwagon and carry a "silver bullet" combining Corba/IIOP and the Java Beans component APIs to shoot at Redmond's DCOM. Doing Corba via Java IDL and IIOP add-on modules simply isn't good enough OMG argues; after seven years of helping create Corba "why won't Java RMI use Corba?" it has justifiably asked Sun's top brass. This "smells like Unix all over again," it says. As far as Sun's concerned the answer is simple, 'then there were three: Microsoft DCOM, Corba, and now a Java object model too. Sun's JavaSoft unit says Corba/IIOP is simply too fat for the kinds of skinny local container/containee work envisaged for end-to-end Java environments. Many developers won't need or want to touch Corba, for the kind of light-to-middleweight work Java is targeted at, it says. In its world Corba will be the mechanism that supplies an industrial, multi-language, back-end object distribution environment. Indeed, with Java Beans APIs supporting Active-X, the OMG-endorsed OpenDoc and Netscape LiveConnect, JavaSoft even ventures that Java may be the "best environment in which to develop Corba objects," given Java's nominal links to Corba via IDL and IIOP-enabled Java request brokers. Given the fundamental technical mis-match between Java and Corba object models, observers say the Java RMI solution is obviously a better match for end-to-end Java developers than Corba, just as DCOM is for Microsoft developers, despite OMG's desire for IIOP ubiquity. Corba can predominate at the enterprise level, they say. But even if Sun were to turn Java into an IIOP vehicle, the same observers say that anyone who believes this will upset Microsoft's object cart is barking.

TADPOLE SEEKS PARTNER FOR INTEL NOTEBOOKS

Tadpole Technology Ltd is looking to license its Intel Pentium-based P1000 high-end notebooks to a major notebook manufacturer. Introduced two years ago, the Pentium machines have proved something of a problem child for the company. Tadpole is a niche player, with its Sparc and Alpha-based notebooks and embedded PowerPC and Sparc controllers; the P1000 notebooks don't seem to have been niche enough. So the company is talking to other Intel-based notebook manufacturers about re-badging the Tadpole machines as their own. From Tadpole's point of view, the high-end notebook market still has a future in terms of design, if not manufacturing, for the company. Last year, Tadpole was believed to be looking for a buyer for the P1000 line and called in merger and acquisition specialists Broadview Associates Ltd to review "strategic partnership alternatives aimed at maximizing shareholder value" but nothing came of it. *Full story on page two.*

APILINK TAKES MIDDLEWARE TRANSLATOR STATESIDE

Apilink Software SA, based in Paris, France is taking its cross-platform software integration product, the Apilink Service Warehouse, off to the US, where it'll market the product as "middleware for middleware." It eventually hopes to tread in the footsteps of compatriots such as Business Objects SA to the NASDAQ. It's gobbled up \$7m of Swiss VC funding, and is seeking another round to finance its US ambitions, which it hopes will lead to an IPO by the end of next year. Apilink is setting up shops in Boston, Massachusetts, and Berkshire, UK, and claims the Apilink hub at the heart of its Service Warehouse can integrate legacy applications, databases and middleware across multiple platforms. Essentially the technology builds middle tier services; it brings in data from different formats, gives it an object face and creates an API that a client can access, plus links to the back-end. The hub separates middleware protocols entering the hub, translates between the middleware types and makes application services shareable. Apilink says it can do all this without the need for complex software re-engineering, although it does require the use of a proprietary scripting language to write the services. The hub supports database connectivity including ODBC, RPCs, message oriented middleware, ORBs, DCE and transaction processing.

Java

The Service Warehouse includes the scripting language for creating Apilink services and a facility for incorporating C/C++ development services, a repository of services, modules to execute external applications, client extensions, and an engine and supervising kernel that executes Apilink services and logs events, allocates channels and access, supports batch processing and security and authentication services. Servers are developed using the rules-based scripting language which encapsulates processes, transactions and services. Client interfaces support TCP/IP, RPC, LU6.2, triggers and stored procedures for Oracle, Sybase and Informix and TP monitors. A management environment includes SNMP tools. It'll offer links to third party systems management solutions over time. It's working on an API link to Java for Q4 and will incorporate Java class libraries over time. It's recently released Apilink Web, providing application and access and update facilities from browsers. It also offers Apilink modules for http, ftp, email and telnet. It's snared the likes of HP, DEC, Bull, IBM, Forte and Sun in Europe and is looking for US deals. It will sell indirect in the first instance but plans a direct sales force in due course. Prices start at \$10,000 for two developers and two concurrent users. Apilink is up on AIX, Solaris, HP-UX, Digital Unix, NT, Windows, Netware and Bull and Unisys mainframes. Apilink is aiming for revenues of \$5m by the end of the year. It claims 60 customers. Apilink's genesis is a technology created in 1990 for linking Apple Macs to Bull mainframe applications at SNCF. The Apilink Group was created last year, its major shareholder is UBS.

TADPOLE SEEKS OEM TO TAKE ON ITS PENTIUM NOTEBOOK

It is perhaps the nature of the beast at present, and it may always be this way, but the only time a company's Web site usually tells us something new is when it doesn't mention something we think should be there. Tadpole Technology Plc is a case in point. The site opines about the benefits of the company's Sun Sparc and DEC Alpha-based notebooks and its embedded PowerPC and Sparc controllers. But the Intel Corp Pentium P1000 notebooks are nowhere to be seen. Introduced two years ago, the Pentium machines have proved something of a problem child for the **Cambridge, UK-based company. The reason for the disappearing act is that Tadpole is now looking for an OEM deal for the Pentium boxes.**

OSF RESEARCH INSTITUTE FLESHES OUT JAVA STORY

By Chris Rose, OnLine Reporter

The JavaLite OS, initiated by OSF's Research Institute, is being built on the MK++ microkernel that OSF - now part of the Open Group - developed in its B3 security work (UX No 597). We have our suspicions that IBM's silence regarding Sun's JavaOS is being caused by an attraction to JavaLite. IBM's own microkernel is based on the OSF work and the Research Institute's plans for a modular OS sound remarkably similar to IBM's ill-fated Workplace OS strategy. Sources at IBM remain tight-lipped over whether the company is even evaluating the OSF work. According to OSF Research Institute head Ira Goldstein, JavaLite's use of a microkernel makes the OS a "mix and match" system that allows any flavor of the Unix operating system to be dropped in alongside the JVM. So JavaLite differs in concept from Sun's JavaOS, which will be simply a lightweight Java platform targeting network computers and other Internet devices. The modularity will allow users to determine what kind of operating system it will be - a monolithic Unix-cum-Java OS or a lightweight pure Java play for Internet devices. The feature is aimed at Unix fanciers looking to adopt Java without abandoning Unix applications. It will also let users configure the network to apportion functionality between local devices and the server - a key feature, Goldstein said, because the NC model can put a lot of strain on the server: "When you talk about a lot of thin clients there also has to be a fat server around somewhere." While the Research Institute calls the OS JavaLite internally, Goldstein said "We probably can't call it that" because Sun's guarding the Java trademark. It's alternately called TIE or Trusted Internet Environment. The initial implementation of JavaLite, which will use Sun's Java rather than OSF's own version, will build on a "scaffold": a full-blown Unix OS that will be whittled down over various incarnations until there's nothing left but things like network infrastructure. Goldstein estimates that the first "full-bodied" version of TIE will emerge in Q3 with releases every three months after that, leading up to the "lite" version of the OS showing up in the middle of next year.

Royalties

Meantime, OSF claims its clean-room implementation of Java isn't politically motivated and that its Research Institute tackled the task to solve some of Java's technical problems. Goldstein claims the Osmosis implementation (UX No 597) is not "license-related" but concedes that the OSF dislikes the way Sun licenses Java, as a French cohort said last issue. According to OSF, Sun not only collects a royalty, typical in the Unix world, but any enhancements made to Java belong to Sun, not the party making the enhancements. OSF will make Osmosis freely available to non-commercial users as the University of Illinois National Center for Supercomputing Applications's (NCSA) Mosaic was, but will charge for commercial use. OSF, forever recycling its past, will use its star-crossed Distributed Computing Environment (DCE) to pass messages and transactions between separate Java systems. The Research Institute is also working on a way to "marry" the garbage collection function in Java to the memory manager in the hope of speeding up real-time performance. Osmosis also features a "turbo compiler" written in C++ with B3-derived coding that will compile both portable byte code and executable code. The compiler will work with both Java and Osmosis and will contain a "fork" that will let it be ported to either 32-bit or 64-bit operating systems without the performance penalty that Sun's Java reportedly imposes on 64-bit systems. Hence its backing by DEC, the only vendor with a 64-bit Unix operating system, Digital Unix. The JVM will begin implementation in the Fall with prototypes due the first quarter of the year, raising questions as to whether it will arrive too late to take advantage of the Java surge. Goldstein said there are other groups doing clean-room Java implementations, notably Natural Intelligence, whose Java VM for the Mac which has been licensed by Apple as well as a group on the Internet building Jolt. The difference, he said, is that those implementations only seek to create Java-compliance while "we're not trying to reproduce Java, we're trying to improve it."

the chief executive's seat for barely a week, former Santa Cruz Operation Inc exec Bernard Hulme, said that "people buy it for its ruggedness." And if the only reason for buying a computer is the type of metal the box is made from, you know that something's up. Tadpole is a niche player, and the P1000 notebooks don't seem to have been niche enough. So it is talking to other Intel-based notebook manufacturers about re-badging the Tadpole machines as their own, and using their marketing muscle to make a go of the things. It would be a surprise if at least one of the heavy hitters in the notebook business were not involved though. Hulme said that from Tadpole's point of view, the high-end notebook market still had a future in terms of design, if not manufacturing for the company. Last year, Tadpole was believed to be looking for a buyer for the P1000 line and called in merger and acquisition specialists Broadview Associates Ltd to review "strategic partnership alternatives aimed at maximising shareholder value" (UX No 544), but nothing came of it. Hulme arrived at Tadpole from SCO following the resignation of former CEO and company founder George Grey, who resigned July 5. At SCO Hulme has been senior VP and general manager for international operations and had also been VP of worldwide marketing. Prior to that, he was at ICL Plc, where he was responsible for its worldwide Unix server business. Tadpole promoted engineering chief Mike Hancock as new technical director to replace the engineering nous that Grey brought to the outfit. Hulme's talent is marketing, something Tadpole hasn't been particularly good at, and cost it a lot of friends on the London Stock Exchange. It was trading around 58 pence last week, a far cry from the 400 pence and more it was at in 1994. Ironically enough, it was the P1000 notebook that drove the share price up at the time. Investors were jumping for joy at a company like Tadpole getting into the high-end Pentium notebook market, and providing a machine twice as fast as the puny 75MHz machines available back then. But, Tadpole was not quick enough, smart enough, or perhaps crucially, big enough and the rest caught on and caught up, while potential buyers looked elsewhere. The thing is nobody else sold anything like that, which goes to show how bad the marketing effort must have been.

Shake down

The other body blow was IBM Corp's decision to cancel a follow-on contract for Tadpole to build the RS/6000 N40 PowerPC notebook, which caused job losses and the closure of a factory in Austin, Texas (UX No 539). Tadpole has reported fairly encouraging financial results this year, cutting its losses in the first two quarters (UX Nos 590, 573) and pinning its hopes for a return to profitability on the Alphabook, launched at the back-end of last year. Hulme said the company is enjoying life as a Sparc-compatible manufacturer. He said that during his six-year sojourn at SCO he'd seen the Sparc chip business shake down to just Sun and Fujitsu Ltd, and reckons there is a "reasonable balance between the two." He'd "seen Sparc go off the boil and come back on, despite its problems" and the market was now in "pretty good shape" in his opinion. He saw no problem dealing with Sun and enjoyed a "very encouraging level of co-operation." He said he didn't find himself dealing with a company that said "keep out - this is my territory." After all, Hulme said, it's not as if Tadpole is competing with Sun in the portable workstation market. Hulme said Tadpole is going to concentrate on getting into some markets in depth with the Sparcbooks, notably software development, mobile Sparc servers, defence and telecommunications. Over on the Alphabook front, it's still early days. It's a "pretty neat technological feat". But regarding the marketing effort, Hulme said "what they so far haven't done is in-depth work on what markets need to be addressed by the Alphabooks." The major area at the moment is defence, where the OpenVMS operating system is popular. It also sells into the mobile VMS administration market. Hulme predicted that with some focus, the Alphabook "will be quite a success story". Mind you it will have to be, if Tadpole is to have a future. Hulme said that in the notebook market, the segments "pop out at you". Here's hoping they pop out pretty hard and hit Tadpole's marketing machine between the eyes, thus keeping alive one of the last British computer manufacturers.

DAEWOO TO RESELL DATA GENERAL NUMA SERVERS

Attempting to garner the maximum impact for its OEM wins in the hot technology area of Non-Uniform Memory Access, Data General Corp has announced a third partner in as many weeks for its PentiumPro-based Aviion server technology which is being peddled by the NUMALiine business unit it created a few weeks back. Daewoo Telecom Ltd, a unit of the \$55bn South Korean Daewoo Group, will resell Aviions in South Korea targeting government markets, in South East Asia and in Eastern Europe, as well as using them internally. Data General claims Daewoo will blow its existing arrangement to sell IBM Corp RS/6000s in South Korea out of the water as a result, although IBM representatives in the country say that's not true. More interesting is Data General's expectation that Daewoo will use future Aviions - 32-way NUMA machines due three months after the 16-ways and 64 processor systems expected by the end of next year - to create massively parallel processing (MPP) solutions that'll compete against the consortium of South Korean companies that are to sell MPP solutions based upon NCR Corp's WorldMark 5100 servers in all markets except the US, Western Europe, Japan and Australia. The consortium includes Samsung, Hyundai and Seoul University which represents the Ministry of Trade. Data General says it'll work with Daewoo on future operating system and NUMA technology development for the Korean market. Daewoo will begin selling Data General's non-NUMA Pentium-based Aviions that are already shipping, pick up the PentiumPro SHV-based quads that will be unveiled in a couple of weeks and step up to the 16-way NUMA-based Aviions when they roll-out towards year-end. Daewoo will also resell Data General's Clariion RAID disk subsystems. Data General says it'll soon make public data from customers using the NUMA interconnect it's currently shipping for its 88000-based Aviions. Although Intel-based NUMA Aviions won't be unveiled until towards the end of the year - they're not even in beta yet - Data General says it'll have at least a year of customer experience with the 88000 NUMA technology under its belt before any other company even ships a NUMA solution. Data General's getting its interconnect boards from Scalable Coherent Interconnect pioneer Dolphin Interconnect Solutions A/S under a non-exclusive arrangement. Prospective NUMA types can pick up the boards from either company.

SYBASE LOSSES ARE EVEN WORSE THAN IT HAD EXPECTED

As expected, Sybase Inc reported increased losses in its second quarter, but the results were even worse than the company predicted the week before (UX No 597). The company had thought second quarter losses would be \$20m, but in fact turned in \$24.6m losses, up from \$9.2m losses last time, which included the \$20.0m charge resulting from the acquisition of SDP SA. CEO Mark Hoffman put the mistake down to expenses being "predicated on higher anticipated revenues". To combat the loss, Sybase will eliminate around 10% of its 6,100-strong workforce. Both North American and European revenues fell below company expectations. Sybase also blamed changes to its sales organisation and ineffective marketing for its losses. It will "return to profitability as quickly as possible." But Hoffman was predicting back in May that the company would be profitable in the second quarter (UX No 589), so wisely wasn't putting any timescale on that eventuality this time. Sybase reported second quarter net losses of \$24.6m up from \$9.2m last time which included the \$20.0m acquisition charge on revenues up 4.1% to \$249.9m. Mid-term losses were \$31.5m up from \$26.6m last time, which included the above charge and a further \$25.0m merger related charge. Revenues were up 8.2% at \$493.6m. The shares hit their 52-week low of \$16.75 at the news last week.

PLATINUM HAS NETARCHIVE 2.5 OUT NOW

Platinum Technology Inc says version 2.5 of its NetArchive system file backup and hierarchical storage management software is now available. Naturally, it's faster and achieves the extra speed by instructing the OS to bypass several protocol layers, jumping straight to the TCP/IP layer - what the company calls "out-of-band technology". It also has new length and age sorting, burst mode back-up for small files and raw device backup support. NetArchive 2.5 costs \$3,000 for a site-based server licence and \$2,000 for a client licence.

NETWORK APPLIANCES READIES ITS FIRST CIFS BOXES

Network Appliance Corp, which came out in support of CIFS a few weeks back (UX No 595), has its first CIFS product already in beta, and says it should be out by the Fall (one source said "within 45 days"). NAC's product thrust is one of native implementations of multiple protocols, and its CIFS product will include a native file system implementation, avoiding the usual emulation bottleneck (NAC servers, of course, use a proprietary micro-kernel operating system rather than Unix). It won't be giving up on NFS, and continues to track WebNFS, which it expects to follow the NFS standard and to be part of the next NFS release. NAC needs a faster alternative to HTTP for large file transfers, though it admits that what's there in CIFS at the moment "is just the tip of the iceberg" and that to start with it will be used, as SMB is, for connecting up PC desktops rather than for Internet/intranet. The key to that will be mainstream browser support, yet to be declared. To support WebNFS within a browser requires source code changes which neither Microsoft or Netscape have so far committed to make. NAC already does 20% of its business as Internet service providers, though for network storage rather than serving. Both CIFS and WebNFS will be able to receive HTML files.

NETMANGE WILL STICK WITH NFS, WEBNFS

NFS "is still the only file sharing protocol with universal access", says NetManage spokesman Willie Tejada, who claims the company has not noticed a lack of demand for its NFS and PC-NFS product lines. NFS and its PC derivatives will continue to support the widest number of host systems, including mainframes, most Unix boxes and proprietary systems, he points out. NetManage says it is looking into some aspects of NFS/SMB integration, but dismisses CIFS as "SMB renamed, just as ActiveX is still really OLE". Instead NetManage is looking towards WebNFS as the basis for what it sees as an emerging new file sharing paradigm. Tejada views the future of CIFS as an "internet enabled" file system, whereas WebNFS is, in his view, more like "a native file system for the Internet/intranet, combining the global viewing model of the Web with the universal file system of NFS".

BSDI READIES UNIX NETWORK DEVICE KERNEL FOR INTEL, POWERPC, SPARC

BSD Unix house Berkeley Software Design Inc, Colorado Springs, Colorado, will launch itself into the world of network devices in September with a cut of its BSD/OS Unix kernel tailored for embedded Intel, PowerPC and Sparc developers. It thinks folk building network computers, point-of-sale systems, ATMs, firewalls, handhelds, single system boards, CTI kit and network access devices, including the hub and router merchants, will be attracted to its binary packages and source terms. The as-yet unnamed product - a marketing plan is to be thrashed out this week - will run in 2Mb and come with a set of C++ development tools for customising kernel functions. BSDI, which retreated from the mainstream Unix-on-Intel file server business some time ago to concentrate on Internet servers, says the PowerPC port is done and Sparc will be complete by launch date. It doesn't plan to take on the real-time, microkernel Unix houses. Its BSD 4.4-based kernel is a modified version of the code that features in the BSDI Internet Gateway and Internet Gateway for Novell LANs products which are bundled with the Apache Web server and other Internet tools but also run with Netscape servers. BSDI claims some 24,000 Gateway installations, mostly with Internet service providers, though it has other customers still running its full-fledged Intel Unix. It's also got a bunch of Internet firewall vendors using its stuff, including Secure Computing and Trusted Information Systems. Source and binary pricing for the new kernel's not been set but the Internet suite starts at around \$5,000 and \$1,000 respectively. 50-person privately held BSDI's claims quarter-on-quarter growth and profitability; an IPO beckons. It expects the Internet gateway suites to remain its core product lines. It's got ex-IXI and SCO executive Randy Brem on board as VP embedded technology sales to guide the new products. Last week Milkyway Networks, San Jose, California, said it'll be using BSD/OS as the underlying operating system for its Black Hole 3.0 Internet firewall for PCs. The company claims Black Hole is the first application-level firewall to support virtual private networks.

DATABLADERS SHOW THEIR UNIVERSAL SERVER WARES

The Informix DataBlade module programme is well underway now, leading up to the release of the Universal Server at the year-end. Universal Server is the object-relational combination of Illustra's content management system and Informix's Dynamic Scalable Architecture relational database. The modules allow various multimedia data types to be stored as real objects in existing databases, rather than just parcels of data with object wrappers. Consequently, a great many companies were flashing their DataBlades about in Chicago last week. Informix itself announced plans to build an Adobe Systems Inc Portable Document Format (PDF) DataBlade module so files created using Adobe Acrobat can be distributed across intranets. No price, no timeframe. Canadian Unix utilities and porting company Mortice Kern Systems Inc, Waterloo, Ontario, is creating a version control DataBlade for use with the Informix Universal Server out of its Web-based Integrity Engine change management software. The DataBlade will be available from MKS this quarter priced from \$500 per concurrent user - presumably for use with the Illustra Server as part of Informix's DataBlade Developers Program until Universal Server proper ships. MKS' version control technology is already bundled by Netscape Communications Corp with every copy of its Netscape Enterprise Server for Web software developers. Open Text Corp will incorporate its Livelink library for document management application into a DataBlade module for release some time in the autumn, when pricing will also be determined. Cambridge, Massachusetts-based Open Market Inc will integrate its OM-SecureLink technology with Informix's Internet Commerce (IC) DataBlade module. Used in conjunction with Open Market's OM-Transact, its Internet commerce software, the IC DataBlade module with added OM-SecureLink will enable businesses to conduct secure commerce over the Web based on information residing in their Informix databases. Next up is MapInfo Corp, which will use its MapMarker address-matching geocoding technology to create a DataBlade module that enables address and spatial information to be stored on Universal Server. The module will incorporate all address and location components from separate data columns into as single data type, for easier storage and retrieval. No prices or dates. Other DataBladers include EcoLogic Corp, Excalibur Technologies Corp, Macromedia Inc, Mathsoft Inc, Premenos Corp, SRA Corp, Synopsys Inc, Verity Inc and VxTreme Inc. There are 24 in all signed up thus far to develop modules.

INFORMIX XPS TO RUN ON WORLDMARK SERVERS

Informix Software Inc and NCR Corp announced their three-pronged agreement last week at the former's worldwide user conference in Chicago. Informix's OnLine Extended Parallel Server (XPS) will run on NCR's WorldMark symmetric multiprocessor and massively parallel processor systems as a result. It's the first deal struck as part of NCR's High Availability Transaction Processing Program, under which NCR guarantees availability levels. The other two elements are service and joint development, but all the latter comprises at the moment is the opening of six centres around the world on Informix property this quarter to demonstrate the stuff working. They also plan to recruit ISVs to develop other applications for the program. NCR will up its Informix-certified people from about 100 to 300. The pair will also integrate PeopleSoft Inc's Human Resources software with each other's technology, and Informix will buy WorldMark systems to run PeopleSoft internally.

INFORMIX JOINTS HP/NETSCAPE PARTY

Informix Software Inc has made Hewlett-Packard Co and Netscape Communications Corp's company a crowd by joining the pair's so-called enterprise workforce collaboration initiative. It means Informix's OnLine product family will join the products and services sold by HP and Netscape, and Informix will add support for HP's OpenView systems management software. The agreement, forged in May, is based upon HP's OpenView and OpenMail messaging software and Netscape's SuiteSpot set of Web servers for intranets. It was already pretty cosy between the three, as HP already resold Informix products and Informix and Netscape combined the OnLine range with Netscape's LiveWire environment, FastTrack server and Navigator.

INFORMIX TAKES THE WRAPS OFF ONLINE XPS 8.1

Informix Software Inc said its long-awaited OnLine Extended Parallel Server 8.1 (OnLine XPS) is now generally available, by which it actually means the end of the month, when it will be up on the Hitachi Data Systems SR4900 Scalable RISC Complex (IBM's SP), IBM RS/6000, NCR WorldMark 5100, and ICL Goldrush MegaServer. All the other Unix platforms will be available by October, when the company promised there will be 12 in all. XPS was re-built from the ground-up, based on Dynamic Scalable Architecture (DSA). The new features are in the areas of transaction and query scalability, decision support query processing, Very Large Database (VLDB) manageability and of course, the web. OnLine XPS 8.1 has a new messaging system, which the company says avoids the overheads that TCP/IP brings. A new transaction management facility provides scalable transaction coordination across SMP and MPP systems, avoiding the overheads associated with two-phase commits, such as happens with DB2, or the overheads of distributed lock management, that Oracle uses, Informix claims. The level of messages remains constant, giving near-linear scalability, according to David Watson, director of product marketing for database servers. And application partitioning enables applications on a specific node to execute local SQL statements on that node, avoiding the need to introduce coordination among nodes. It's important for applications that support partitioning, such as SAP AG's R/3, and for transaction processing monitors such as Tuxedo and Top End. On the decision support front, version 8.1 introduces sampled queries that support statistical sampling, so trend analysis queries can be run much faster by running it on only a sample of the database. Ranking gives faster OLAP queries by only delivering the first or last N rows requested. Nothing new in that, but Informix claims other parallel DBMS vendors would do it on a client tool, requiring a lot of data to be processed across the network. And Informix has introduced a case statement to group multiple queries. For VLDB manageability, Informix has introduced a tool called OnBar for on-line backup and restoring of very large databases and also supports third-party management products. A high-performance parallel loader conversion tool is included for parallel conversion of data types such as EBCDIC to ASCII and it has a programmable interface to integrate with other systems a real-time feeds. And DB Slices enables administrators to logically group together sets of DB Spaces without affecting parallel execution of queries, updates and administration across the underlying platforms, the company claims. For the web, Informix has bundled Netscape Communications Corp's Enterprise Server software and Navigator Gold. The bundling will enable data to be deployed across intranets, according to Informix. When it's released on schedule on July 31, OnLine XPS 8.1 will go from \$30,000, excluding support and depending on configuration.

INFORMIX JOINS METACUBE TO BUSINESS OBJECTS, ANDYNE QUERY TOOLS

Informix and Business Objects SA are to integrate the Paris-based company's eponymous query, reporting and OLAP tools with Informix's MetaCube OLAP engine. The combination will enable users to perform multidimensional data analysis on the client and the server. Informix users get to use Business Objects query and reporting tool, while Business Objects users can access data in Informix databases through MetaCube. BusinessObjects will also enable the automatic generation of documents from MetaCube, and mobile users can pull MetaCube data into BusinessObjects for analysis and reporting while disconnected from the network. And Kingston, Ontario-based Andyne Computing Ltd is to integrate its PaBlo multidimensional query and reporting tools with MetaCube as well.

PLATINUM SHIPS THREE INFORMIX TOOLS

Platinum Technology Inc introduced Informix support for three existing database tools at the Informix users conference in Chicago last week. They are TSreorg, SQL-Spy and SQL-Coder. It brings Platinum's Informix tools stable to more than 15 runners, the company claimed. TSreorg is a utility that restructures objects that have become disorganised, without the need to rebuild the database, and can do it while the database is in use. The same thing has been out for Oracle since 1994 and will be available for Sybase later this quarter, which is also when the Informix version comes out. It'll cost \$2,000 a client and \$4,500 per server for Solaris, AIX, HP-UX and Windows NT. SQL-Spy enables administrators to monitor heterogeneous databases, and alert administrators when pre-determined events occur, such as exceptionally heavy usage, or fix the problem itself. It supports Windows 3.1, Windows 95 and NT for \$1,000. And SQL Coder, Platinum's code and object management utility now supports Informix on the same platforms for \$800.

CLARIFY OFFERS END-TO-END CUSTOMER MANAGEMENT FOR TELCOS

Customer management company Clarify Inc, San Jose, California, is carving a vertical market product out of its ClearSupport customer request and trouble management software for the telco, cable and Internet service provider industries called **ClearSupport CommCenter**. Specifically, Clarify has re-written the data model which provides a definition of the rows and tables to be created in the host database to support a set of functions it says are specific to the telecommunications industry. It claims CommCenter ties front-end customer management into back-end network management and can link device information, such as hub and router configuration and usage, with details of the services that are available across each, such as ISDN. Clarify says this ability adds a new level of depth to customer service solutions, allowing users to develop a one stop shop for customer account information on products and services to historical records and contacts. Clarify says CommCenter work order management will allow a telco to assign a new ISDN connection to a customer and update all records and initiate all actions from a Clarify screen. ClearSupport already includes an API to Hewlett-Packard Co OpenView network management which the customer must be running to take advantage of CommCenter's network integration. Another API allows developer to build a Clarify GUI that maps a user's existing graphical front-end. Clarify says the telco offering isn't part of a wider vertical market business orientation, rather a reflection of the fact that the industry doesn't ship products, but services. Clarify's other main markets, hardware, software and medical equipment houses, use a vanilla data model which they modify accordingly. ClearSupport CommCenter server and client costs \$80,000 from September on Sun, IBM, HP and SGI Unixes and NT, supporting Oracle, Sybase and SQL Server databases and Motif, Windows and Mac clients. There's apparently no demand for Informix support. Clarify counts Swedish telco Telenordia - owned by British Telecom, Teledanmark and Telenor - as the first CommCenter user. It expects its other telco customers, including Avantel SA, MCI, Securicor Wireless, Concert, Grupo Iusacell, Ericsson, Aspect, Centigram and VTEL to upgrade their installations over time. Clarify reckons the telecom market to be 12% of its business, behind software and networking (16% each), computer systems (15%) and manufacturing and business systems (13%).

Java

Clarify claims a quarter of its 30,000 users at 160 sites are now utilising Clarify Web support tools allowing them to process queries from browsers. It says one third of all the support calls it gets are now addressed through the Web and that only one tenth of these 1,000-odd hits turn into problems that need to be addressed by people rather than Web pages. Clarify says it'll soon begin to offer Inference Corp CBR3 case-based reasoning engine alongside its own diagnosis engine; it says the majority of its customers use the Clarify product but that the Inference engine it's offered for sometime is important for several of its key users. Clarify's currently Java-enabling all of its products and promises they'll roll out before year-end. Clarify says its March acquisition, Palo Alto, California-based Metropolis Software Inc, has now been fully integrated and that the Metropolis sales force automation software, now called ClearSales, will be running against the Clarify data model by the end of the year. Clarify's taking a \$1.5m to \$2m charge against its second fiscal quarter of 1996 which ended June 30th to account for the share swap which netted Metropolis. The deal valued Metropolis at \$13.2m. Clarify did \$24m in its fiscal 1995 and reports its second quarter 1996 results in a couple of weeks.

PASSPORT READIES VERSION 8.2 OF TOOLSET, PRIMED FOR THIN CLIENT AGE

Passport Corp has announced version 8.2 of its eponymous application environment, which the Paramus, New Jersey company claims is ideal for the thin-client model of centrally-maintained applications. It features so-called dynamic object passing, so users can get what objects they need, when they need them, said the company. It is integrated with LogicWorks Inc's ErWin to ease the transition from database design to application design and deployment, and also with BEA Systems Inc's Tuxedo transaction processing monitor for CICS, DB2, DL/I and VSAM. The new version also has an abstract layer to message-oriented middleware. The Passport environment combines an object-oriented 4GL with a toolset and can work with any ODBC database. It support Unix, Motif, Windows 95, NT and 3.x. Passport 8.2 costs \$8,000 and is out in "late summer".

TIVOLI BUNDLES POWERBUILDER FOR NETMAN APPS

IBM Corp's Tivoli Systems Inc and Sybase Inc's Powersoft business group have inked a distribution deal whereby Tivoli will bundle Powersoft's Enterprise 5.0 for Windows in a bundle called the Tivoli Manager for PowerBuilder Applications. It's meant to enable PowerBuilder developers to write applications that are ready for network management. This is the first offering to emerge from Tivoli's Applications Management Specification APIs introduced late last year (UX No 569). The bundle also includes the Tivoli Developer Kit for PowerBuilder and the Tivoli Manager for Applications. PowerBuilder applications built using the toolkit will generate a PowerBuilder application description file (ADF) that the Tivoli Applications Manager can use to manage the application. The Tivoli Manager for PowerBuilder bundle will be available next month, comprising a single-user PowerBuilder licence and a 25-user licence for the Tivoli Manager for Applications for \$5,000 for limited time, which the company wouldn't specify. An upgrade to a 100-user licence of the manager is available for a further \$6,000 during the promotion. Work is also underway at Dynasty, Forte, Informix, Intersolv, Oracle, Softool and Unify on the Tivoli APIs.

DYNASTY ADDS MERCURY TESTING TOOLS TO DDE 3.0

Dynasty Technologies Inc, whose three-tier Dynasty Development Environment 3.0 is currently in beta has teamed with Mercury Interactive Corp to integrate Mercury's testing tools with DDE. Dynasty's API will enable Mercury's WinRunner and LoadRunner tools to test all the GUI objects created by Dynasty, when version 3.0 rolls out, probably in late August, with a bunch of new features (UX No 596). WinRunner is for testing Windows applications, and LoadRunner tests client, server and Web load testing. Test scripts are created using by WinRunner on from user operations on the various objects, and these scripts can be used to check whether the objects are functioning properly. Dynasty co-founder and CEO Michael Lyons recently stepped aside to enable the COO Mike Wilson to take over. He is thought to be steering the Lisle, Illinois company down the road to an IPO.

FULCRUM AND FUJITSU FORM JOINT VENTURE IN JAPAN

After 18 months or so of co-development, Fulcrum Technologies Inc and Fujitsu Ltd are forming a Japanese joint venture company to market a Japanese-language version of Fulcrum's Search Server search and retrieval engine. Nihon Fulcrum KK, as it will be known, is 70% owned by Ottawa, Canada-based Fulcrum, with the rest held by Fujitsu and the \$900,000 invested by the pair reflects that split. The company will begin selling the new product at the start of next month from its Tokyo headquarters. The deal is non-exclusive, but the company itself will have exclusive rights to market the technology in Japan. Fujitsu, still plugging away at the groupware market with TeamWare, is to integrate the Japanese SearchServer technology into TeamWare, to Web-enable it and enhance its Japanese-language capabilities. Fulcrum CEO Eric Goodwin reckons the new engine has all the Japanese bases covered, including such idiosyncrasies as multiple characters with the exact same meaning. He said this deal will probably lead to other Asian language versions, given Fujitsu's muscle in that area of the world. The joint venture is very small to start with: "in the four or five range", as Goodwin put it. Goodwin said he expects the Japanese market to be "explosive" over the next few years. At the end of this fiscal, Fulcrum's CFO Peter Reid said he expected Asia/Pacific revenues to account for between five and ten percent of the total, but the company expected that to rise to 20% in the next three years, according to Goodwin. Fulcrum's search engine came out of work done at Queens University in Canada, where the law school worked with the computer department to develop a text indexing system to search through legal documents at high speed. The competition is hotting up very fast in the search engine market, and competitors such as Verity Inc have driven Fulcrum to cut its prices, produce more powerful, low end products, and step up its branding and licensing activities. Fulcrum is also an example of that rare animal in the Internet search engine world: it's profitable and has been so for some time now.

NEW VERSION OF OMNIGUARD/EAC FROM AN INDEPENDENT AXENT

Newly-independent Axent Technologies Inc has re-architected its OmniGuard/Enterprise Access Control software for Unix in version 3.0, which is available now. It previously relied on an NFS directory mounting to make the directories global. With this version, it's all routed via TCP/IP in a so-called management-agent architecture. It also supports NIS and NIS+ naming services. Rockville, Maryland-based Axent spun out of Raxco Inc earlier this year for its own Nasdaq listing. The manager controller part of EAC costs \$2,000, with each agent, prices on a per-machine basis, goes for \$1,000.

HP CANS DISK DRIVES

Shares in Hewlett-Packard Co shed 11% of their value last Thursday, plunging \$10.62 to \$78.37 on the news that it had closed its disk drive manufacturing operations with immediate effect - at a cost of \$150m before tax - and that orders were slowing. HP doubts it will make the third quarter earnings estimates of \$1.10 per share now. The news prompted a general unloading of IT stocks which sent other share prices tumbling. HP's disk debacle would be a deep embarrassment for the company were it not that people on Wall Street have such short memories. "The thing has to work to spec of course, or there will be red faces all round," our sister publication *Computergram International* wrote only last October, when the company was trumpeting a new 8.7Gb 3.5" drive that was aimed squarely at the mainframe market, and with which it had had design assistance from EMC Corp. EMC was to have used the drive: now it will have to turn to one of the other vendors HP so disparaged last autumn, although it says it was only evaluating the things and had never committed to using them. HP said development of the drive took far too long and it couldn't justify the continued levels of investment required to keep the project alive. HP is one of the most successful of the world's big computer companies because it addresses problems before they start to fester, and it has bitten the bullet this time because market share has been declining in a tough environment, but it says it is in talks to license the technology after failing to find an outright buyer for the business. The 1,680 people that work at the division will be offered jobs at other operations in Boise, Idaho, and Penang, Malaysia. It will also offer redundancy packages to employees that choose to leave. The pre-tax charge is for inventory and other asset adjustments as well as redundancy incentives. It will now concentrate its storage efforts on tape back-up, recordable optical disk drives and optical and tape libraries. As to the size of the closed division, it describes it only as "relatively small," but it appears to be about \$700m. "The closure will add to the decline in order growth," it said. HP said that based on the first two months of the quarter, May and June, it expects third quarter order growth will be "significantly" below the 24% increase reported in the second quarter. Even that increase was unbalanced across businesses; at the time HP blamed a delay in disk mechanisms as one of the reasons for it. Meantime Morgan Stanley & Co reckons HP could see its worst product backlog in six quarters due to weak sales in Europe. The investment bank recently downgraded its HP stock forecast to neutral and reduced its fiscal 1996 estimate for the company from \$5.70 to \$5.45 per share. HP's European sales are expected to be soft in most product areas and overall sales will only increase by 18%, compared with 25% last quarter and last year's peak of 34%, Morgan Stanley believes. US sales will likely rise 26% and European revenue will rise just 13%, Morgan Stanley reports. If its 18% estimate is right, that will result in a backlog up 10% year-on-year, the bank says. HP declined to comment.

FINJAN OF ISRAEL HAS ANSWER TO MISBEHAVING JAVA APPLETS

Start-up Finjan Ltd, based in Netanya, Israel thinks it has the Java hostile applets problem licked. Its first product, Surfin'Board went into public beta test recently and when run, warns users of applets that are attempting to circumvent security or break user-defined resource-usage barriers. Rogue applets can be killed, either by the user or automatically. The software (itself a Java applet) also monitors the Java runtime environment, in terms of memory, threads and Universal Resource Locators. The first version, which should be finished this month, is being aimed at nervous home users, and will cost around \$50. But a more advanced version aimed at corporates is due in September. This will enable data processing staff to set security policies globally, and will presumably admit the tacky West-coast user interface. An entirely new product, Surfin'Guard, is expected before year end. This has much greater pretensions, and is claimed to build a complete security shell around both the Java run-time environment and the operating system. Surfin'Guard will initially run under Windows NT with Windows95 and various versions of Unix following on. How the product will work isn't entirely clear. Company founder Shlomo Touboul says the company is writing device drivers that will extend the operating system. At the same time, data processing managers will be able to set up an access list that will grant special privileges to particular applets. One of the problems that may face Finjan in the future is how to cope with encroachment from the Java operating system itself. Touboul says that JavaSoft is likely to implement something like the Surfin'Board approach itself by early next year and acknowledges that keeping Surfin'Board ahead of the game won't be trivial. Touboul says that he is co-ordinating with JavaSoft and hopes to persuade it that a strong, third party security market is best for the language's development. The privately held, 10-strong company is likely to be floated at some stage, said Touboul. It's to be found at www.finjan.com.

PHILIPS, SONY BUY INTO THE WEBTV NETWORKS DREAM

One-year-old WebTV Networks Inc, the company founded by three Apple Computer Inc alumni with a completely different model for exploiting the World Wide Web for the television-watching masses, has won the backing of the most powerful European-Japanese axis, the informal but very long-standing alliance between Philips Electronics NV and Sony Corp. The pair may have nearly come to blows over the rival merits of MiniDisk and Digital Compact Cassette, but their ardent wooing of the same segment of the market simply left them partners in failure. To have loved and lost the same girl often makes for a strong bond, and the two have put their differences behind them and both are backing the Palo Alto company's vision of low-cost - under \$500 - devices for connecting television sets to the Web. Steve Perlman, president of WebTV networks, says Sony and Philips are already in pre-production for the boxes, which are built around a chip from Integrated Devices Technology Inc - using one of its MIPS R-series RISC cores, presumably. The device uses a 33.6Kbps modem. Access to the Internet will be only via the service to be offered by WebTV, and while the monthly subscription price has not yet been set, it will be "competitive" with the other on-line services. Other supporters include Concentric Network Corp; Excite Inc; Headspace Inc; Progressive Networks Inc and SurfWatch Software Inc.

Selling points

The selling points are that the WebTV Network provides what is claimed to be an easy-to-use front end to the Internet, and that it presents any Web page with "stunning clarity and without distracting flicker," so that the text is comfortably readable "even from across a living room," thanks to patent-pending TVLens technology that "eliminates interlace flicker without blurring, while it enhances the perceptual image quality." The custom browser presents Web content in a form that fits the television screen. RealAudio, MIDI music and MPEG 2 audio support are integrated into the system. It offers a 16m color palette, transparency so text and images appear translucent when superimposed on another image, and use of dissolves, wipes and cross-fades as transitions between images. It is run from a "One Thumb Browsing" universal remote control, and supports up to five users per household with each account protected by a personal identification number with personal Internet mail address; a keyboard will be optional. None of the three companies would comment on pricing. WebTV is confident it can make money from the online service, called The WebTV Network, and said it expects to break even in 1997 and turn a profit the following year. Sony says its set top box will ship this fall. WebTV expects hardware firms to sell televisions with built-in Web capability before the end of the year. Sony said it is considering selling such configurations.

ICL DENIES PYRAMID RELATIONSHIP IS AT AN END

ICL Plc says it has not terminated its OEM agreement with Pyramid Technology Corp for Pyramid's Nile servers (UX No 597). It says it has a significant installed base to continue supporting, and also Pyramid servers fit into niche areas of its strategy. ICL admits the relationship may change next year, but denies it will finish. The company also said its Goldrush massively parallel machines are being focused into media server and data warehousing applications, and in the US are also successfully running data analysis services on a bureau basis in a joint venture with Amdahl Corp for the retailing sector.

DEC's TRANSACTION MONITOR GETS INTERNETTED, BUT ONLY FOR UNIX, NT

Digital Equipment Corp's contribution to commerce on the Internet is the TP Internet Server software, which it says offers secure business-to-business transaction processing over Internet connections. Aimed at financial services, insurance claims processing, order processing, inventory control and distribution, the software integrates the high-volume, three-tier ACMSxp transaction processing monitor with AltaVista Tunnel encryption and will be available for Digital Unix and Windows NT servers (not OpenVMS, so DEC suggests users of that exploit "the affinity between Windows NT and OpenVMS") and will support Windows95 and Windows NT clients. TP Internet Server will be available next month at \$6,400 for Windows NT servers and \$14,200 for Digital Unix systems. Client software is from \$192.

HP DELIVERS NEXT GENERATION SNA INTERNETWORKING TECHNOLOGIES

Hewlett-Packard Co has announced the next generation of its Systems Network Architecture intercommunications system, targeted at users running HP-UX in IBM Corp mainframe environments. Enhancements to what is called SNAplus2 are said to include: the ability to accommodate a "virtually unlimited" number of simultaneous users and sessions; Advanced Peer-to-Peer Networking end-node functionality; concurrent support for a wider range of local network and wide area network protocols; new graphical user interface configuration tools and enhanced application programming interfaces, providing communications between applications distributed between HP 9000 servers and an IBM host or peer system. Pricing for the HP-UX SNAplus2 portfolio is to start at \$3,550 for Tier 1 systems, but the five members of the SNAplus2 family are also available stand-alone. The HP-UX Link, which communicates between the HP 9000 and the IBM mainframe or peer system, such as the AS/400, costs \$500; the SNAplus2 3270/3179G, which provides communication between the HP 9000 and the IBM mainframe or peer system using SNA 3270, 3278 and 3179G/3192G emulation is priced at \$850; the SNAplus2 APPN End Node carries a price tag of \$600; the SNAplus2 application programming interface set costs \$300 and SNAplus2 Remote Job Entry, intended to provide batch data transfer between the HP 9000 and the IBM mainframe host in an SNA environment, is to cost \$1,300. Hewlett-Packard also announced plans to integrate Cisco Systems Inc's CIP, the Channel Interface Processor, into its SNA portfolio: the processor, based on Cisco's 7000 family, is designed to connect mainframes to Ethernet, FDDI and Asynchronous Transfer Mode internetworks, without the need for front-end controller equipment. There is no word what price Hewlett will be putting on Cisco's Channel Interface Processor.

DEC DESERTS LOW-END CUSTOMERS, FARMS OUT CUSTOMER SERVICE

Digital Equipment Corp is set to abandon support for any customer unfortunate enough not to have revenues of \$50m or above. In a recent meeting, DEC decided to farm out support for low-end customers to third parties such as VARs and other service providers as part of its overhaul of customer support. "As part of the services restructure we said we will concentrate on medium to large customers and 'channelise' the low-end customers," DEC said. The company denied that its UK and Ireland desktop customer support - or even its entire desktop business - would be sold, as previously suggested by a source close to the Dublin support operation. The services restructure, which was implemented July 1, divides the group into three units - systems and network integration, multivendor and DEC product support and outsourcing. Its decision to shun low-end customers may be a sign DEC is finally acknowledging that its strengths don't lie in the PC services area and that it should retire from the PC world. The services restructure follows the recent fallout when DEC announced another bad quarter, forced out its desktop business chief and will fire 7,000 people (UX No 597).

PHAR LAP CAN TURN YOUR DOOR CHIMES INTO A WEB SITE

People tend to think of a Web server as a Sun Microsystems Inc Netra or one of Apple Computer Inc's specially configured Power Macs, but there's no reason why you shouldn't turn your electricity meter or a thermometer up Mount Snowdon into a Web server. And Cambridge, Massachusetts-based Phar Lap Software Inc has come out with what it calls "the world's smallest Web server for embedded devices." Based on Phar Lap's Embedded Web Technology, which includes Realtime ETS Kernel for embedded development, TCP/IP support and an HTML-On-The-Fly package, it is designed to enable embedded devices to be made universally accessible via the World Wide Web from any machine with a Web browser. Phar Lap sees the system being used to monitor things such as weather stations, seismographic monitors or flood watch systems, or in-room patient monitors, factory-floor controller monitors and office systems such as smart copiers. It has put together the Phar Lap weather station, which runs on a 4" by 4" 80386 single board computer, provides worldwide access to the local weather outside Phar Lap's Cambridge, offices - want to check? It's at <http://smallest.pharlap.com>. The HTML-On-The-Fly package converts raw data into HyperText Mark-up Language; the suite includes dialler software so the remote system can dial a host. It will be available this quarter, but the firm gave no prices.

YAHOO! STILL LEAKING, BUT CONFIDENT OF MODEL

Yahoo! Corp has reported its results for the first quarter of its public life, the second of this fiscal. It turned in net losses of \$1.4m for the quarter, up from \$355,000 losses a year before, on revenues of \$3.3m, against none a year ago. For the six months to June 30, net losses were \$1.3m, against the same losses last time, on \$5.0m revenues, against nothing last time. Yahoo! hit the heights with its incredible \$848m valuation by the markets when it went public in April, floating at \$13 per share, shooting up to \$43, before closing at \$33 per share, netting the company \$33.8m before expenses. On the day of the results announcement last week they fell to their lowest point since flotation, \$16, before edging back up to \$16.375 at close, down \$2.375 on the day. This being Internet-time, three months can seem like an eternity, so set against the previous quarter, net losses were \$1.4m, against an \$81,000 profit, from revenues up 89% to \$3.3m. The majority of its sales and marketing and product development costs have occurred in the second half of the six months, hence the losses. The Sunnyvaler said its advertisers were at 230 at the end of the second quarter, compared to 112 three months earlier. During the last quarter the company changed its advertising rules, so that the advertiser pays only according to the number of people that react to the first appearance of the ad by clicking on it and visiting the company's site. Despite what it sounds like, this could benefit companies like Yahoo!, because if only one in ten users actually visit a site for the first time after seeing it on the Yahoo! page, the advertiser will actually have to pay 10 times as much for each one as it would if it paid for every passer by. It claimed nine million page views per day in June, compared with six million per day in March. The company is still obviously cash rich, and development costs for its branded localized navigational tools is likely to keep it occupied, and in the red for a while yet. All this from a company that didn't even have a search engine to call its own, and had to license one from Open Text Corpon a non-exclusive basis, which was one of the 27 warnings posted in its prospectus as to why investors should be wary of such a company.

IBM HAS AS/400 WEB SERVER BUNDLE, RS/6000 TAGS CUT

IBM Corp has bundled up all its existing Internet offerings for the AS/400 to create the Web Server in a Box - pure marketing, but the right kind of marketing that has been conspicuously absent when it comes to the RS/6000 as a Web server. The company also launched VM:Webserver and cut prices on many RS/6000s. The AS/400 Internet Server Package is - at last - a complete turnkey system combining the AS/400 Advanced Server 9402-20S with system software including Internet Connection for AS/400, for \$22,000. Lotus Notes Base Pak is included at no additional charge, with the File Server Input-Output Processor. VM:Webserver enables a Web server to be set up as a virtual machine under VM/ESA 1.2.1 up, enabling users to tap into VM-based information via a Web browser. In addition to storing and serving pages written in HTML, VM:Webserver provides a full range of other Web server functions. No price was given. Price cuts on the RS/6000 affect 43P Series models 120, 390, 390H, 590, 590H, 591, R20 and R24, and range from 7% to 20%. There are also similar price cuts on the RS/6000 SP2 parallel models.

VXTREME CHANGES ITS TUNE TO I-NET VIDEO TECHNOLOGY

VXtreme Inc, Palo Alto, California, is switching its original strategy and launching itself this month as a next-generation Internet video technology company and not a traditional video conferencing vendor as expected. We're not quite sure what the difference is. The firm says it'll provide a free video viewer that will connect with the Netscape Navigator browser. Its goal is to provide a line of consumer video products, but said corporate intranets will be its first focus because most consumers are still using 28.8 kbps data transmission speed whereas the number of businesses with T-1 lines is rapidly increasing. VXtreme is promising to deliver video at 10 to 20 frames per second. Its corporate intranet server software will be ready by the end of the summer. VXtreme says it won't ditch its video conferencing software technology entirely, but likely license it to other companies. Expect more product details from VXtreme soon.

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Carlo De Benedetti is stepping aside from the day-to-day running of **Ing C Olivetti & Co SpA** and will devote his time to strategy and partnerships, while 38-year old Francesco Caio, head of Omnitel Pronto Italia SpA becomes effective supremo of the computer company. Bernhard Auer, evicted from **DEC** last year and quickly picked up by Olivetti, will take over the personal computer side.

Hewlett-Packard Co cut its prices on the HP-9000 K-class servers and the HP 9000 D-class servers: cuts on K-class models range from 19% to 30%, and on D-class models 4% to 20%, so a K210 model with 64Mb memory is \$26,780, down from \$38,450 and its K220 with 128Mb is \$39,900, down from \$49,250; the D200 with 32Mb is now \$6,900 from \$7,200, and the D210 with 32Mb is now \$8,200 compared with \$10,200.

The main competition for **SCO's** VisionFS (*see front page*) is the freeware Samba SMB on Unix port written by Andrew Tridgell, and available from <http://lake.canberra.edu.au/pub/samba/>. **SCO** says it looked to see if it could build on Samba for its own product, but decided in the end to start from a clean sheet, and got a claimed 30% performance improvement. **SCO** also decided against licencing source code from Microsoft itself.

SCO is beginning to hawk round the next version of its X-Vision "transparent" PC X-Server product line, due out properly just before **SCO Forum** in the third week of August. The Forum will also be the venue for more details on the Vision family of products that allow users to keep their state as they move around (UX No 591).

Sun has come out unequivocally in support of people doing clones of Java - not that they will be able to call it "Java". "We made Java cloneable from the beginning" said JavaSoft VP Jon Kannegaard.

The long-sought trial of Addamax' antitrust suit against the **OSF**, **HP** and **DEC** - which took five years to get on the docket - has now been postponed from August 12 to October 15. Seems one of the defendants had scheduling problems because of an even longer-standing federal case that got dibs.

Ron Lachman, whose ventures include selling Interactive Systems and the Wabi technology to **Sun** and whose TCP/IP and NFS software arguably runs on half the Internet servers out there, is now invested in a covey of some eight start-ups including **Internet Dynamics**, **Connected Corp**, **Agora**, **Technically Elite**, **Netstream Inc**, **Sandpiper Consulting**, **Kinetech Inc** and **Multilink**. All are pretty much Internet-related though Lachman prefers to still call it networking and all are dabbling in either security or remote storage.

Following the departure of the VP of **Oracle Corp's** network computing division, Andy Laursen last month (UX No 592), another VP has jumped ship. Gadi Maier, VP of operations at the division has gone to **Cisco Systems Inc** to head up its Internet division.

Visual Edge Technology Ltd is sending out production versions of its ObjectBridge object-to-object translator to OEMs this month. Java-enablement will follow.

Sun Microsystems Inc says that it has sold around 200 Ultra Enterprise servers in Russia.

Informix's NewEra 3.0 graphical application development toolset will not now be released until the end of the year. The Windows 95, NT and object product was originally slated for the end of last year. This slipped to June (UX No 579) and is now due out with the Universal Server. Support for Universal Server is one reason for the delay, the other is the need to support 16-bit Windows 3.1, which hasn't disappeared quite as quickly it predicted.

Oracle Corp has version 1.3 of its Designer/2000 modelling, design and generation tool out now. It's added Visual Basic 4.0 support, a C++ object layer generator, new graphics and MS-Help generators.

Motorola Inc has begun volume shipments of its embedded MPC86 PowerQUICC Quad Integrated Communications Controller. The PowerPC counterpart to its 68000-derived 68302 is available in all five configurations clocked at 25MHz, with the 40MHz versions following in September (UX No 590). The basic MPC860 costs \$70 in 10,000 quantities at 25MHz and \$105 at 40 MHz. The top MMPC860MH is \$85 at 25MHz and \$120 at the faster speed. The MPC860 application development system for Windows or Sun-4 system, including a board costs \$3,000.

Axil Workstations Inc, Sparc-compatible builder has added the Ultima 1/E+ Sun Microsystems Inc Ultra 1 clone. The Santa Clara, California company claims it to be the fastest in its class, but couldn't provide numbers to prove it. Ultima 1/E+ workstations come in uniprocessor 167MHz and 200MHz versions with 64Mb RAM, Creator graphics, 21" screen, 2.1Gb hard drive. The 167MHz box goes for \$21,265 and \$22,290 buys the 200MHz version. As a server, with 128Mb RAM, two 2Gb drives, CD-ROM but no monitor, the 167MHz Ultima costs from \$20,025 and the 200MHz server costs from \$21,050.

Sun has announced a Tool Command Language/Toolkit plug-in for Netscape Communications Corps' Navigator 3.0. It means the Tcl embedded scripting language is now available for Windows and Macintosh platforms and Tcl/Tk applications can be delivered and executed using the Web. Sun said Tcl is ideal for small applications on the Web, such as user interfaces, macros and system integration, leaving the bigger stuff to Java.

SCO people in a tizzy lest our piece on the Comet release of OpenServer give the impression the sky's gone black (UX No 594), might want to revisit the piece, which identifies a veritable shower of Comettes for OpenServer through and beyond the release of the merged Gemini code, UnixWare's final resting place. There won't be a single streak across the heavens. Meantime, **SCO** and **Hewlett-Packard Co** will be making an announcement about the progress of their 3DA Summit Unix kernel at **SCO Forum** in a few week's time.

Sequent's annual benchmarking bill reportedly stretches to some \$6m a year, and it's usually the marketing department directing the effort. "We go to the technical department and say we want that benchmark," says Kevin Joyce, head of technical marketing. "They come back and say it will take this long and cost that much." Usually the cost is signed off. In the multi-billion dollar Unix systems market, it's too risky not to have a competitive benchmark.

Unisys Corp's USoft business has its USoft Developer model-based application development and execution environment available for Informix's OnLine Dynamic Server. No price.

Matisse Software Inc, Redwood Shores, California - formerly ADB Inc - is integrating object-relational house UniSQL Inc's SQL compiler into its Matisse multimedia, object-oriented database. It'll allow users to query Matisse using standard SQL, the company claims.

With **NCR Corp** taking its Top End OLTP monitor off to the net (UX No 593), **IBM Corp** wants everyone to know that it too is Java-enabling its CICS transaction software. It's re-written the C-based CICS' external call interface in Java claiming it'll allow users to access CICS servers through CICS-enabled Java applets over TCP/IP, bypassing dedicated Internet servers. With performance issues being solved through Java just-in-time compilers, IBM's Hursley, UK lab is currently sorting through security options. Demo clients are up on IBM's web site, betas are expected later this year. Meantime, IBM's Transarc Corp has re-written its cut-down DCE client, DE-Lite, in Java - it's got a back-end strategy in hand but isn't telling.

Andyne Computing Ltd has released version 4.0 of its GQL MQE query and reporting tool for Windows 95 and NT. It's enhanced the admin tools and added a data model refresh facility. It costs \$700 per user and is out for Unix and Motif next quarter.

NCR Corp still hasn't cooked its Internet goose; it was supposed to hand down a full web and net strategy in May or June - it's people say it's still in the oven (UX No 587).

Wanna see a **Sun Microsystems Inc** JavaStation in action, but can't wait until the autumn? Then go to the Olympics in Atlanta. Sun is installing 100 of the things, along with a dozen Ultra Enterprise servers for visitors to access a specially-prepared Web site called JavaJoint Online. Sun says the Java boxes are just prototypes - with the emphasis on the proto. "The resemblance to what we're going to announce [later this year] is minimal", the company said. They'll have a Netscape browser on them including a video screen. The site has been prepared by Sun and House of Blues NewMedia. It'll feature a menu of live music, chats with performers and athletes and a daily report of life at the Olympics "off the beaten track". The popular beat combos featured will include such cutting edge acts as the Blues Brothers (brother James replacing John Belushi), Johnny Cash and Jerry Lee-Lewis. Doubt if Sun will let anybody in with screwdrivers though.

Despite the trouncing technology issues just took and the shortfalls experienced by **HP**, **Motorola** and **DEC**, Goldman Sachs is highly optimistic that **Sun** will meet expectations this Thursday July 18 when it reports its June quarter, the end of its year. Despite manufacturing glitches with its new Ultra-Sparc machines earlier in the period (UX No 595), Goldman believes Sun produced and shipped as much as its plan called for in the quarter thanks to a round-the-clock production schedule. It's looking for 84 cents-85 cents. Europe got shortchanged in the process and didn't get the configurations they ordered so that Sun could fill US demand. Goldman thinks Europe still doesn't have ship dates for what's missing but that Sun is going into the September quarter with a big backlog.

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MERCED MIGRATION ISSUES EXTEND PA-RISC SYSTEM LIFE

Hewlett-Packard Co has defined another member of its PA-RISC family that will extend the life of native PA-8000 boxes well beyond the introduction of systems based on the Intel Corp Merced part, now expected early 1998. The PA-8500, which may see the light of day late 1997 in limited quantities, follows a mid-1997 PA-8200 part, and might not be the last of the PA-8000 family, the company says. Although HP claims HP-UX applications will run faster on Merced systems than on PA-RISC, the extension of its RISC architecture envelope suggests that either not all's right with Merced, or that its fate is simply out of its hands entirely now. Significantly, HP admits one reason for continuing PA-8x00 system designs beyond the introduction of Merced is that it hasn't yet worked out how it'll handle PA-RISC-to-Merced migration. The PA-8500 is set to double PA-8000's performance, which currently does 11.8 SPECint95 and 20.2 SPECfp95. 8500 is the part previously referred to as 8400 (UX No 593), a tag HP dropped to avoid confusion with other 8400 products, including DEC's 8400 TurboLasers. The 0.35 micron PA-8200 is now slated for mid-1997 introduction. Meantime the company's been stepping through its 64-bit Unix plans up to and beyond Merced's introduction. This week it introduces the HP-UX 10.20 which will support files sizes of up to 128Gb, up from 2Gb now as well as 64-bit register math. Between 10.20 and the mid-1997 HP-UX 11.0 release there'll be one or more point releases, including the addition of support for kernel-level threads. 11.0 is the full-blown 64-bit operating system, with 64-bit addressing, also supporting 32-bit applications. It'll include the LP64 (Aspen) Unix 95 extensions as well as APIs from the 3DA Summit kernel being created in conjunction with Santa Cruz Operation Inc. The APIs will allow users to run recompiled 64-bit SCO or HP-UX applications on their PA-RISC systems. HP stresses the APIs are engineered to provide backwards compatibility features, not introduce new functionality. An 11.x release will support the introduction of PA-8500 and Merced systems, but the full Unix TNG (The Next Generation) Unix based on the 3DA architecture won't debut until beyond 1998. This will allow 64-bit SCO and HP applications to run on either environment after a recompile. The 12.0 release will provide the first 3DA-based code dump to SCO and HP OEMs. HP says it'll soon hang a moniker on the compiler software that'll allow PA-RISC binaries to run on Merced, which it currently refers to as post-VLIW.

MICROSOFT TALISMAN TO TAKE OUT GRAPHIC CHIPMAKERS

In the next step in its concerted campaign for world domination, Microsoft Corp has identified the leading graphics chip designers for elimination. The company is planning to announce a new hardware architecture code-named Talisman for three-dimensional graphics and multimedia on the Windows personal computer at Siggraph 96 in New Orleans next month that it claims will offer performance rivalling that of high-end 3D graphics workstations, at a cost point of "two to three hundred dollars". Microsoft has lined up graphics gurus Jim Kajiya (ex Caltech) and Jay Torborg (ex Alliant) to describe the project, codenamed Talisman, on August 9th at the show. Its aim, say the two, is to "exploit both spatial and temporal coherence to reduce the cost of high quality animation. Individually animated objects are rendered into independent image layers which are composited together at video refresh rates to create the final display". A report in *Electronic Engineering Times* claims Microsoft is working on the project with Samsung Semiconductor, Cirrus Logic and Fujitsu Microelectronics: Samsung will provide a digital signal processor chip for geometry calculation, lighting and Z-sorting; Cirrus Logic's compositor chip will take polygons from main memory (via Intel's new AGP accelerated graphics port), preprocessing them in macroblocks; and Fujitsu's RAMDAC digital-to-analog converter pushes the information onto the screen, says the paper. JPEG compression is likely to be used so as not to overload the 66MHz AGP's bandwidth. By eliminating the screen buffer and graphics accelerators, Microsoft hopes to cut costs, though it's not yet clear how cheaply the new chips can be incorporated. And as with NEC and Videologic's competing PowerVR chips, the novelty of the architecture may mean there are compatibility problems with existing 2D and 3D applications. Intel Corp is likely to be less than pleased, as it wants these tasks done within the central CPU - its first MMX (multimedia extensions) compliant Pentiums are expected in the fourth quarter. But critics have already claimed that, even with MMX, Pentiums will still not be fast enough for multimedia.

SYBASE: CAN THE KERTZMAN FIX WORK?

Something's finally given over at Sybase Inc, currently waist deep in blood and red ink. Co-founder Mark Hoffman's been bumped off the wheel - Powersoft founder and CEO Mitchell Kertzman takes the reins as president and CEO. Hoffman, in charge for over a decade, remains chairman. Is this the end of Sybase as a serious database company? No, but the next couple of quarters will be crucial, especially in light of new Gartner Group numbers which say Informix has moved ahead of Sybase and is now number two in Unix databases behind Oracle. It's got to get the mindshare back somehow too. Only a couple of weeks ago our software-watchers at a Sybase pow-wow in Massachusetts were left with the impression that the Californians seem to think the Bostonians around Kertzman have written the book on turnaround marketing (UX No 594). "That's as far from proven as saying Sybase is dead in the water, as Oracle and Informix are telling anyone who picks up the phone," they told us. "But marketing isn't enough - you also need good technology and aggressive selling - and let's hope those sides of the business aren't being neglected in favour of the Kertzman Fix." Now Sybase has to find someone to replace Kertzman as marketing chief.

SOMEONE WANTS DYNASTY

Three-tier application development company Dynasty Technologies Inc's IPO heading has been interrupted by two recent bids for its business, one from a hardware company, the other from a large software concern. Both are said to be the result of buy versus build decisions. Dynasty's crown jewels is its rules-based code generator which is embedded in the Dynasty Development Environment for developing partitioned applications. The company's spent some four years and \$25m-odd venture funding developing the 4GL engine. The technology's reckoned to be around a year behind where closest rival Forte Software is right now, although some market researchers say Dynasty could close the gap within 18 months, if it can find a buyer or partner to bankroll it and provide the channels it currently lacks. They figure without such a catch Dynasty's unlikely to figure as a player in this market like Forte, TI or Seer appear destined to be. Gartner Group says Dynasty needs to be doing \$150m by 1999 to compete effectively, unachievable without an acquisition or alliance. Whether the company cuts and runs with one of the offers - or a subsequent bid - depends whether its venture backers believe they'll get a better return by selling outright now or taking the company to the market in a year or so, or even selling outright then. Wall Street's view is that development tools are tough to sell; they're proprietary and it's hard to tell if they actually work. That, combined with falling prices for software, leads Morgan Stanley's technology watchers to conclude that the company's VC backers will want to press on down the IPO route.

Suitors

What's certain is that any buyer will have to pay big bucks to land Dynasty. Other companies in the same technology space - look at Forte - do \$40m to \$50m a year and are growing at 40% or 50%, so even \$100m spent would be recouped fairly quickly. Possible suitors include any of the big six service providers, plus vendors such as acquisitive Platinum Technology, CA, TI and Sterling Software. Dynasty's reckoned to be three years into a four year gameplan laid out by its VC backers. The four-year-old Lisle, Illinois-based company's garnered \$27m from half a dozen VCs. Dynasty co-founder and chairman Mike Lyons recently stepped aside to bring COO Mike Wilson on board. The Dynasty engine is based upon an aborted Softlab repository project which the German Case vendor tried to build using technology from code generation outfit Trimarend. Softlab was a Trimarend OEM, while its parent BMW held a minority stake in it. Before Lyons acquired Trimarend in 1992 to add into the embryo Dynasty, the company had already received some \$10m funding, mostly from cable TV companies. These days Dynasty says Trimarend technology forms the core of its client/server tool. Dynasty claims 78 customers, a handful of them production sites. It counts HP, Tivoli, Tandem and BEA as its strategic partners.

WITH ENVIABLE CASH CUSHION, GENERAL MAGIC TURNS ATTENTION TO INTELLIGENT WEB AGENTS

By Morgan Holt

Electronic agents that are able to negotiate with each other look set to become a feature of the Web as Personal Digital Assistant (PDA) specialist General Magic Inc breaks up its software and moves into the World Wide Web Consortium. Apple Computer Inc spin-off General Magic, the six-year-old software company with **\$100m in the bank yet little of the glory it hoped to have by now, is reorganising to catch the Internet wave. Early this year, General Magic made its first move into** outward implementations of its PDA software with a cumbersome Windows version. At the time it said outward versions were not primarily revenue generators, but ways of stirring up flagging interest in PDAs. When that didn't happen, General Magic had to put its PDA development on the back-burner. The advantages General Magic has are that it has its own script-based agent software - agents being the secure electronic surrogates that will one day travel from one Web site to the next searching for and monitoring information, negotiating with the sites on the user's behalf, and automating transactions. To get to that point, General Magic is unbundling its Magic Cap and Telescript products so that it can build separate brand identities and pursue separate market segments. It's abandoning its sole reliance on up-front licensing fees and annuity streams from exclusive partners to strike out for OEM customers, value-added resellers, independent software vendors and integrators, in addition to the big shots it has attracted over the years, and will eventually go direct to corporates, Web site operators and service providers. And it is obviously also embracing Web standards.

Intelligent agents

The company also announced its entry to the international World Wide Web Consortium with the goal of developing standards for intelligent agent technologies. The 125-member Web Consortium exists to develop common protocols and reference code for the evolution of the Web (details can be found at www.w3.org). General Magic calls Tabriz - and the need for Internet agents in general - the "third strategic component of a new class of distributed application," the others being Navigator or Explorer, and Java or ActiveX. Right now, it says, the Web is a large disorganised mass of information with only poor tools to collect, compile and use its data. It's also passive and has to be driven by the on-line user. Web performance and traffic is unpredictable. Sites can be overwhelmed at peak periods, idle at others. Web sites don't know preferences and previous actions and they don't learn. Passivity is particularly bad because buyers and sellers can't interact in real time. And Tabriz is intended to fix all that.

Telescript technology

It's said to be able to go multiple places, hide complexity, enable interaction, decouple the user from the task, store instructions, state and data while providing a secure environment that includes two-way authentication, access control and resource allocation. Essentially, the Tabriz agent manages the Web-based processes while the Java applet manages the user experience. It's intended to eliminate the boundaries between physically co-resident but logically distributed information, geographically dispersed data and disparate enterprise legacy systems. It can draw content from non-Telescripted sites. General Magic's new Active Internet Products Division has taken its Telescript technology, an object-oriented server-based communications language, and turned it into a product line called Tabriz. It says it can transform passive networks into active secure and persistent business vehicles with its new Tabriz AgentWare and Agent Tools. AgentWare is meant to execute and manage agent-based applications; Agent Tools to create agent-based applications that are deployed at Tabriz Web sites. In its first iteration, AgentWare will be Java-enabled. ActiveX approaches some way down the road. They are intended for Intranets and the Internet at large. The stuff ships under Unix in a weeks time and under NT this autumn for a one-time fee of \$5,000 per server. However, following a popular Internet tradition, it will be free for the first 90 days with free support for 30 days to get independent software vendors to sit up and take notice. Tabriz is also expected to sign up some partners, beginning with Tandem Computers Inc. In Tabriz's first phase, it has to incorporate database and search engine support. General Magic then hopes to branch out into standard payment schema and transaction-based services along with international distribution. Meanwhile, the company's has a new Communications Products Division that's responsible for the engaging Magic Cap software, but which also has new Presto!Links and Presto!Mail products under its wing. They provide Magic Cap-based handheld communicators such as Sony Corp's Magic Link and Motorola Inc's Envoy Personal Digital Assistants with Web access, Internet electronic mail and corporate Intranet communications.

C-based SoftModem

Presto!Links is a full-featured Web browser; Presto!Mail is consonant with the array of open standards protocols like Point-to-Point Protocol, POP3 and SMTP. The two together cost \$50 and derive from technology imported from Active Paper Inc. Otherwise, it has taken Magic Cap and come up with Magic Cap for Windows - that's Magic Cap plus Windows-specific features - hoping to stir interest in Personal Digital Assistants. The first commercial version isn't due until later this year. The unit is also responsible for General Magic's new C-based SoftModem software, which requires no special signal processor and can share a single CPU with client applications. It will be offered OEM for R-series, Pentium MMX and Philip Electronics NV's Personal Digital Assistant chips as well as others. During its run, General Magic, which once had Apple's hyperlink wizard on board, has picked up a quite brilliant collection of 16 partners, including Sony, AT&T Corp, Motorola Inc, Nippon Telegraph & Tele-

phone Corp, Fujitsu Ltd, Toshiba Corp, France Telecom, Philips, Matsushita Electric Industrial Co, Sanyo Electric Corp, Oki Electric Industry Co Ltd, Northern Telecom Ltd, Mitsubishi Electric Corp, Cable & Wireless Plc and Koninklijke PTT Nederland NV.

SYSTEMS MANAGEMENT HAIRBALL FALLS TO THE WEB

More than 50 vendors have come together to define a standard for Web-based systems, desktop, and network management. The initiative was led by BMC Software Inc, Cisco Systems Inc, Compaq Computer Corp, Intel Corp and Microsoft Corp, with other notable networking backers including 3Com Corp, Attachmate Corp, Bay Networks Inc, Cabletron Systems Inc, DEC, Eicon Technology Corp, Hewlett-Packard Co, Netscape Communications Corp, Network Managers Inc, and Tivoli Systems Inc. No Novell Inc though. The idea is that equipment using existing enterprise network management technologies (such as SNMP and the Desktop Management Interface) should be manageable via regular Web browsers, with communication via the Web's hypertext transfer protocol (HTTP). Each network device will have a home page on the intranet for remote administrators to monitor and change configuration details. It's different from the kinds of vendor-specific technologies designed to manage internet/intranet devices from proprietary environments. Development of two new technologies is proposed to cover management-specific requirements not already catered for: the HyperMedia Management Schema (HMMS), which is designed to provide data modeling and manipulation capabilities, and which the group hopes the Desktop Management Task Force will define and develop; and the HyperMedia Management Protocol (HMMP) - already under consideration within the Internet Engineering Task Force - which is designed to allow HMMS to run over HTTP. SNMP applications can use proxies to connect with the new protocols, or be re-written.

Redmond

A third component being proposed for use is a C++ HyperMedia Object Manager (HMOM), providing object management services between the data model and point-to-point browser at the front-end and multi-point, managed environments themselves. HMOM is Microsoft code loosely based upon its DCOM object framework. There was no mention of any plan to submit this to a standards body and the thinking is that non-Redmond types will simply plug HMMS and HMMP into other object management services such as OMG Corba, or use plug-ins that will likely be created for Netscape Navigator. Compatibility with Java-based web management tools is also promised, although no details were forthcoming on how this will be achieved. Sun Microsystems Inc didn't participate though it said it was in broad support of those parts of the initiative that would be going to the standards bodies. It believes that whatever emerges will be complimentary to its Java work in the systems management area. First systems conforming to the proposed standards aren't expected until towards the end of next year at the earliest, although vendors such as BMC will have Web-based versions of their existing management products out this year. One company that seems to have backed the wrong horse is UB Networks Inc, absent from the event, although parent Tandem Computers Inc - a born again Redmondite - did lend its support. UB announced in March plans to integrate Java into its NetDirector and EMPOWER network management product lines to provide Web-based management. Details of the initiative were closely held up to the last minute - Microsoft NDA'd everyone that came to a systems management get-together it hosted some time ago to put the initiative together. Indeed it was so closely-held that whilst Tivoli people on site at IBM's Raleigh networking headquarters were unaware of the initiative, Tivoli folk in Austin were working on details of its support. Novell Inc was invited to join the initiative but said it didn't have enough time to evaluate the proposals. It will participate in the initiative at the standards body level. The DMTF is to review the proposals this week.

VAN FLEET HEADS NEW SOLUTIONS GROUP IN RS/6000 RE-ORG

RS/6000 boss Mark Bregman has heeded IBM Corp chairman Louis Gerstner's recent messages about putting more Big Blue technologies together into solutions packages. Bregman's taken AIX VP Donna Van Fleet off the IBM Unix variant and given her the reins to a new RS/6000 business solutions group which will create commercial and technical hardware/software solutions packages in five industry areas. It will use workstations, commercial servers, the SP parallel servers, system and packaged software. IBM didn't know how big the group will eventually be. Bill Colton, head of the ill-fated Power Personal Systems Division's engineering team, most of which was folded back into RS/6000 last year, has been named to run the division's day-to-day hardware and software development activities as VP development. Bob Greenberg formerly VP PowerParallel systems development assumes responsibility for overall strategic hardware and software planning across the division. Meantime, VP RS/6000 marketing and assistant general manager Jeff Mason has been moved upstairs to become VP marketing for Nick Donofrio's amalgamated server business, which is responsible for RS/6000, AS/400s and S/390 systems. Bregman has brought in former colleague Bob Dutkowski to replace Mason; Bregman and Dutkowski previously worked together as assistants to Gerstner. Dutkowski served time as a marketing executive in Asia/Pacific. The RS/6000 group claims its business is now fairly evenly split between technical and commercial sales.

SYBASE AXES NON-CORE PRODUCTS

On top of firing up to 700 of its 6,100-strong workforce after reporting \$25m losses on sales of \$250m instead of the \$300m it was targeting, Sybase Inc is also dumping or selling off a slew of technologies not regarded as core product offerings. Those that are to be axed include all interactive TV work, the New Media Division and its Intermedia video server for desktop technology derived from the Gain Technology acquisition, the Media Splash program and EMS wireless messaging. The announcement is likely to be a blow to Centro Digital Pictures Ltd of Hong Kong, which was supposedly developing its next generation of interactive television applications using Sybase's New Media Studio development environment. Sybase says its MPP, decision support and Highgate OLAP technologies will be untouched. It didn't comment on the future of its Maidenhead, Berkshire-headquartered business re-engineering consultancy Oasis Group Ltd, acquired back in January 1994. 30% of the jobs being cut will be management positions.

NETWORK APPLIANCE USES ALPHA TO ATTACK ENTERPRISE NFS SPACE

Network Appliance Inc has launched the fifth model in its Filer Series of Network File System (NFS) servers, claiming the NetApp F540 is its first enterprise box (UX Nos 573, 595). The F540 is the company's first RISC-based system - it uses Digital Equipment Corp's 275MHz Alpha 21064A processor - and is rated at 2,200 NFS operations per second at under nine milliseconds response time, and over 900 operations at under four milliseconds. It's designed for mission-critical, high-performance client/server environments; software and hardware product design development, financial services, on-line and Internet services providers, and telecommunications. It supports 200Gb disk now - 300Gb later - FDDI, FDDI-TP and 100BaseT for data intensive networks, PCI expansion bus and SCSI-2 interfaces, tape backup through DLT and its flagship WAFL (Write Anywhere File Layout) file system. Performance is rated at over 2,000 NFS I/O operations per second with fully protected data through RAID. The company says it provides high-speed sequential I/O for data intensive applications such as CAD, software development and Internet service. The F540 runs the company's transport independent NetApp operating system software combining high speed file system with integrated NFS and RAID technology. The system avoids Unix overheads by using a single file system that grows automatically as new disks are added. Prices start from \$100,000. The company did \$47m revenues in the year ending April 1996 compared with \$15m in 1995. It raised \$25.7m in an IPO in November which it will use to cover operating costs. Europe contributed 9% of its revenues last year, which Network Appliances expects to grow to 20% this year. It has sales offices in France and the UK and plans to open another in Germany. Sun has recently started out after the company with its new dedicated Netra NFS 150 (UX No 589) which helps legitimise the Network Appliances strategy, says president and CEO Dan Warmenhoeven. Meantime the Netra NFS 150 is comparable with boxes "we stopped shipping eighteen months ago," he says.

SUN ADDS 200MHz ULTRA 1

Sun Microsystems Inc this week adds a 200MHz Ultra 1 workstation to its line; the Model 200E, with 500Kb cache will start at \$27,000 in entry-level configurations, some \$4,000 ahead of the 167MHz Model 170E. 170E motherboard upgrades are \$9,000. Sun's also reducing the number of Ultra workstation configurations it offers - there are currently 12 - by eliminating a 128Mb RAM option. Sun says falling memory prices mean users buy low RAM configurations and add cheap memory upgrades. It's offering 32Mb RAM for \$800 - almost half what it used to cost. It says its shifting more of the high-end Ultra 2s and low-end Ultra 1s than the mid-range units.

ORACLE'S WEB COMMERCE VISION

With transaction processing and Web commerce as the theme, Oracle Corp last week launched version 3.0 of its WebServer - a direct competitor to Netscape Communications Corp's offering - with additions to its Web Request Broker technology that enables users to conduct persistent database transactions over the Web, giving the "same reliability from using the Internet as if you were using Oracle directly", according to CEO Larry Ellison. It's an "ORB for the Web", he said, which will enable users to write server-based applications that sit behind the HTTP server. The new version will enable Web Request Broker programs - what the company calls cartridges - to talk to each other. Cartridges are a set of APIs - open, Java, basic and PL SQL - that can use the Web Request Broker to communicate via the new Inter-Cartridge Exchange (ICX), which is at the heart of the WebServer. For instance, applications using cartridges can combine to complete a task, such as an electronic transaction from a catalogue. Ellison claimed that the WebServer will deliver "real transaction integrity for Web-based applications". New versions of Oracle Developer/2000 and Designer/2000 were also announced. The former will enable applications for transactions to work on intranets and the latter to place and access database-driven reports on intranets, with no additional programming, according to the company. Next up was a few additions to the Oracle Applications for the Web family for managing corporate purchases, production schedules, engineering changes, workflow approvals, and the like. ConText Option, the text and linguistic analysis tool is now available and last up was a new Web plug-in for Oracle's Video Option, which can deliver full-screen, full-motion video over intranets. WebServer 3.0 is out in the autumn.

UNIX BASED APACHE WEB SERVER SURGES AHEAD OF COMPETITION

The Unix-based Apache Web Server has increased its lead over its rivals, and is now fifteen percentage points clear of the NCSA server, the next in line, according to the July Netcraft Web Server Survey (<http://www.netcraft.co.uk/survey>). The survey, carried out monthly by automatically polling sites across the Web, found 104,086 sites running Apache, a 35% share of all the sites polled, up from 33% last month. NCSA had a 20% share with 59,084 servers found, down from 23% last month. Netscape-Commerce and Netscape Communications took 7.4% each, and CERN managed a 6.3% share. The survey also showed an increase in the use of Windows NT-based Web servers, which now represent 11.1 % of total sites, up from 10.5% last month. The NT leader is O'Reilly and Associates' WebSite server, with 4.5% of the market. Website surprisingly stayed ahead of Microsoft's Internet Information Server (IIS) at 4%, which had been expected to surge ahead. But security problems are thought to have dampened demand for ISS: Microsoft issued a patch earlier this month when it was found that remote users were able to take control of machines running it. The figures don't show whether Netscape or Navisoft servers are running on NT or Unix, as Netcraft can't distinguish between the two signatures on those servers. So when will the most popular Web Server be appearing on NT? Not any time soon, by the sound of it, as the Apache Group, largely made up of volunteer Unix hackers, says it doesn't currently have the expertise within the group to do it - though if anyone wants to take the task on, they'll be more than welcome. A port to NT has been done by a group from Canon in Japan, however, but it's not been fully evaluated by the Apachees. The Apache project home page is at <http://www.apache.org/>

CANDLE PUTS IN LABANT AS PRESIDENT, COO

Candle Corp has appointed former IBM Corp US sales chief Bob LaBant as its new president and COO. LaBant has been consulting with a VC firm since he resigned from Big Blue after Lou Gerstner chose Ned Lautenbach to head a global sales force in its January 1995 reorg instead of LaBant. LaBant's worked with Candle for several months on its open systems and application management makeover. Candle just bought CleverSoft Inc for its Notes management technologies.

COREL APPEALS CANADIAN CONTRACT, TOUTS REDMOND BIAS

Corel Corp's claim that political manoeuvring and not technical merit led to it losing a Canadian Defense Department contract with Microsoft Corp is being investigated in court. The Canadian International Trade Tribunal began the inquiry last week and Corel says it expects to get a decision on the matter within 90 days. "The real question is not so much that we lost, but how we lost and why we lost," Corel said yesterday. Corel's allegations hint at a scenario in which Microsoft plays a virtual contract saboteur. The fuss began when the defense department cancelled its \$8m contract for the WordPerfect suite with Novell Corp, when Novell sold the software to Corel. The department then cancelled its \$1.75m purchase order without paying a penalty. A second round of bidding ensued. The timing left Ottawa, Canada-based Corel with only two weeks before the bid deadline and its request for an extension was denied. "IBM/Lotus, an American company buying an American company, was granted an extension of one month and two weeks, but a Canadian company buying an American company isn't. Is that fair?," Corel asked yesterday. Also, during the first bidding - which Corel won - Corel claims certain people within the Canadian Defense Department with "a strong Microsoft bias" were removed from the decision process. In the second round they were allowed back on the committee. The department says it chose Microsoft Office over WordPerfect on technical grounds; because Corel didn't have or didn't demonstrate its PowerPoint 4.0 filter. Corel says it demonstrated the filter, but it was missing from the box the department received later. Corel says it's amazed that this was grounds for rejection since it alleges only 12 department users have PowerPoint. Microsoft did not return phone calls yesterday.

COREL OFFICE SUITE: THE ONLY APPLICATION FOR NCS

Corel Corp claims it's in the catbird seat when it comes to Network Computers and will be the only application fully written in Java - outside email and browsers - ready to ship at the beginning of next year. Corel's by-default position should become official within the next two months, when the Network Computer Gang of Five consortia fill in details about the Internet terminal and Corel announces its OEM deals and produces a beta. Corel's WordPerfect suite in Java - its legal department is still trying to find a name for the suite using the heavily trademarked coffee name - will feature 80% of the current desktop WordPerfect suite features and take up single digit megabytes of memory. Corel said Network Computer manufacturers will bundle a Corel suite smart card with the machines that would give them free access rights for one part of the suite, such as wordprocessing, but then require a fee for other areas such as spreadsheets. Corel expects it will still charge corporates for traditional site licenses. It says the Java version will be the best option for mixed environments and function with any intranet groupware server with ODBC, ODMA, LDAP and other standard hooks, which will make it superior to Microsoft Corp's Office or Lotus Notes. Corel disparaged Lotus for being too "Notes-centric." "Our system will be able to talk to Oracle or any back office system," Corel said.

Intranet

With the Java version in an intranet environment, Corel's suite acts like client server software, but makes installation and maintenance easier. For example, an administrator could send out a memo in the form of a Java applet telling users about an upgrade or new software, which would instantly be installed as they read it. Corel doesn't expect Fortune 1,000 companies just to throw out their desktop suites entirely, but already has companies trying out the pre-beta in departmental environments. Companies rarely switch suites, but Corel sees Internet terminals as an opportunity to convince users in mixed environments to make the move away from Cambridge and Redmond. Will the Java version be cheaper? Corel isn't sure. Since it offers less features it seems as though the price should drop, but since it has more cross platform capability Corel may end up charging more than its current suite price of about \$700. Corel also said yesterday it will release a software developers kit for its Barista publishing engine, probably before the end of the year. With the Barista technology and Corel Office for Java, users will be able to publish to HTML, Acrobat, Common Ground, Envoy and others. Meanwhile, Corel launched its Office Professional 7 for Windows 95 suite yesterday, which allows users to publish documents directly to Java and costs \$700 for the CD-ROM version and \$300 for upgrades.

INFORMIX POSTS REVENUE GAIN, BUT PROFIT IS FLAT

Sitting between Sybase Inc's earnings collapse and Oracle Corp's continued ascendancy, at least Informix Corp managed to stay above the parapet, reporting second quarter net profit at \$21.62m, or \$0.14 a share, compared with \$20.18m it did in the same period last year. Revenue for the quarter was ahead 38% at \$226.28m, compared to \$164.06m last time. Revenue for the six months was \$430.30m compared to \$312.10m for the same period last year. The company blamed the impact of foreign exchange rates for shaving 4% off its revenue growth for the quarter. North American revenues were increased by 48% to \$93.34m in the quarter, European revenues increased by 36% to \$89.11m and revenues from other parts of the world increased by 24% to \$43.82m. Database server revenue increased 61%, tools revenue declined 13% over last year. Industry watchers say data warehousing, OLAP and third part applications don't drag along Informix's tools. Headcount is 4,082.

DIVISION FORESEES SOFTWARE VR MARKET

Virtual reality software and systems builder, Division Group Plc, looks to be moving into Superscape VR Plc's territory with its new dVise for Windows NT software, but Superscape doesn't mind. First shipments of the software, converted from the Unix environment, are due at the end of this month at about £2,000 for the ready-to-go boxed kit. "We priced the product at that point to compete with Superscape's £3,500 VRT software," said Pierre duPont, marketing manager at Almondsbury, Bristol-based Division. Division got rid of the last of its hardware when it sold its high end graphics technologies to Hewlett-Packard Co and is now forming itself as a software and systems integration company. dVise for NT marks Division's first entry into the PC market and its lowest entry product to date. "Even though dVise is cheaper than our own Windows95 VRT virtual reality authoring software and Division is encroaching on our low end market, we don't mind," said Tony Tuck, managing director of Superscape and former sales and marketing director at Division. "There is room for three or four more companies in the virtual reality market. We have a good relationship with Division and if they or another VR company were to go bust that would have a negative effect on our business," he said, adding that the two products were aimed at a slightly different market. Hook, Hampshire-based Superscape is due to launch a Windows NT version of its VRT software in the next few weeks. Division's duPont said that a Windows95 version of the dVise software was currently in development, but until "Microsoft irons out its bugs," there was no incentive to release it. Division said that no head-set will be offered with the Windows NT version of dVise, but if demand for a head-set is there, one is likely to be boxed with the kit by the end of the year. In the meantime, Superscape is now shipping Visualiser for Silicon Graphics, which lets real-time three-dimensional virtual reality applications developed on a PC run on Unix workstations from Silicon Graphics Inc under Irix 5.3 up, with all the benefits of superior rendering capabilities and subtle lighting, textured shading to create "a more realistic virtual reality experience than previously possible." Other features of the Visualiser include over 40 different world navigation styles, 3D animation, configurable haze, fog and smoke effects, and anti-aliasing. The development products run on an x486 with 8Mb RAM, SVGA monitor, keyboard and mouse. It is available today from Superscape and some resellers at \$1,200.

SUNSOFT OFFERS JOE ORB BETA

SunSoft Inc - which now calls itself the internet software company - has finally made its Joe 1.0 beta generally available. Joe - the name comes from American slang for coffee - is the company's Java Object Request Broker (ORB) and Object Management Group Interface Definition Language (IDL) compiler that will connect applications residing upon the OpenStep-based NEO object-oriented server environment with Java applications via the Common Object Request Broker Architecture, bypassing HTML and CGI scripts. Java applets with Joe do not re-load entire Web pages but send updated information as necessary. Joe, which is downloaded automatically into Web browsers along with Java applets, supports an early version of remote Java communication using the Corba Environment Specific Inter-ORB Protocol for connecting with Sun NEO servers. Eventually Joe will be able to communicate with objects on non-NEO platforms via support for other vendor's ORBs through the Corba 2.0 Internet Inter-ORB Protocol. NEO includes the Solaris NEO operating system environment, Solstice NEO network and systems management, the Workshop NEO development tools and Joe to support Java client access to remote NEO objects.

NEC ABANDONS MIPS FOR NT FOR INTEL, BUT UNIX REMAINS

NEC Corp has stopped manufacturing or selling Mips Technologies Inc-based workstations and servers in the US and is concentrating solely on Intel Corp-based platforms for its NT machines. It will ~~continue to sell Unix Mips-based machines. And it will still sell NT on~~ Mips in Japan, where they will also be manufactured. Most were previously made in the US. The company announced Intel-based Pentium Pro SH so-called fault-resistant servers this week. Gartner Group Inc's Dataquest arm, which got hold of an internal NEC memo saying that Mips was no more for NT, speculated that the "decision was almost certainly instigated by the merge of operations with Packard Bell." But NEC is having none of this, saying it made the decision long before Packard Bell came on the scene, which seems to make more sense.

NCR SHOWS THE BENEFIT OF EXITING THE PC BUSINESS

Soon-to-be-free NCR Corp was one of the contributors to the losses from discontinued operations line in AT&T Corp's half-year figures released last week. NCR can't split its numbers out properly, so we have to make do with operating-level figures, which showed a narrow \$11m operating income, against the \$219m operating loss reported a year ago. Incredibly, it's the first quarterly operating profit NCR has reported since 1994 and the first second-quarter profits since way back in 1992. And of course, getting out of the much-maligned personal computer business was the primary reason for the improvement. That move took \$182m, or 29% of expenses out year-on-year, according to chief financial officer John Giering, and helped gross margins up 7.2% in the quarter to 27.6%. Giering also pointed to focus on NCR's core competencies in the retail, finance and telecommunications markets with its scalable data warehousing and transaction processing lines. NCR's total revenues, including sales to Lucent Technologies Inc and AT&T Capital Corp fell almost 18% to \$1,679m. The company couldn't split out non intra-company sales. But when the PC business is excluded from the calculation, the revenues are basically flat, and rate conversions kept them from being up about 3%, according to Giering. The aim for this year is to break even and for revenues to be flat, but being produced by 8,500 fewer people than last time as Giering pointed out.

GENERAL AUTOMATION OFFERS POWER95 9.2

General Automation Inc, Irvine, California, has release 9.2 of its Power95 Pick-style multidimensional database available now. It combines the database with development tools and systems administration and is aimed at small to medium-size businesses to combine all their accounting, record keeping and transaction applications in one. This version adds transaction logging for recovery when the network fails and distributed remote processing across other Power95 systems running other parts of a database. It also supports two users viewing a common screen. Support has been added for dedicated parallel printers and 2.5 or 5Gb quarter-inch tape drives. Single processor seats are \$300 each while \$425 buys an SMP seat. It runs under AIX and General Automation sells it running on re-badged Compagnie des Machines Bull SA Unix boxes.

LBMS HAS WEB-ENABLED PROCESS ENGINEER

For those companies where adherence to a business practice standards manual is considered important, Houston, Texas-based LBMS Inc's latest Process Engineer process management software has added a component to spread the message more efficiently around corporate intranets. Process Engineer 3.5 has also added new interfaces, better workgroup capabilities and more application templates. The PE/Web Publisher component enables companies to create and maintain a "best practices" Web site. Along with interface improvements, LBMS has also added enhanced workgroup features, such as wider electronic mail standards, including Lotus Notes 4.x and cc:Mail 6.0, Object Linking & Embedding automation and support for Computer Science Corp's Project View 3.2 and ABT Corp's Project Workbench 3.0. Process Engineer comes in components for all Windows platforms. PE/Process Library is \$50,000 per server, with the clients costing \$10,000, \$3,500 and \$1,500 for PE/Process Manager, PE/Project Manager and PE/Activity Manager.

RED BRICK PROVES SMALL CAN BE BEAUTIFUL

Judging by the amount of noise Red Brick Systems Inc makes, you wouldn't be blamed for thinking the company was doing around \$500m in revenues a year. But last week's half year report showed ~~that although the Nasdaq newcomer is small, it's arguably perfectly~~ formed. The Los Gatos, California data warehouser turned in results that impressed the technology-laden Nasdaq in a week in which fickle investors turned on their heels and fled out the sector, only to return sheepishly later on. Red Brick turned in second quarter net earnings up to \$192,000, up from just \$54,000 a year before. But this year's figure included an exceptional \$500,000 hit for an unlimited license of connectivity software from a company it cannot name, that will replace by November next year the technology the company currently gets OEM from Sybase. Red Brick reckons this will pay for itself well before the OEM deal is up. Revenues for the quarter were up a healthy 61% at \$8.0m, beating Morgan Stanley's estimates by \$800,000. The company actually made an operating loss in the quarter of \$147,000, after the charge, against \$132,000 profits last time, and it was the hefty interest received from what remains of the \$34m the company netted from its IPO in January that pushed it into the black.

Offering

Incidentally, Red Brick got its offering away at \$18 a share, way above the target price of \$12 to \$14 a share, which was itself a big revision up from the original \$8 to \$10 target. But Red Brick says top line growth is the focus, and with gross margins of around 90%, few would argue at present. Cash at the half-way stage stood at \$35.2m. New accounts represented half the revenues in the quarter, but the average selling price halved in the same period. But Morgan Stanley put this down to the rapid expansion of the company's sales force, with new employees tending to bring in smaller deals at first. Red Brick has distributors in 11 other countries at the moment, and international expansion should start to contribute significantly in next year's figures. Red Brick's stock was at one point the most advanced on Nasdaq the day after the results came out, before profit taking ate away the advances the following day. For the half year, profits rose to \$626,000, from \$97,000 previously, on revenues up 58% at \$14.5m. Net earnings per share were static at \$0.01 in the quarter, and were up to \$0.05 in the half, from \$0.01 last time. Morgan Stanley upped its estimates to \$0.17 per share for the year and \$0.32 for 1997.

OPENTV LIKELY TO BE RESTRUCTURED

Sun Microsystems Inc and Thomson Multimedia SA are looking at a number of options for restructuring their Open TV interactive television alliance (UX No 586). They would not confirm any specific reports, but Sun said an announcement is due in the next couple of weeks. There are several options open to them. Spinning the alliance off as a separate company is one option, but it isn't big enough for that, one industry source said. Another option is shifting control to one or other of Sun or Thomson or formalising it as a business unit rather than as a consortium. According to a report in *Consumer Electronics*, it will become an independent company with partnership moving from joint venture to one where Thomson takes the lead and Sun retains equity interest, Sun CEO Scott McNealy is reported as saying, adding that the alliance, currently 50-50, is working "fine".

Sources

Sources familiar with plans told *Consumer Electronics* that the independent company would operate with Thomson and Sun staff and funding. The two companies have taken the "next logical step" in forming a group "dedicated to marketing this technology to the world," the source said. "This would be a higher level commitment from Thomson and Sun because customers would prefer a vendor to be a real company instead of two guys getting together on a fun idea." Thomson and Sun formed the Mountain View, California-based Open TV alliance in November 1994. It was established to bring together Sun's experience in personal computer networks and servers and Thomson's abilities in digital video compression and consumer product manufacturing. It has around 40 employees from both companies.

SUN RESULTS MEET EXPECTATIONS

Sun Microsystems Inc last week posted record Q4 results, meeting Wall Street expectations (UX No 598), a refreshing change of pace from some of fellow technologists lately. Revenues were \$2 billion, up 22% from a year ago. Earnings per share, exclusive of one-time acquisition charges related to Integrated Micro Products and Lighthouse Design Ltd, reached an all-time record of 85 cents, almost a 35% gain. Revenues for the year were \$7 billion, up 20%, and earnings were \$2.65, up 46%. The company has nearly a billion dollars in cash, little debt and an operating margin of 11.9% in the fourth quarter, its highest level in eight years. During their meeting with financial analysts after the numbers were released Thursday after the market closed, Sun CEO Scott McNealy, chief financial officer Michael Lehman and SMCC president Ed Zander made no note of the manufacturing difficulties the company experienced early in the quarter with its new UltraSparc machines that could have ruined things for them. Round-the-clock production schedules allowed them to meet plan and left them with record bookings and backlog. Lehman expressed reservations about whether demand would continue through Q1 with its seasonal downturn, traditionally a rough time for Sun. He would not be able to tell until later in the period. Q4 was Sun's first experience with UltraSparc machines and demand for them exceeded demand for older products. Germany, Italy and the Benelux countries proved strong; not so France and Switzerland. Results in Japan were stronger than indicated, they said, because of the strength of the dollar. Computed in yen returns showed a 20% improvement; in dollars only 15%. Otherwise, currency had little impact. Zander claimed Sun hardware, simultaneously innovative and safe, was winning over HP, its chief rival, thanks to the slip in the 8000, confusion over HP's NT-P7 policy and its failure to articulate an Internet strategy. Sun, on the other hand, explaining that Internet halo effect is indispensable, has Java as its "calling card." Sun also claimed to find similar weakness in IBM, DEC and Silicon Graphics. Zander did, however, acknowledge that NT is "certainly a competitor" before trotting out the now-hackneyed and increasingly less well-founded charges that it lacks mission-critical support. Sun claimed record server sales across-the-board and said it had a few 6000 installation in the \$1 million range. 6000s are of course its high-end 30-ways. Netra sales were three times what they were a year ago thanks to Internet fever. Sun had added 2,900 people in the last year, a ramp up expected to taper off, and is shooting for the large accounts going forward. During the interview, McNealy said that he is now prepared to publically retract his long-held oft-repeated opinion that there would be three surviving architectures after the smoke of the computer wars cleared: Wintel, Sparc and PowerPC. He is now prepared to consign PowerPC and all its baggage like Taligent and OS/2 to the dustbins of history and substitute the Web in its place. Naturally this gives McNealy a foot in both camps since the Web, where Sun already has a commanding position, involves Java chips, Hot Java and Java Beans among other things. Ironically McNealy had privately regarded PowerPC as a place to retreat to if Sparc and Unix bombed big time and supported it with Solaris.

COMPUTER ASSOCIATES LEADS THE BULL CHARGE

Computer Associates International Inc was at the centre of the technology stock revival last Wednesday, coming off the back of Intel Corp's storming figures the night before. CA's shares surged ahead \$6 or almost 15% to close at \$46 on the day, following better than expected first quarter earnings, and they stood at \$49 as we went to press on Thursday. The Islandia, New York company had warned in May that the first quarter would face "tough comparisons" against the year-ago quarter, and it may not meet Street expectations. But that's just the kind of error of judgment the markets, and the company don't mind seeing one little bit. CA turned in first quarter profits up 35% at \$119.8m on revenues up 37% at \$792.1m. CA-Unicenter "was a significant factor" in the growth, according to chairman and CEO Charles Wang in a statement. CA restructured its sales force at the start of the quarter, creating a unit for smaller accounts, which has proved successful, and it also restructured into four business units. These have "positioned us well for future growth", according to Sanjay Kumar, president and chief operating officer. Mainframe revenues rose 36% in the quarter, with mid-range sales up 50%. Product licensing rose 52%, and maintenance was up 5%, the first rise in three quarters. But Morgan Stanley reckons that won't continue, it being just a first quarter thing. The board's decided to buy back a further 18.75m shares, to add to the 18.8m currently outstanding. Morgan Stanley gushed "Business is good" at CA and recommended them as a strong buy, after the first quarter performance, normally the company's' weakest. It estimates \$1.98 per share for the year.

PARCPLACE MAKES MORE THAN SMALLTALK WITH OBJECTSHARE

ParcPlace-Digitalk Inc, Sunnyvale, California, says it will use its acquisition of Objectshare Systems Inc this week to plunge into what it calls the "wide open sea" of the Java components market and release the first of a family of products in August. Objectshare is putting the finishing touches on the August release, called jKit/Grid, a series of Java classes which acts as a set of grid and table UI that provide scrolling grid controls and related cell editors. Santa Clara, California-based Objectshare is offering a free download of jKit/Grid for non-commercial use and was expecting to charge \$145 for a one year commercial license with support and \$495 for the same deal with source code, but with ParcPlace-Digitalk running the show, it's unclear if that pricing will remain. Objectshare says it has a family of Java components in the pipeline for programmers which want short-cuts to build more complex applets and applications. ParcPlace-Digitalk said yesterday it hasn't decided whether component and others to follow will be branded with its name or Objectshare, which will become an "independent business unit" of the firm when the deal becomes final. The companies did not release financial details of the acquisition.

Mass market components

The unit will report to Richard Dym, ParcPlace-Digitalk VP international operations, who said the firm will produce mass market components for the Smalltalk, Java and ActiveX environments. "We're going to be active players in the components business and the addition of Objectshare gives us an immediate quick-step in that direction and still allows ParcPlace to focus on our forte - distributing computing in the enterprise setting," Dym said yesterday. The acquisition's more obvious benefit will come from Objectshare's Smalltalk tools, such as WindowBuilder Pro/V and WidgetKit/Professional, which make a nice fit with ParcPlace-Digitalk's Visual Smalltalk Enterprise product line and offer an entry into IBM's VisualAge marketplace. Dym emphasised that Objectshare would continue to offer Smalltalk tools for VisualAge customers. Expect ParcPlace-Digitalk to reveal its branding strategy and prices next month. Expect Objectshare to post a letter detailing future plans for its customers on its Web site in the next two weeks. Objectshare has 15 employees and claims 10,000 users. Financial terms of the deal weren't disclosed.

HDS ADDS WIRELESS ETHERNET FOR NC @ \$2,600

At \$2,600, it's rather a long way from the \$500 or less that was meant to be the selling point for Network Computers, but for its latest @workStation trick (the original version of the 80960 RISC-based box costs \$750) HDS Network Systems Inc has come out with the wireless @workStation, which comes with the FreePort wireless Ethernet local network system from Windata Inc. The King of Prussia, Pennsylvania firm sees the line being used in the factory, where users could reconfigure the shop floor without worrying about rewiring the network, or the warehouse, where a user could propel it along on a cart while taking inventory. As with the fixed @workStations, it supports networking standards and can run any existing Windows, Unix or mainframe applications, as well as be used on the Internet.

HP FORMS INTERNET SOLUTIONS ARM FOR PRINTERS

Hewlett-Packard Co last week formed a new Internet Solutions Operation to develop Internet and intranet software for its printers and other networked hard-copy devices. The division's first offering will be an intranet version of its JetAdmin printer management software, which should be available in the fall. The division is being located in HP's Boise, Idaho-based LaserJet Solutions Group. Boise is one of the places hit by HP's withdrawal from the disk business. The division will be headed by general manager Bill Sharpe, who was formerly a lab director at HP Laboratories in Bristol, UK. The intranet printer management system will enable corporate intranet users to monitor network printer and scanner activity from Web browsers. HP says the tool is part of what is now an extended Operation Camouflage network printing initiative originally created in March 1995 that is supposedly backed by Novell Inc, Microsoft Corp and IBM Corp.

WHERE ARE THEY NOW?

ONTOS CHANGES TACK TO MIDDLEWARE

Ontos Inc, one of the earliest of the object database companies, has re-emerged as a middleware company after virtually disappearing over the last two years. Once an object purist, Ontos has now realised that full-blown object databases are for niche markets only, and is touting the benefits of its Object Integration Server (OIS) as an object/relational integration tool. It still sells the full Ontos database, now renamed DB/Explorer, but at a vastly reduced "giveaway" price of \$500 - it was previously \$7,000. Privately-held Ontos, which doesn't give out financial details, seems to have survived largely due to the continued interest of one of its biggest customers, Daimler Benz, which poured a much needed \$5m capital into the Lowell, Massachusetts-based company at the end of 1994 in exchange for a 20% stake. (UX No 508). The rest of the shares are held by J P Morgan and Wolfensohn Associates. The Ontos database is made up of extensible C++ classes, and OIS is the storage management component, sub-classed and mapped to other data structures, specifically Oracle and Sybase. The OIS front-end comes from Neuron Data. OIS comes in three parts. The schema capture and mapper tool represents the data graphically and maps it to a C++ object model. This is stored in a repository independently from the database, currently a cut-down version of the Ontos database, though a flat file option is due out next month. Then there is a run-time environment, automatically generating SQL or C++ code that gets compiled into the application - from then on the application can access the database directly. OIS runs on Sun workstations, but HP/UX, IBM AIX, DEC Alpha and Microsoft NT platforms are due in the third quarter.

Hand modelled

Previously, object/relational mapping had to be carried out by hand, a very difficult task. There is still sometimes room for hand tweaking once OIS has done its job, but Ontos says that its support for denormalised tables, relational standard procedures, graphical user interfaces and user-defined keys puts it up to two years ahead of the competition. The mainstream relational players are working on the same problem from the other direction, but none of them have made a convincing job of it, says Ontos: Computer Associates gave up on its plan to integrate its existing software with Fujitsu's ODB II; Sybase abandoned its Brahm's object strategy at the beginning of the year and started again from scratch; Oracle's SQL3 extensions won't do the trick for those who require full multiple inheritance and polymorphism; and Informix's purchase of Illustra has generated a great deal of scepticism. Ontos is currently keen to work with as many object and database companies as it can, so Oracle and high-end object database house Versant were beta partners for OIS, and Ontos is working with IBM on a DB/2 version. Informix support may follow, but others, including CA-Ingres, will have to be accessed via a generic ODBC version currently under development with Intersolv Inc, due out as a product in December. Ontos is also working on ORB integration with Sun, DEC and Expersoft, with software development firms such as Forte and Platinum, and increasingly with vertical market software houses such as London-based Intelligent Computer Solutions, which writes software for the process and power industries. Also up its sleeve is something Ontos calls Objects on the Desktop (ODT), aimed at developers and end-users working with Visual Basic, PowerBuilder or Java-based browser environments. It plans to demonstrate an ODT prototype with Java API and integration with ActiveX at the Object World West show in San Jose next month. Meanwhile, the original Ontos database, now DB/Explorer, will be further cannibalised for future products. As a stand-alone system it will either gradually fade away, or boom spectacularly as a developer/Web database under its newly cut price tag.

HTTP WORKGROUP SHUTTING UP SHOP - NEXT STOP; THE OBJECT WEB

The biggest shake-up in the underlying structure of the World Wide Web is on the way with proposals to completely change the nature of its underlying Hypertext Transfer Protocol (HTTP), says our sister publication *OnLine Reporter*. The likely outcome? A move from ~~HTTP's simple 'Request-Send' model to one involving distributed~~ objects. With work on specifying Hypertext Transfer Protocol 1.1 nearing completion, the Internet Engineering Task Force HTTP workgroup is aiming to shut itself down by year end. But it is likely that the workgroup will be replaced with another, examining proposals for HTTP-NG, a next generation object-based protocol. "My personal bet is that the Corba-style of definition of distributed object interactions will dominate the thinking of advanced Internet protocols" says Larry Masinter, joint chair of the existing HTTP workgroup. The main work on NG to-date is based on a proposal from Simon Spero of Verifone subsidiary EIT. Conventional HTTP requires a browser to set up a new connection to the server for each request - for each image, or piece of text on a page - resulting in huge overheads. NG attempts to reduce this by allowing multiple requests to a server to be passed over a more persistent single connection. Moreover requests can optionally be handled asynchronously with the client able to fire out multiple requests without waiting for a response. Today's browsers try to mimic this effect by opening multiple connections to a host, but this tends to clog router caches on backbone connections. While Spero's work substantially cuts the network overhead and paves the way for better multimedia integration, the World Wide Web Consortium wants to go a lot further: bringing object technology to the underpinnings of the Web. Moving HTTP towards an object framework would make it fit more comfortably into the corporate software world, and allow for multiple language support. A joint conference with the Object Management Group late last month was set up to explore the ways that the Web and objects could come together.

Favoured option

The W3C's favoured option is to implement an HTTP-NG proxy using Xerox Parc's Inter-Language Unification architecture (ILU). ILU is a meta architecture that allows, so its proponents say, the easy bridging of multiple protocols with multiple language bindings. You want to link Corba objects to code expecting Sun Remote Procedure Calls? No problems, say the ILU guys. In a briefing paper, W3C architect Dan Connolly enthuses: "ILU makes all sorts of gateways and interoperability mechanisms nearly trivial. You want a gateway that translates between SunRPC and CORBA IIOP? Just link both transports and message formats into your server, and you're done. Eventually, I expect the same will be true of DCE, HTTP 1.x, IBM's DSOM, Microsoft's DCOM, etc. This will be critical when you want to run HTTP-NG from your palm-top, across a serial link to your PC, across the LAN, through the firewall, and over the Internet, then back through a similar set of twisty passages to the server. No single message format and transport will be suitable for the whole route." Such a pragmatic approach is unlikely to endear itself to the Object Management Group, which wants to see IIOP everywhere. Ripping up today's HTTP infrastructure, to replace it may seem like a pipe-dream - replace 30 million Web browsers?. That's why, initially, the W3C is working on proxy systems. End-users would be able to point their existing browsers at the proxy and garner at least some of the performance benefits of HTTP-NG as the backbone network of large servers gradually begins to talk the new language. The first browser to support the new protocol directly is likely to be Athena; the old work-horse developed by Dave Raggett, which is habitually used to test out new developments such as HTML 3. Work on the new version of Athena has yet to start. <http://www.w3.org/pub/WWW/Protocols/HTTP-NG/Overview.html> <ftp://parcftp.parc.xerox.com/pub/ilu/ilu.html>

FACET'S SMB UNIX-TO-PC CONNECTIVITY SOFTWARE WILL CHALLENGE SCO

The Santa Cruz Operation won't have it all its own way in the PC/Unix connectivity tools market with its Server Message Block-based VisionFS product, launched last week (UX No 598). Facet Corp has launched a similar product, called FacetWin, for Windows95/NT to Unix integration. Like VisionFS, the product includes complete file and print services, with no need to install the PC-NFS client software on the desktop, because SMB support is already built-in. It also includes terminal emulation (from the company's FacetTerm product), modem support, PC backup to Unix tape facilities, an e-mail server that works with Microsoft Exchange and other mail clients, remote computing support and network licensing options. SCO opted to jettison much similar functionality, dismissing it as "bloatware". It's available at the end of this month for SCO Unix and OpenServer, IBM AIX and Intel Unix V.4 (Solaris and UnixWare), with HP-UX and Sun Solaris due in the second release, set for early September. Pricing is from \$195 for a single user, \$1,600 for ten users, grading down to \$125 per user for 100 plus users. Facet Corp is the new name for the product side of Structured Software Solutions Inc, based in Plano, Texas - a long term player in the emulation business, and, ironically, a partner of SCO's for the FacetTerm emulator and multiple session manager. SSSI was split into two divisions back in February, the other half being the Structured Software Services Group, providing contract engineering services. Facet Corp president Jim Bryant is also CEO of SSSI. Facet has a Web site at <http://www.sssi.com/>. Facet products are distributed by the UniDirect Corporation.

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The word is that the **World Wide Web Consortium** (W3C) has a new chairman. Out goes Albert Vezza, one of the founders, in comes Jean-François Abramatic, Director for Development of INRIA who was responsible for setting up the European arm of W3C. Abramatic has apparently garnered support from the W3C's fractious Advisory Council who like his commercial savvy. Before he joined France's Institute for Research into Informatics & Automation (INRIA) in 1992 he was Chairman and CEO of an X-Windows start-up. <http://www.w3.org>

Meanwhile the **W3C**, recently under fire from its own Advisory Council for having no process making standards is said to be working on a "calendar of events" from which it is hoped a disciplined process will emerge.

Scientists at the **US Lawrence Livermore National Labs** say they have largely overcome problems on the road to using extreme ultraviolet light in photolithography: the short wavelength - 20 times shorter than currently-used beams, should enable manufacturers to produce chips that are 10 times faster and have 1,000 times the capacity of chips today, by early next century.

Meantime **Lucent Technologies Inc** says its Bell Laboratories division has developed a new electron beam system that etches chip features at sizes four times smaller than can be accomplished with current techniques: the new technology, called Scalpel, etches 0.08 micron lines; Scalpel, proprietary to **Bell Labs**, will be available for research applications as early as the end of this year.

Oracle Corp is becoming such a big company that Larry Ellison can no longer manage to do absolutely everything himself. He has promoted Raymond Lane to president and chief operating officer and the head of a new management committee of 10 top Oracle executives, making him responsible for planning, communicating and implementing policy and strategy decisions by the executive committee, which includes Ellison and financial chief Jeff Henley, as well as Lane, who was president of worldwide operations.

Recalling Niklaus Wirth's law that software gets slower quicker than hardware gets faster, Bob Metcalfe, Internet columnist at *InfoWorld* magazine and vice-president of technology at **International Data Group**, says it is often paraphrased these days as (Intel Corp's Andy) "Grove giveth, Gates taketh away."

One interesting fact to emerge from the most recent NetCraft Web server survey (*see page 3*) is that those companies with newer Web servers of their own appear to be less than confident about using their own products: on July 1st, **IBM**, **Oracle**, and **Novell** were all using the freely available NCSA server in preference to their own commercial offerings.

NeXT Software Inc and **Netscape** are getting together to attack the intranet market, jointly selling Netscape's SuiteSpot set of Web servers and Navigator Gold with NeXT's WebObjects Enterprise application development environment. WebObjects automates Web page creation, and ties them into corporate databases (UX No 575).

Kernel Group Inc's offering a new 2.0 version of its STTrace diagnostic tool for AIX. It describes the STTrace as a software X-ray machine. Prices go from \$500.

Sun Microsystems Inc says high-end Ultra Enterprise server clustering will arrive in the fourth quarter (UX Nos 573, 595). It's not saying how it's going to achieve it.

Santa Cruz Operation Inc's named its UTG replacement group Unix Computing Forum (UX No 596). A support organisation for the OEM-group will be part of the enterprise solutions business unit reporting to the company's VP enterprise solutions.

UUNet Technologies Inc, which gobbled up UK Internet service provider **Unipalm Pipex** last year, (UX No 560) has been out shopping once again: last week it acquired the Canadian **ISP Metrix Interlink Corp**, based in Montreal. UUNet issued 199,939 shares of Common Stock in the acquisition. UUNet Canada will combine with Metrix, taking advantage of its high bandwidth DS-3 infrastructure. Meanwhile, UUNet's merger with MFS Communications (UX No 588) appears to be steaming ahead, and is expected to be finalised on August 12, if approved at stockholders meetings on the 9th and 10th.

Platinum Technology Inc has signed an agreement with the Portuguese company **Mainssoft Software de Sistemas**, following which the latter will distribute the North American's products in the Portuguese market. Mainssoft Software de Sistemas turned over \$2.5m in 1995. Following in the footsteps of his US bosses, managing director of Platinum Technology Iberica SA Guillermo Wagner said that Platinum intends to buy Mainssoft in the near future. It's already negotiating for a Spanish concern. 1996 turnover of \$7.9m in Spain and \$3.9m in Portugal is estimated. Platinum has had an office in Spain since March 1995 and 1% of profits from all five of its business sectors is earmarked for helping an animal in danger of extinction.

A draft of **Tivoli's** Internet Management Specification (IMS) defining an interface for configuring, monitoring and controlling Internet devices (Ux no 583) goes to UK standards body X/Open Co Ltd for review next month. Backed by **SunSoft Inc**, the specification defines Java classes and OMG Corba Interface Definition Language APIs.

Larry Ellison told a recent **SunSoft Inc** sales training conference he believes e-mail will be the killer app for network computers, not web browsers. His thinking is that people are less "proactive" in search of things (browsers) and much more "reactive," and interested to communication (e-mail).

Mitchell Kertzman, the newly installed **Sybase** CEO (*see page 1*), figures his best bet is to tread a path opposite to his rivals **Oracle** and **Informix** which he described as large monolithic centralised testosterone-rich computing while his is small, decentralised and simple. In other words, nothing will change. He claims to have a better Internet story to tell with customers like Hot Wired, Fedex and AOL - his predecessor just didn't tell it - and a better data warehousing tale.

IBM Corp has ported its Data Joiner middleware product over to HP/UX, and added **Informix** to this list of databases it supports. Data Joiner manages the process of joining data tables from different databases, currently DB2, Microsoft SQL Server, Oracle and Sybase.

Data General Corp announced its first servers which use the Intel Corp Pentium Pro Standard High Volume (SHV) motherboards as the Avion 4900 and 5900 servers last week. They use up to four 166MHz or 200MHz processors. The servers come with 512Kb cache, up to 4Gb RAM, support up to 5Tb disk and run DG/UX, SCO UnixWare or Microsoft Windows NT Server. The systems are the precursors to 16 and 32-way Non-Uniform Memory Access architecture Avions due by year-end. The 166MHz servers start at \$35,000; 200MHz models start at \$40,000. Ships begin in 60 days.

One of the reasons veteran terminal emulation company **Structured Software Solutions Inc** changed the name of its product division to **Facet Corp** (*see page 7*) is presumably the confusion of various SSSI sites on the Web. Those searching for SSSI's site (<http://www.sssi.com/>) had to battle their way through Storage Solutions Specialists Inc, Single Source Systems Inc, Sites of Special Scientific Interest, the Society for the Study of Symbolic Interaction, and even the Science of Soft Surfaces and Interfaces: the exasperated company has now resorted to a series of links to help the misguided on their way.

Donald De Palma of Forrester Research has apparently termed the **Informix/Illustra** acquisition as "Illformix". 'Nuff said.

Forte Software Inc has reported first quarter net income of \$293,000 against losses last time of \$1.9m on revenue up 167% at \$11,680,000. The company's reported to be working on releases 3 and 4 of its development environment simultaneously to shorten development cycles and get new features to market quicker. Forte's also understood to be porting its software to MVS. Forte claims 50 production applications.

SunSoft Inc has its Solaris Internet Access Plus-Pack for Sparc and Intel-based platforms available now. It includes a prototype Java Web browser, built from the Java Developers Kit 1.0. HotJava, JavaSoft's browser currently in beta, wasn't ready at the time this pack was being put together, according to Carole Amos, SunSoft's product manager for Internet client software. Also in the pack is a Java Virtual Machine, Netscape Navigator 2.01 - not Java-ised- **SoftQuad Inc's** HotMetal Light 2.0 HTML authoring tool, video and audio tools and network wrappers to give Common Desktop Environment and OpenWindows users access to Solaris FTP and Telnet services. It costs \$100.

Despite a denial that any such plans are afoot, we understand the notion of the **Uniform** organisation being attached to the **Open Group** as some kind of a subgroup was discussed at a Uniform board meeting a couple of weeks back. Insiders says it would give Open Group a new revenue stream.

Meantime, back at the **SunSoft** sales conference, when asked about **Apple**, Larry Ellison "crossed" himself and said the last thing Apple needed was "more control" to compete. He said they had great folks but terrible new management. Of their new CEO - and of ex-IBMer **Ellen Hancock** in particular being added to the executive roster - he quoted Winston Churchill speaking of the British Army fighting against the Ottoman Empire in WW1: "They were Lions led by Monkeys."

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HITACHI OEMS BULL ESCALA SMP SERVERS

The next piece of Hitachi Ltd's twenty-seven month old PowerPC jigsaw is about to fall into place with news that the Japanese company's Hitachi Data Systems Corp (HDS) computer systems organisation will soon begin selling Compagnie des Machines Bull SA's Escala SMP servers worldwide, except in Japan. IBM Corp, with whom Hitachi struck its original PowerPC pact (UX No 495), already sells the AIX-based Escalas as its RS/6000 G, J and R models - see page three. From August, Bull's one-to-eight way micro channel architecture servers come fitted with 112MHz PowerPC 604 processors. The OEM agreement is an important one for Bull, now seeking to restore its business around a healthy open systems operation housed in a new Enterprise Information Systems Division. HDS will also resell Bull's PCI-based PowerPC 604 Estrella desktops and minitowers, the guts of which are based upon Motorola Computer Group's Black Hawk desktop architecture given a server flavour. They run AIX and NT. Bull expects there will be a further rev of the Escala system bus by year-end that'll allow it to support higher clock-rate PowerPC 604s, presumably the 150MHz 604e. Meantime, Bull's 64-bit PowerPC endeavour, the 620-based PCI bus Pegakid, is now running AIX and NT across four processors in the company's Milan, Italy labs. Production versions of the 200MHz Red October 620, version 2.0, are due in November, the system is expected early 1997. The PCI bus version of Escala, which Bull shareholder Motorola is helping design, is now expected in the second half of next year. Bull says it's disappointed the Solaris-on-PowerPC effort is being ditched. HDS already re-badges IBM's SP power parallel systems as its SR4300 line (UX No 561).

CANDLES LIGHTS OUT AFTER APP MANAGEMENT, DESIGN

Having already delivered the 19 Command Center solutions it had promised by the end of this year under its Candle Technologies management framework (UX No 553), San Diego, California-based Candle Corp is striking out for application management, design and service markets, planning a string of in-house developments, OEM partnerships and acquisitions. New president and COO Robert LaBant aims to make Candle into a total solutions provider to IT shops. Candle will use its newly-acquired Notes and desktop management software from CleverSoft Inc to expand into applications management with additional services provided by a third party that was still nameless as we went to press. It'll provide end-to-end application management and alarming. Now that it's peddling IBM Corp's MQSeries messaging software (UX No 588), Candle's going to ramp a middleware application design and service business around it. It's readying management, monitoring and security mechanisms for the software, with other instrumentation to follow. It'll do the same for Microsoft Corp's forthcoming Falcon messaging system. Candle's moving Command Center's mainframe management automation services over to its distributed products by year-end, as well as adding SQL Server and Informix monitoring agents. A new configuration tool will be available within 60 days. As well as joining Tivoli Systems Inc TME performance and application API initiatives, it's also opening its Command Center interfaces to third party job scheduling, database back up and restore applications. It already integrates with CA-Unicenter and SNMP network managers. Later this year it'll allow users to manage in-house applications using Command Center. Although it claims it can already manage Internet servers, it's currently working on Internet service management and browser and 3D front-ends for Command Center. It's supporting the Microsoft-led Web-based management initiative created last week (UX No 599). Candle believes its key technical strengths are in event alert, real-time availability and management. In its mind Computer Associates is focused on production and job scheduling control, whilst Tivoli leans towards systems administration. LaBant's other plans include moving the sales model back to telesales from direct marketing. The company expects it'll be two or three years before its income is divided equally between mainframe and distributed systems product sales. The clear majority of revenue is on mainframes now, a market it says is growing between 8% and 15% a year. LaBant predicts double digit growth over the \$230m it did in 1995.

Objects

Currently Candle Command Center for Distributed Systems supports monitoring agents for AIX, HP-UX, Solaris, SunOS, Oracle, Sybase, NT, and NetWare. OS/2 support's to come. There's an SNMP alert adapter for NetView for AIX. An HP OpenView version will follow; it's not made a decision on support for SunSoft Solstice. Mainframe-based Command Center solutions are available for MVS/Sysplex, CICS, IMSplex and MQSeries. Omegaview II allows developers to build alert rules that work across multiple environments (mainframe, Unix and Microsoft) and across networks (OpenView, NetView/6000, NetWare). It offers Omegacenter Gateway and Status for mainframe availability and Omegaview for IBM, DEC and Tandem environments. There are Omegamon II performance monitors for use with IBM databases, plus console automation and session management for mainframes. Workstation client software runs on OS/2, Windows and Motif systems. The data repository, based on Candle's own relational and object database runs under Unix, OS/2, Windows NT, OS/400 or MVS. Applications services are based on a set of C++ libraries from Borland although Candle wrote its own C++ compiler for the mainframe. The distributed products are based upon OSF Distributed Computing Environment and a Corba-compliant request broker based upon technology originally licensed from Apollo Computer. It has its own bridge to OLE front-ends. Along with DEC, Candle was once at the forefront of Microsoft Corp's Distributed OLE campaign (UX No 527). Whilst it says it now doesn't know what Microsoft's plans for it are, it expects Redmond to make an announcement on the future OLE in around four week's time.

DISUNITY AT MICROUNITY?

Rumours are flying round the valley that MicroUnity Systems Engineering Inc, the eight-year-old privately-held company backed by Microsoft, HP, US West, Cray and TCI is all but finished. Sources say its 170 employees were told two weeks ago they only had two weeks left and that "every company in the Valley is talking to their engineers right now." All the engineering staff is said to be going, leaving a skeleton team. It's believed the company has shut down its fab, which cost \$50m to build. MicroUnity, the brainchild of Mips co-founder John Moussouris, developed a 1GHz MediaProcessor capable of issuing up to 128 instructions simultaneously. It is meant for broadband applications, such as cable modems, cellular base stations and set-tops. Whatever will remain of the company will, the same sources say, retain the "philosophy" of the everything-on-a-chip approach, rather than any design. Its distinction was combining all the functions necessary for digital communications systems, including video compression, echo cancellation, protocols for communication links, cryptography and routing on a single, programmable processor, as well as running general-purpose operating systems. OSF's 64-bit Mach Unix had already been ported. Moussouris claimed other processors designed for arithmetic calculation were inefficient, requiring assistance from numerous other processors to handle tasks such as frequency modulation, audio and video comdec. The company said it had received wafers about four weeks ago; more are due September. MicroUnity admitted it had left its fab for some place else without being prompted. It did not return calls.

INTEL COUNTRY

Besides Klamath (P6 with MMX), Deschutes (P6 shrink) and Merced (P7), Intel Corp appears to have a clutch of other processors up its sleeve also code named for Oregon rivers. They were uncovered by lawyers conducting a \$250 trademark search for webmaster Robert Collins, who has been trying to register the name of his Intel-watching Intel Secrets site. On or about the same time Intel filed trademark applications for Merced and Deschutes, it also filed for Katmai and Haleakala, and when it filed for Klamath it also filed for Willamette, Clearwater and Umatilla. Separately it filed for Flagstaff, believed to be a species of the i960 RISC. All of these trademarks are pending. Intel is known to be using river and mountain names as code names, but it's not clear how they are being applied. Willamette and Umatilla are Oregon rivers. Clearwater is a northern Rocky Mountain chain, Katmai is an Alaskan volcano and Haleakala, a Hawaiian crater. Collins' search didn't turn up Metolius, a tributary of the Deschutes river believed to be a Deschutes chipset. Other names the search did come up with include Metrium and Vantium, filed together, Septium, Heptium, Itanium, Sexium, Amphion, Cognium and Centeon, also filed together. These trademarks are also pending. Intel say these trademark applications are a branding technique, not placeholders, and that there is real technology under every single one, though whether any of it ever comes to market is another matter. Collins claims Intel is misusing the trademark rules in swearing to the trademark office that these names are actually going to be used. Take a look see at: www.x86.org

DIVISION INVADES SUPERSCAPE'S DESKTOP TURF WITH DVICE FOR WINDOWS NT VIRTUAL REALITY PACKAGE

UK virtual reality software and systems developer Division Group Plc looks to be moving into Superscape VR Plc's territory with its new dVise for Windows NT software, but Superscape doesn't mind. First shipments of the software, converted from the Unix environment, are due at the end of this month at about £2,000 for the ready-to-go boxed kit. "We priced the product at that point to compete with Superscape's £3,500 VRT software," said Pierre duPont, marketing manager at Almondsbury, Bristol-based Division. Division got rid of the last of its hardware when it sold its high-end graphics technologies to Hewlett-Packard Co and is now forming itself as a software and systems integration company (UX No 595). DVICE for NT marks Division's first entry into the desktop market and its lowest entry product to date. "Even though dVise is cheaper than our own Windows95 VRT virtual reality authoring software and Division is encroaching on our low end market, we don't mind," said Tony Tuck, managing director of Superscape and former sales and marketing director at Division. "There is room for three or four more companies in the virtual reality market. We have a good relationship with Division and if they or another Virtual Reality company were to go bust that would have a negative effect on our business," he said, adding that the two products were aimed at a slightly different market. Hook, Hampshire-based Superscape is due to launch a Windows NT version of its VRT software in the next few weeks. Division's duPont said a Windows95 version of the dVise software was in development, but until "Microsoft irons out its bugs," there was no incentive to release it. Division said no head-set will be offered with the Windows NT version of dVise, but if demand for a head-set is there, one is likely to be boxed with the kit by the year-end. In the meantime, Superscape is now shipping Visualiser for Silicon Graphics Inc, which enables real-time three-dimensional virtual reality applications developed on a personal computer to run on workstations from Silicon Graphics under Irix 5.3 with all the benefits of superior rendering capabilities and subtle lighting, textured shading to create "a more realistic virtual reality experience than previously possible." Other features of Visualiser include over 40 different world navigation styles, three-dimensional animation, configurable haze, fog and smoke effects, and anti-aliasing. The development products run on an 8Mb 80486 with Super VGA monitor. It is priced at \$1,200.

MOTO NAMES NEW MARKETING CHIEF; CHRP SALES START THIS HALF

The Motorola Computer Group has picked up Dennis Schnieder and named him VP and director of worldwide marketing, a new post. Schnieder had been Digital Equipment Corp's director of marketing for NT three years ago when the market was just developing, then left to become a consultant and set up the East Coast branch of Logical Marketing. He swears PowerPC still has a future in the NT desktop arena - a significant one, mind you - and that there's a plan that Motorola's unwilling to share just yet to accomplish this goal. Meantime, to keep its volumes up, it'll be addressing the Apple clone market first. Apparently it has what it thinks are some distinguishing designs for Apple-like portables and desktops in hand that it'll field at prices under Apple's though what that'll mean for Apple's troubled marketplace couldn't be good. Meanwhile, *ComputerWorld* is expecting the imminent release of an alpha version of the Mac OS that supports CHRP, the Common Hardware Reference Platform that also supports NT and Unix. This code, whose final version is supposedly set for the fourth quarter, should apparently not be mistaken for the much-delayed Copland or Mac OS 8, currently due next year. As we went to press, the Nihon Keizai Shimbun in Tokyo reported being told by visiting Apple and Motorola officials that they will sell developers prototype CHRP motherboard and computers starting in mid-August. It said Apple would start selling to consumers before year-end and Motorola from early next year. IBM was expected to sell the stuff too. Apple's unidentified director of overseas sales was reported as hinting that the Mac OS would be licensed to two or three Japanese hardware vendors by the end of the year.

HISTORY AS IT HAPPENED - UNIGRAM.X IS 600 ISSUES OLD, ROLL-ON NO 666

In Unigram.X Issue No 500, we brought latecomers up to date with the history of the publication since its first issue on October 29 1984 (For anyone who missed it, let us know and we'll fax you a copy of the two-page special). So here we are now at the 600th issue. From August 1994 to date, the change has been as rapid as ever - for it was in the Fall of 1994 that the World Wide Web really began to take off. Before then most of the talk was about objects, the Common Desktop Environment (CDE) and Spec 1170. Novell Inc was still plugging away at UnixWare, even considering a PowerPC version, and talking about SuperNOS, its grand plan to unify Unix and NetWare. The Object Management Group battled to get everyone (and Microsoft) to agree over CORBA. And, in a sign of things to come, Sun launched its Netra Internet hardware server packages, while its WABI "Microsoft free" Windows effort fizzled out. IBM gave up on its MCA bus in favour of PCI. Sybase acquired Powersoft, SCO acquired VisionWare, Siemens-Nixdorf acquires Pyramid. Microsoft attempted to claim royalties from Unix vendors on account of its old Xenix code. By February 1995 IBM's Workplace plan to host multiple operating systems on a single machine was in tatters. X/Open took over the Unix trademark from Novell as part of the SPEC 1170 effort. CDE finally made it out the door, at Uniforum in March 1995. By May there was definite disquiet over the future of high-end Unix development, the perception being that Novell was interested only in the low-end of the market; meanwhile the incredible shrinking Digital Equipment Corp made it clear that NT, rather than Unix, was to be its primary route forward for the VMS user base. In June, the Open Software Foundation finally called it a day on OSF/1, the operating system at the heart of the Unix wars. And Java began hitting the headlines at the end of May, following Sun's launch of the language and HotJava browser in San Francisco.

Sea change

The Java launch really marked a sea-change in the industry. Novell's interest in Unix was noticeably flagging, and by September it had sold out to HP and SCO, a disastrous two-year cul-de-sac for both Novell and Unix. IBM gave up on its Power Personal Systems division, and indicated it was having problems with the 64-bit 620 PowerPC - clear indications that the dream of PowerPC as an Intel-busting volume processor was over. And in October, IBM's object shop Taligent re-cast its business plan, as a prelude to disappearing almost completely back into the body of IBM. And the Open Software Foundation was finally laid to rest, merged with X/Open as The Open Group. The X-Consortium, with X-Windows fading fast under the influence of the Internet, proposed a final Web-enabled gasp with its Broadway proposal before calling it a day. Novell also got rid of Tuxedo. By 1996 it was Java with everything, including chips, and Oracle's network computers were set to replace Microsoft's dominance on the desktop - in Larry Ellison's dreams. Java development tools were everywhere, and 4GL companies began to take it into account. Microsoft gave up on its proprietary Microsoft Network, renamed OLE ActiveX, embraced the Internet, and battled it out with Netscape for the browser market. People began looking at how Java applets fitted in with those object standards still struggling to gain acceptance, and now in danger of being left behind. New "web-enabled" versions of Sun's NFS Network File System and Microsoft's SMB Server Message Block were proposed. HP's plans to merge its chip technology with Intel were little clearer at issue No 600 than they were at 500. And, just as we closed this latest volume, research firm Datapro predicted that, far from dying, Unix sales were set to boom over the next few years, maybe even at the expense of NT and Windows, largely due to the influence of - you've guessed it - the Internet. Given Unigram's well-established reputation for playing devil's advocate, the next anniversary should perhaps be No 666, which by our calculator, falls on November 7th 1997, time enough for a whole new revolution.

IS TEXAS INSTRUMENTS THE MYSTERY ADVERTISER?

We're only guessing, mind, but we think we've figured out who the mystery company is that's promising to unveil a new client/server development environment on September 16. The anonymous outfit has been running a series of blind ads suggesting the software has a "musical" flavor to it (Notes?). The copy's also on a web site leased from a tiny outfit in Bryan, Texas, a small town near Galveston. The web site supplier, WebWright, only has two other customers so far, one of them the Dallas White Rock Marathon. Part of the \$25,000 prize purse in the marathon is being put up by Texas Instruments whose enterprise-class environment is Composer. And we thought TI wasn't going to announce the new Internet-enabled version of its Arranger workgroup applications development programme until the fourth quarter.

IBM FUMBLES OLYMPIC INFORMATION BATON

Oh dear, it wasn't supposed to be like this. A sponsor of the Olympics since 1960, and the technology supplier since Los Angeles '84, IBM Corp had a nightmare first week at the games in Atlanta. IBM used the Olympic theme in a series of television ads in the US featuring spoof British heavy metal band Spinal Tap. While musing about how the band will sort out the logistics of their tour, lead guitarist Nigel Tufnell shouts above the din that they'd "better get in IBM, they've been doing it since the sixties," just like the band. The irony is that Big Blue's Atlanta effort has ended up resembling one of Spinal Tap's collapsing stage sets or exploding drummers rather than a finely-tuned information system. And the shambles in Atlanta has also taught us that there's no recreation without transportation. You've all heard about MARTA, Atlanta's mass transit system: bus drivers happily telling reporters it's the first time they've ever been to Atlanta; the woman driver who burst into tears when asked to drive down the freeway, and the fearsome British womens' rowing team, who told a driver - en route to the field hockey - to shut up and drive them to their rowing event. But IBM's glitches are what concern us. Of all the groups at Atlanta to upset, the worldwide news organisations were the wrong ones. IBM has seven different systems operating at the games including the results feed to the world's media. The International Olympic Committee (IOC) got so annoyed at a series of well-documented cock-ups that CEO Lou Gerstner's Sunday lunch was left to get cold as he had to report to the IOC two days after the games started, saying he was sorry and he would do his best to fix it. At the centre of it all is the network that was under-powered. IBM had provided 9,600kbps modems for some of the lines, and had to upgrade them to 38,400kbps. The data was also serially transmitted, rather than broadcast. The first day of testing? Inevitably it was the first day of the games. IBM claimed it didn't fully understand the clients' - the Atlanta Committee for the Olympic Games (ACOG) - needs. Well if IBM doesn't, at its fourth attempt, then you can be sure nobody else does either. There were rumours flying around Atlanta - which is more than the data was doing - that the IOC would be looking elsewhere for technology for the millennium games in Sydney, but they remain just rumours. A senior IOC official said last week that if Atlanta was subject to the same criteria being applied to those wishing to host the 2004 games, it would not even get past the first round, and in future it seems likely that no city will be allowed to host without the government underwriting at least some of the cost. Technology accounted for \$233m of the \$1,700m total costs. IBM put up \$40m to be a sponsor, and another \$40m to pay for the technology. There were a few comic moments worth recording, like the three-round boxing tournaments that 'ended' in the fourth, fifth or sixth rounds; the boxers who were reported to be 0.5m or 6.35m tall; the Danish and Australian cyclists who were reported to have broken world records the day before their tournament started; the equestrian cross-country event, where the results system was unable to print out, so they reverted to pen and paper, or the Trinidad & Tobago table-tennis player who was drawn in two matches in the same round twice in succession. United Parcel Service, another erstwhile Olympic sponsor, thought it might be an idea to test security by sending a fake bomb to the games, complete with a load of electronics inside. It got past UPS' own people, but was intercepted by an Olympic guard, but not after a widespread evacuation. The games in Barcelona in 1992 were the last to use mainframes, IBM this time plumping for a sort of intranet with 7,000 personal computers, 800 midrange machines and 250 local area networks connected by two wide area networks, serving around 15,000 journalists. IBM's results system is called Info 96, leading one unkind spectator reported in the South Korean *Chosun Ilbo* newspaper to dub it "Impo 96", for impotence. Impotent might be a little unfair, but Big Blue certainly did not perform to its partners' expectations. At least it's beat the now-customary drug scandals into second place, which must please the IOC.

PEOPLESOFT V6 NEXT QUARTER

PeopleSoft Inc, whose second quarter revenue was up 96% to \$100.6m, will roll out version 6 of its human resources and manufacturing software in the fourth quarter. New international language and multi-currency support due early 1997 is expected to help its European campaign. It's also reportedly adding the time and labour and pension administration modules customers have been asking for.

112MHz POWERPC 604 INVADES THE RS/6000 LINE

IBM Corp made scads of announcements in the RS/6000 arena last week, notably the anticipated PowerPC-based nodes for the RS/6000 Scalable Powerparallel or SP systems, building 112MHz PowerPC 604s into monster symmetric multiprocessor 604 High Nodes with up to eight processors each with 1Mb L2 cache (UX No 580). Each node has 16 Micro Channel Architecture (MCA) slots, 64Mb to 2Gb RAM, 2Gb to 6.6Gb disk and one SCSI-2 and one Ethernet adapter. Up to 16 604 High Nodes - with a total of 128 CPUs - are supported in the tall frame SP model 406 with a multi-switch. The Model 206 scales to 64 nosed without a switch. Model 306 supports 80 nodes with a switch. The nodes can be intermixed with current Wide and Thin nodes. The PowerPC SP nodes run AIX 4.1.2. Meantime, IBM's High Availability Cluster Multi-Processing (HACMP) software, which clusters up to eight RS/6000 server or SP nodes, now supports AIX 4.2. Prices go from \$4,500 to \$10,000 for the base code; the concurrent resource manager is from \$6,500 to \$15,500. A high availability NFS is \$2,500.

PowerPC 604 servers

As well as the long-promised free PowerPC 604 upgrades for customers of its existing PowerPC 601 RS/6000 Models G30, J30 and R30, IBM has also introduced three new 112MHz PowerPC 604 models. Like their predecessors the G40, J40 and R40 are based upon the one-to-eight way MCA bus Escala system designed by Compagnie des Machines Bull SA and IBM, which IBM introduced in October 1994. The G40 minitower comes with one-to-four CPUs each with an optional 500Kb L2 cache, 64Mb to 1Gb RAM, 2.2Gb to 13Gb disk and five free MCA slots. It costs from \$26,000 as a uniprocessor, \$30,000 as a two-way. To get to four-ways costs an additional \$10,000. The J40 deskside comes with up to eight CPUs on four cards, up to 1Mb L2 cache, 128Mb to 2Gb RAM, 2Gb to 36Gb disk and six free slots. Prices go from \$54,000 for a two-way. Additional dual-CPU boards are \$12,000. The eight-way, with 1Mb L2 cache, is rated at 258 SPECint_rate95, and 200 SPECfp_rate95. The two-way performs at 71.9 SPECint_rate95 and 57.3 SPECfp_rate95. The eight-way does 5,774 tpmC (\$243 per tpmC). The R40 rackmount version of the J40 with from 128Mb to 2Gb RAM, from 2Gb disk costs \$69,000 as a two-way. Dual-processor upgrade cards are \$12,000. All run the Unix 95-compliant AIX 4.2. A new Multi Media server for AIX 1.1.1 is now available at from \$5,000 for 25Mbps to \$14,000 for 75Mbps. There are no-charge PowerPC 604 upgrades available for PowerPC 601 SMP Models G30, J30, R30, and R3U. The 604 was originally due mid-1995 (UX No 506). Each dual PowerPC 601 processor board currently installed can be replaced with a dual PowerPC 604 processor board. The dual PowerPC 604 112MHz processor boards come standard with 512Kb Level 2 cache per processor on the Model G30 and with 1Mb per processor on the Models J30, R30, and R3U. Though IBM says the boards are available, that seems to mean August 30 like the other new systems. Meantime Silicon Graphics Inc's Alias/Wavefront is putting version 7.0.2 of its Alias Studio, AutoStudio and Designer 3D design products up on the RS/6000.

CENTERVIEW AND LOGIC WORKS POOL VISUAL BASIC/POWERBUILDER STRENGTHS

San Francisco-based Centerview Software Inc's impending tie-up with Princeton, New Jersey-based data modelling company Logic Works Inc will result in a bundled product family featuring Centerview's recently announced Data Director 2.0 VB application development environment, (formerly Choreo) and Data Neighborhood database connectivity tools (UX No 594), plus Logic Works' SQL-based desktop database modelling tool, Erwin (Entity-Relationship Modelling for Windows). Software watchers say Centerview has created Data Director by extracting and abstracting the most popular feature in Powerbuilder, the DataWindow, and making it available for Visual Basic. The DataWindow allows developers to work with database tables in Oracle, Informix, and other relational databases. Centerview president and CEO Mark Douglas says that's too simplistic a view of what it's trying to achieve long-term - a full-blown component software environment - but admits it's a useful shorthand to describe what's there now. He says the Centerview product will evolve during 1997 into a decision support tool providing data access from anywhere, not just a Data Window. Douglas agrees the bundling deal will be important for Logic Works given that Powersoft ended its bundling arrangement with the company following parent Sybase Inc's acquisition of the competing S-Designor product. It'll give Logic Works a stronger Visual Basic business. Douglas says although Centerview could do without Powerbuilder, the Logic Works relationship will provide it with an important route into big accounts with large data models. Douglas claims other bundling deals are in the pot.

EUROPE AWASH WITH IT VENTURE FUNDS

From Computer Business Review, a sister publication

Three years ago the outlook for most young technology companies in Europe was bleak. Start-ups in search of venture capital found the doors of investment banks and venture funding organisations closed - both in Europe and in the US. Venture backers were put off by the lack of a clear 'exit strategy' that would give them a chance to reap the rewards of their investment. With no European equivalent to the US NASDAQ market - the focus for most US high-tech start-ups - the venture capitalists (VCs) preferred exit strategy was blocked. No exit strategy, no money. But in the last 18 months the cycle has been broken, and the European venture capital flood gates have been thrown open.

A series of highly-successful flotations on NASDAQ by European IT companies has broken the log jam, and US VCs are on the search for the next Business Objects SA (of France), Baan NV (of Holland) and Planning Sciences Ltd (of the UK), all European software companies whose shares have risen high since they listed on NASDAQ. "Those flotations have created a tremendous sucking effect. VC money in Europe has never been as obtainable," says Pierre Haren, chief executive of ILOG, the \$21 million French application development tools company which is aiming to list on NASDAQ in the fourth quarter of 1996. "All of a sudden, the VCs can see a way out - it's like a gold rush." The lack of venture capital in Europe has left a pool of under-funded companies which are viewed as potentially rich pickings for VCs. "It's a virgin market," says Kurt Nybroe-Nielsen, president of New Edge, a venture capital company recently set up with Texan money specifically to tap the European seam. Until recently, Nybroe-Nielsen was chief operating officer at Olicom, a Danish PC networking products company, which along with competitor Madge NV was one of the first European companies to make it to NASDAQ three years ago. By Nybroe-Nielsen's assessment, only 20 European investment companies could accurately be described as VCs, mostly in the UK and France. That compares to the 1,500 VCs servicing the US. Jochen Witte, chief financial officer at Poet Software, a \$4.5 million desktop object database company which is shooting for a 1998 IPO, estimates that there are only 3 or 4 VCs active in Germany. The rush of VCs was much in evidence in London last month as US investment companies descended on Venture Market Europe, a shop-window for young companies in search of funding. VCs were spoilt for choice with around 60 hopefuls pitching to several hundred VCs, investment bankers, IPO lawyers and consultants. Unlike the US venture market, where VCs are fighting each other for the chance to be part of the next hot Internet or data warehousing company, in Europe there is little competition for their services. But more importantly, European companies are seeking venture capital at a more mature stage in their growth. The companies fishing for funds at Venture Europe were a mixed bag - plenty of entertainment and online information companies; a couple of networking start-ups with high-speed ATM products; a handful of application development software companies - but only a couple of Internet product vendors. This included established companies such as ARM, the £10.3 million (\$15.8 million), low-power RISC chip maker which is shooting for an IPO late next year; Micromuse from the UK, a \$30 million systems management software company; Prolin, a \$20 million help desk software company from Holland which is aiming its IPO for March 1997; and UK Online a £26 million (\$40 million) online information service supplier. Many are not necessarily young - but that is hardly a disadvantage. "There is a pool of very high quality companies queueing up to be taken public. They are more mature, more stable than the likes of Yahoo! and the other unproven Internet sensations," says Haren. The transatlantic flow has even woken up some European VCs to the potential. Typically they have only been interested in more mature companies when they are in search of expansion funding. Only a sixth of European VC money goes to companies in the seed or start-up phase. That is changing - Haren cites a French bank which has just put \$80 million into a VC pot. Another inspiration for the VC rush is EASDAQ - a further acceptable exit strategy in the minds of most VCs. Starting up in September, this will create a European-wide stock market on the model of NASDAQ. Nevertheless, the majority of companies hoping for an IPO are happier with the idea of a flotation on NASDAQ. Not only do they think they can get a higher valuation on NASDAQ, but part of the reason many European companies float is to raise their profile in the US market - something that would be missing in an EASDAQ listing. Outside of EASDAQ, two initiatives from the UK and France offer yet another channel to market. The Alternative Investment Market (AIM) in London and the Nouveau March in Paris have attracted only a few computer industry companies, such as application development software company Intelligent Environment Group Plc which has opted for an AIM listing. But many executives still have reservations about these smaller markets - even EASDAQ. "It takes a lot of actors to make an IPO work. Very good analysts, investor sales people, interested investment banks, and heavy-duty institutional investors," says Haren. It will take many years before any alternative to NASDAQ achieves that kind of complex infrastructure, he says. Nevertheless, EASDAQ is featuring in such companies' thoughts. A company like ILOG sees its initial IPO on NASDAQ being followed by a secondary offering on EASDAQ, thereby increasing its scope for liquidity and offering European investors a shot at the hottest stocks.

But the venture capital industry is fickle. The current rush of IPOs on NASDAQ is likely to slacken, with the result that funds will become tighter, and there will be less competition for funds among US technology start-ups. That may mean US VCs become more circumspect about rushing into Europe. But the pattern is set - European technology companies can be a hit on NASDAQ - and the flow of early-stage investment funds from US VCs to Europe's technology start-ups is now well established.

HBM CHALLENGES PRINT MANAGEMENT MARKET WITH \$300 SOFTWARE

UK peripheral-to-network connectivity specialist H. Bollmann Manufacturers Ltd, Burgess Hill, West Sussex, is hoping the PeripheralVision network printer management software it introduced in the UK last month will generate as much as \$30m revenue for it by year-end; that's 100,000 licensees for the \$300 software. It's yet to get a concerted US campaign going, claiming it's overstretched trying to fulfil initial demand in the UK and from its web site, where a demo is available. Its two-person operation in Norristown, Pennsylvania is primarily a technical support shop. The software allows network administrators to map TCP/IP-based LAN, WAN or Internet network configurations and to manage network devices such as printers from a single screen. HBM marketing manager Ralph Ehlers explains that PeripheralVision works like any other network management software, collecting information from all types of network devices via agents which send Management Information Base (MIB) status information about the device back to the application. Agent information must be compatible with the de facto Simple Network Management Protocol or a Network Peripheral Management Protocol (NPMP) being developed by the Network Peripheral Task Force (NPTF), a group chaired by HBM managing director Klaus Bollmann which boasts a roster of printer companies that includes Texas Instruments, Kyocera, Mannesmann Tally, Fuji Xerox, Minolta, Mutoh, NEC, Okidata, Ricoh and Brother. HBM claims 99% penetration of the Japanese printer market through NPTF and claims all of the members are in the process of developing NPMP compatibility for their products. Ehlers says NPMP is faster and more lightweight than SNMP and requires less memory. PeripheralVision creates a graphical map of network devices based upon agent information with custom icons for different brands of printers plus copiers, desktops and servers. The connections made between devices allow the administrator to see which print queues are going to which printers and where they are located on the network. In addition to an administrator console, client components loaded on to each desktop allow users to add and delete their own print jobs from queues. Print watcher The Hardcopy Observer likens PeripheralVision to Adobe Systems Inc's PrintMill software; although PrintMill only supports PostScript it can print on any Internet printer. PeripheralVision supports SNMP but won't be able to print to any Internet printer until its next incarnation.

Fast and friendly

HBM says the key advantage PeripheralVision has over other network management solutions such as HP OpenView or SunNet Manager is that it's "friendlier and fast" and it doesn't cost \$15,000. However Ehlers claims HBM's not trying to compete with the HPs and Suns of the management world. He says PeripheralVision's not designed for users that want or need a \$15,000 software package and he thinks it unlikely that MIS departments which have already spent thousands on a premier network management solution will be able to comfortably switch to a \$300 piece of software without having their finance people asking why the original sums were spent. Ehlers says HBM's looking for volume in any case. The current Version 1.1 will be followed by new releases that include support for input of Unix titles, drag and drop printing to any attached Internet printer, vertical windows and other facilities, in OEM and end user packaging. It's still working on an OEM strategy. It doesn't know whether it'll do a Unix or Mac version of the Windows 95 software - Ehlers' PeripheralVision team is only eight-strong now. HBM's primary business is the design and manufacture of Ethernet and Token Ring cards and print servers. German-born husband and wife team Klaus and Hanne Bollmann are also founders of Burgess Hill, Sussex-based networking equipment manufacturer Network Technology Plc in which they hold a 60% stake.

CA READIES OPEN-INGRES 2.0 PRE-BETA PROGRAMME

Computer Associates International Inc will begin a "pre-beta" programme for its CA-OpenIngres 2.0 relational database next week, sending the first cut out to a couple of clients before wider distribution, according to Predag Dizdarevic, VP research and development. The beta had been due in July (UX No 575). There was no word on how long the pre-beta period will be, though it's thought to be no more than a few weeks. The new version will feature low-level locking, a new indexing schema, support for spatial data and greater parallelisation of the engine. It will also include distributed multiple caching, where environments can be deployed across multiple systems, but the size of the cache will hide the multiple environments and present them as one, according to Dizdarevic. And Jasmine, the CA version of Fujitsu Ltd's ODB-II object database, is still at the Software Development Kit stage, and the company is looking to get the beta programme underway in September. Some ISVs have the SDK at the moment, and are developing class libraries and the like. The full version of Jasmine will be released by the end of autumn, according to Dizdarevic.

DEC TO RESELL RAPTOR, EAGLE; NEW VERSION NEXT MONTH

Raptor Systems Inc has inked a deal with Digital Equipment Corp for DEC to resell and integrate Raptor's Eagle family of firewall products for Windows NT through its NT-riddled services division. DEC will resell the stuff as part of its Internet Services portfolio. The Waltham, Massachusetts company, in which Compaq Computer Corp among others has a small stake, has version 4.0 of Eagle for Unix out next month, with the NT version due in September. Raptor has also taken Microsystems Software Inc's Cyber Patrol filtering software, originally developed for parents to stop their children seeing what they shouldn't see on the Internet, for Eagle, and will be included in the new version. Privately-held Framingham, Massachusetts-based Microsystems has a list of Cyber Not locations that are "inappropriate in a business environment", including a sports and leisure section for those killjoys among you. Raptor said that in the fourth calendar quarter this year it shipped a previous version of Eagle split 50-50 between Unix and NT, and expects that to tilt in favour of NT in the quarter just gone. Eagle 4.0 for Unix costs from \$7,000 to \$15,000 and the NT version will be from \$6,500 to \$15,000. Meantime, Raptor reported its first profitable quarter in its history, with net income for the second quarter of \$150,000, against losses of \$559,000 a year before on revenues that rose to \$2.9m, from \$725,000 previously. Net losses for the six months to June 30 were \$279,000, down from \$973,000 previously, as revenues were up to \$5.0m, from \$1.1m a year earlier. The company's balance sheet was boosted by the \$50m initial public offering in February, the cash line standing at \$51.5m, from \$1.9m the previous year. They got away at \$15, and were at around \$19 last week.

MARCAM SELLS FORESIGHT TO INVESTMENT COMPANY

Marcam Corp has spun out its Foresight Software Inc customer information management business, selling it to investment managers Platinum Equity Holdings, a move supported by the Foresight management and employees. Platinum insists it's along for the ride, and will seek bolt-on acquisitions for Foresight. Marcam was not prepared to do something similar for Foresight, the Atlanta, Georgia-based company said. About 20 people lost their jobs as a result of the takeover, the company operating on a headcount of about 70. Foresight specialises in the customer software market with its Service Management System, by which it means software to link field service engineers, inventory, call centres, repair centres within service companies. It was previously Marcam's MXP business group, and Marcam formed a separate company in December last year to prepare for the spin-off and reckoned it could grow from \$17.5m revenues in 1995 to \$20m this time (UX No 581). Foresight said it was now looking at a "more conservative" growth plan as far as organic growth goes, with acquisition-led growth far more likely. The company has a Web product line in development, but wasn't prepared to say much about it, other than that it will probably start with simple customer inquiries into the status of their orders. The products are due by the end of the year, maybe in late autumn, President and CEO for about a year Kent LaRoque stays in the post.

AMDAHL FORMS MONDEX PROCESSING ARM AS MONDEX BECOMES FREE-STANDING

Following National Westminster Bank Plc's announcement that it had established its Mondex electronic cash card effort as an independent payments organisation, Amdahl Corp has formed a new SmartCard Group to supply processing systems in support of the Mondex electronic cash initiative. The Sunnyvale will focus on banks and other institutions that want to provide the cashless system. Amdahl has developed Mondex-compliant software that runs on Windows NT servers that is due to go into beta shortly. The move apparently came from a tip-off from Amdahl sales people talking to long-time customer NatWest, who suggested Amdahl look into it. The new organisation, Mondex International Ltd, is owned by 17 major organisations from Europe, North America, Asia and Australasia. It is still headquartered in London, and will be responsible for managing future development and international implementation of Mondex. NatWest has licensed its Mondex intellectual property rights, and has sold the Mondex brand, to Mondex International. Selling shares to member banks will raise about £100m for Mondex but some £70m is expected to go back to NatWest to reimburse it for its development costs. It retains about 10% and will receive deferred payments based on successes of the product globally. Other members are AT&T Corp and Wells Fargo & Co, who see possibilities for Mondex in making purchases over the Internet and as a form of identification. The main trial is in Swindon, Wiltshire, but Wells Fargo is also trying it out on its employees and their families around San Francisco and another trial will get underway in Guelth, Ontario later this year involving 126 merchants. The UK nationwide rollout is planned for the end of next year. Mondex has never charged users for using Mondex yet. At present, the plan is to charge users £3.50 per month (\$5.32) for a wallet of 4 cards. A new wallet and card is not required for each month, but the charge will remain. Mondex said it "probably will" charge the merchants as well, but no fee has been determined yet. The company insists that it's charging users as that's what its market research tells it people want, which seems very difficult to believe, but said it will conduct further research prior to the rollout. As for the Internet, to which many believe Mondex to be ideally suited, as it doesn't matter over which medium the chips in the cards talk to the other chips, along as they do it securely, Amdahl's software merely provides the software processing to aid transactions, and it's up to Mondex to sort out who will write a front end. The other 14 participants are Midland Bank Plc; The Hongkong & Shanghai Banking Corp Ltd; Canadian Imperial Bank of Commerce; Royal Bank of Canada; Australia & New Zealand Banking Group Ltd; Commonwealth Bank of Australia; National Australia Bank Ltd; Westpac Banking Corp; ANZ Banking Group (New Zealand) Ltd; Bank of New Zealand; Countrywide Banking Corp Ltd; National Bank of New Zealand Ltd; ASB Bank Ltd; and Westpac Banking Corp. AT&T is in via a subsidiary of AT&T Universal Card Services.

SCO REPORTS PROFITABLE Q3; NINE MONTH LOSSES HIT BY CHARGES

Unix owner Santa Cruz Operation Inc turned in a third quarter profit, but nine month losses last week, due to the cost of acquiring UnixWare from Novell Inc last year. SCO took a \$38.4m one-off charge for the acquisition in its figures for the three-quarters, driving the company into the red with net losses of \$26.5m, up from \$3.5m losses a year before, which were hit by a \$14.1m charge for the acquisition of Visionware Ltd. SCO continues to collect royalties from OEMs that it passes on to Novell, which contributes a fair bit to expenses. Nine-month revenues were flat year-on-year at \$152.7m. Alok Mohan, president and CEO expressed himself "pleased with the progress we've been making", which is just about as excited as anyone could get about the figures. Third quarter net income was up 174% to \$3.3m, on revenues that rose 6% to \$54.0m. The company has reduced inventory in its channels, which was causing problems, cut sales and marketing expenses, while research and development continues to rise. Cash at the nine months was down slightly at \$29.1m. The nine month figures benefited from a small tax credit of \$114,000 this year, against a tax charge of \$3.0m last year.

CALDERA BUYS DR DOS, FIRES ANTI-TRUST BROADSIDE AT REDMOND

If Microsoft Corp thought it had got Ray Noorda out of its hair when he retired from Novell Inc, took a few of his favourite toys with him and formed Caldera Inc around them, then it was wrong. Orem, Utah-based Caldera last week announced it had acquired DR-DOS and related assets from Novell, including an outstanding claim against Microsoft alleging anti-competitive practices, a claim Caldera now intends to press through the courts. The same day - ironically some kind of legal holiday in Utah - Caldera filed an anti-trust suit against Microsoft alleging "illegal conduct... calculated and intended to prevent and destroy competition in the computer software industry." The suit alleges that Microsoft's "predatory practices" had prevented DR-DOS from gaining market share over the last five years in a market estimated to be worth \$20bn between 1991 and 1995. The suit seeks treble damages but does not specify a dollar sum. It asks that the court order Microsoft to refrain from the use of anti-competitive practices and policies including per-processor licensing, require it to share operating system APIs with Caldera for the next ten years, and make its operating systems compatible with Caldera products. The lawsuit explains that Novell gave up marketing and development of DR-DOS in September 1994 as a result of Microsoft's predatory and anticompetitive conduct. Now Caldera intends to reintroduce the full line of DR-DOS products to the market and to offer additional product features.

AMERICAN TECHNOLOGY CREATES SOUND OUT OF THIN AIR

It has long been the dream of sound engineers to find a way of getting rid of the bulk of loudspeakers, and now a San Diego company, American Technology Corp, reckons it has cracked it. Big advances in small loudspeaker technology have been made in the last 10 years, but there has been no escape from the fact that to deliver a full audio frequency range with any volume, a speaker has to be big. But American Technology has grasped an idea that has been floating about in the ether for many years - that of distorting the atmosphere itself to create sound - and proved to its own satisfaction that it can make it work. It has got to the point where it has filed patent applications on the technique, which it calls the Norris Acoustical Hetrodyne Effect. It says the technique mixes ultrasonic waves acoustically to create new waves that can be heard as sound - the audible sound is generated indirectly through a conversion process that takes place within directed ultrasonic energy waves so that the sound appears in midair. Inventor of the system Elwood Norris was also responsible for development of an ultrasonic Doppler device that evolved into the Sonogram, and he has also invented a linear tracking tone arm, a cordless microphone, miniature radios, headset devices and audio cue circuitry. The company is not giving much away, but says it has completed its proof-of-concept prototype and is preparing for industry and media demonstrations. It claims that most forms of distortion are eliminated, and that its testing indicates virtually perfect sound reproduction across the entire audible frequency band and beyond.

MITSUBISHI ADOPTS IBM'S FAMILY OF EMBEDDED POWERPC PARTS

Despite being the one second source Digital Equipment Corp has managed to line up for its Alpha RISC, Mitsubishi Electric Corp is apparently of the Japanese mind that you can't have too many different RISCs on your books, and has formally signed up to market IBM Corp's embedded versions of the PowerPC under its own name. Way back last summer, the company indicated an interest in the PowerPC when word surfaced that it was definitely planning a Personal Digital Assistant and that the thing might use the PowerPC (UX No 523) - and such an application would definitely need an embedded version. IBM hopes the pact will lead to greater use of the parts in multimedia, office, and Internet products. Mitsubishi is licensing the RISC core and the library of application-specific circuitry that has so far been developed, and is allowed to add customised functions of its own to the chips - although it is apparently not entitled to fabricate them - it has to go back to IBM for that. The agreement covers the PowerPC 401GF, PowerPC 403, and the PowerPC 602 chip designed for use in games players.

BULL SELLS OUT IN VIETNAMESE VENTURE

Bull is getting a reputation for disappointing its Far Eastern partners, and after IPC Corp Ltd terminated its joint venture agreements and sold its Bull shares after a string of broken promises, the Vietnam Electronics & Computers Corp is buying the 30% stake Bull holds in their Gen Pacific Co computer distribution joint venture, in an attempt to turn the loss-making company around. Gen Pacific is expected to continue marketing Bull computer equipment after the sale set for November.

MOTOROLA LICENSES 68000 CORES TO HP

Lending the lie to the perception that there was not much value left in Motorola Inc's 68000 microprocessor architecture, the company has licensed the simpler parts in core form to Hewlett-Packard Co for use in peripheral controllers. Hewlett has signed a non-exclusive licence agreement for the 68000, 68020, 68030 and ColdFire variable-length RISC microprocessor cores. The licensing agreement provides a second source of supply for essential microprocessors in many of Hewlett-Packard's products, and the company is permitted to fabricate or modify products as needed to meet internal design requirements, the companies said. The ColdFire instruction set is an optimised subset of the 68000 set, and Motorola says the hybrid part is intended to deliver the best compromise between complex and conventional fixed instruction length RISC CPUs, where an optimum balance between code density and transistor count can be achieved.

IBM RECASTS NET-INFO SERVICES WITH INDIGO PLUS INFOSAGE

PointCast Inc's Network news service has supplanted InfoSage as IBM Corp's Net-based consumer and low-end news and information offering. This became apparent when Lotus Development Corp recently struck a joint development deal with PointCast to produce an application to deliver both external news and internal communications to subscribers over the Internet and intranets. IBM is going to turn its five-month-old InfoSage service into a business-oriented information service which can broadcast internal company messages and data to employees and authorised subscribers, along with general news and information services. This intra-company news broadcast feature is currently missing from InfoSage, which gives subscribers access to 2,500 publications and newsletters for \$25 per month plus a fee for accessing certain journals. The trouble is that users have largely bypassed InfoSage in their stampede toward free Net-based news services; IBM won't reveal just how many InfoSage subscribers it has for the service, which was plagued with start-up problems. The InfoSage group and Lotus/PointCast teams met last week for the first time to map out a strategy for both product lines. IBM, which anticipates a \$30,000m corporate market for information services and subscriptions, believes there's room for both the upcoming PointCast/Lotus application, code-named Indigo, and its repositioned InfoSage news service. Indigo will fall under IBM's NetApps line and allow Notes users to receive news broadcasts from the Internet and Intranets using Lotus' Domino server and PointCast's I-Server technologies. Meantime, IBM will next year allow InfoSage to broadcast a company's internal documents to employees using PointCast's I-Server or by a server it may develop itself. IBM is already in the process of enhancing InfoSage. Within two weeks, it says it will have improved InfoSage's article delivery mechanism by allowing users to edit their profiles on a Web-based screen, speeding the registration process. IBM also plans a Java version of InfoSage before year end and will develop an InfoSage front-end for use over its CICS OLTP monitor. IBM said that InfoSage allows more specific and detailed searches and retrievals than PointCast. However, Lotus is yet to reveal how it'll sell Indigo and whether Lotus or PointCast - or both - will own it.

BT SCIENTIST FORECASTS "THE END OF DEATH"

Scientists are usually such sober creatures that we are surprised at the quotes attributed to Dr Chris Winter, head of British Telecommunications Plc's artificial life team apropos the ridiculously styled Soul-Catcher chip. If integration levels advance as forecast it will be able to be connected to the human optic nerve and other neurons connected to the brain in about 30 years, so that people would be able to relive their own experiences or have their memories transferred to another person's brain. "This is the end of death - immortality in the truest sense," says the good doctor, but we'd be a little surprised if anyone much wanted it.

BLECHSCHMIDT LEAVES UNISYS TO HEAD SNI'S PYRAMID

Siemens Nixdorf Informationssysteme AG has ended its search for a new chief executive of its American business by poaching Unisys Corp's chief financial officer Edward Blechschmidt. Blechschmidt has been at Unisys since the Burroughs days and now assumes the role of president and chief executive of SNI Inc's Pyramid Technology Inc, as well as head of operations in North and South America. John Chen, currently in charge at Pyramid will remain as chairman, but gets to spend more time in his role as head of SNI's Open Enterprise Computing unit, encompassing all its server businesses (UX No 575). Former Pyramid boss Dick Lussier retired in April but remains on the board of both SNI and Pyramid. Unisys, meantime, begins the search for a replacement.

WANG BUYS I-NET FOR \$207M, REPORTS LOSSES FOR YEAR

Wang Laboratories Inc was playing games with its year-end figures released last week. It proudly announced something called EBITDA of \$138.0m for the year. For the uninitiated, the clumsy EBITDA stands for **Earnings Before Interest, Income Taxes, Depreciation and Amortisation**. But what's the point of that as a measure of success, unless you're trying to hide something? If you are unable to even pay the interest on your debt, then you're bust, to take just one of the elements. Instead of "earnings" of \$138.0m for the year to June 30, the Billerica, Massachusetts company actually turned in net losses of \$600,000 - quite a difference. These losses were after a \$27.2m charge for purchased research from the acquisition of Sigma Imaging Solutions Inc and were down from losses the year before of \$61.3m, which also included a hit for \$64.2m, for similar reasons due to the acquisition of Compagnie des Machines Bull SA's US maintenance operation. Revenues for the year were up 15% to \$1,089.8m. For the fourth quarter, fourth quarter net profits were up 44% to 8.2m, on revenues that fell 6% to \$268.1m. All the periods include amortisation of tangible and intangible assets, both acquired and as a result of an accounting change. Meantime, Wang has indicated that it's taking its new role as a services company very seriously indeed, by announcing the acquisition of I-Net Inc, a Bethesda, Maryland-based network and desktop outsourcing company for a total consideration of \$207m. I-Net's revenues were \$327m in fiscal 1995. Wang is paying \$100m cash and the rest in the form of a \$66.7m one-year interest-free loan note. The company is also assuming I-Net's \$40m or so debt and said the acquisition will be earnings-dilutive for fiscal 1997, but beneficial thereafter.

Network services

I-Net will remain as a wholly-owned subsidiary within the greater Wang. I-Net has 3,000 people dotted around its 50 offices worldwide. Wang CEO Joseph Tucci reckons the acquisition will turn the combined companies into a \$1,500m network services company. It's got a long way to go before it gets to that as last year, Wang's total service revenues were up 24% at \$720.9m, while products were virtually flat at \$368.9m. But I-Net brings a lot of federal government contracts with it, and Tucci reckons Wang will generate \$400m in federal services revenues alone. The figures for the year just gone were boosted by the acquisition of Avail Systems Corp, deemed a very shrewd one by most watchers. Wang's very close to Microsoft Corp these days, partly as a result of having the Redmonder over a barrel with a patent infringement case which caused it to take a 4.5% stake in Wang, invest \$90m and sign a long technical, service and marketing agreement in return for Wang software licenses and desktop imaging and object controls, which were the subject of the infringement case and are included in Microsoft operating systems. Microsoft's CFO Mike Brown got a seat on the Wang board to ensure everything remained ship-shape.

UNISYS FINDS IT IS STILL HAVING TO RUN EVER FASTER SIMPLY TO STAND STILL

Unisys Corp was the offspring of such a ludicrous marriage that the company has worked wonders simply still to be around, but life does not get any easier for the company and second quarter profits plunged 87% as it proceeded with its major restructuring and introduced a new line of high-end computers. The company said the 1% fall in turnover to \$1,505m in the quarter was because customers were awaiting shipments of its new ClearPath family of mainframe computers. "Our computer systems business unit is working through a major product transition that, as we expected, impacted our second-quarter results," chairman James Unruh said, warning that even on that front, the news is not good - the company experienced delays in the availability of some of the ClearPath servers due to final testing of their complex chip architecture, and that the delays may adversely affect its earnings for the full year. It continued to see progress during the quarter under the new three-business-unit structure. Unisys Corp reported second quarter net profits down 86.7% at \$5.3m on turnover that fell 1.0% at \$1,505m; at the mid-term, the company made a net loss of \$8.1m against a profit last time of \$84.4m, which included \$12.5m from discontinued operations, on turnover that fell 1.9% at \$2,928.1m. There were no earnings per share: they were wiped out by dividends due on the company's preference shares.

IBM SETS WALL STREET DANCING FOR JOY AT LESS BAD THAN EXPECTED FIGURES

IBM Corp had done such a good job of driving down second quarter expectations that when some very storm-damaged figures came out, the market jumped for joy that they were not as bad as the blue ~~tunk~~ **IBM had engendered suggested, and the market jumped for joy**. At the close in New York on the day, the Dow Jones Industrial Average was up 67.32 points, or 1.3% and that was all down to IBM - by far the biggest leaper in the index, it was up \$11.75, or 12.8% at \$103.50. The headline figure was a 22% fall in profit to \$1,350m or \$1.35 a share as sales growth slowed - users waited for the new CMOS boxes due in September, falling memory chip prices hurt IBM, and currency fluctuations meant that translation of foreign business into dollars made it look worse than it was. Turnover rose 4% to \$18,200m - and without the effect of exchange rates, IBM's sales grew 9%, but that is a false figure, because the dollar had been undervalued before rather than being overvalued now, so present levels are likely what IBM will have to learn to live with. US business was up 11% at \$7,800m, Asia-Pacific was \$3,600m, about flat in dollars, but up 19% in local currencies; Latin America grew 6% to \$786m but Europe was horrible, down 2% at \$6,000. Lou Gerstner was chirpy on the results, but when you look at the gross margins, you have to wonder why. Hardware sales were off 1% at \$8,576m and gross margins slumped to 33.4% from 40.1% as water-cooled mainframes disappeared from the mix. Services business, including the cock-ups in Atlanta, rose 22.8% to \$3,734m but gross margin faded to 20.8% from 21.5%. Software grew 4% to \$3,195m and margins rose to 68.4% from 65.3% - but most of that stuff was all but fully amortized in about 1985 or earlier. The CMOS machines cost less to maintain, so maintenance fell 6.5% to \$1,754m and the gross margin on it fell to 47.8% from 53.8%. And rentals and financing rose 4.7% to \$924m with an improved gross margin, 57.4%, up from 55.7%. But that slump in hardware margins meant overall gross margin eroded to 39.5% from 43.5%.

Unix processors

Tivoli Systems Inc performed strongly, IBM said, and Lotus Development Corp experienced continuing strong sales, and Notes users jumped to 6.3m from 2.2m a year ago. Lou Gerstner's message was that it was a tough quarter, but that results were largely affected by a few short-term factors, "particularly a sharp drop in memory prices and currency." The fact that "we earned \$2,600m in the first half of 1996, even with these short-term issues, speaks to the resiliency of IBM. But what really gives us a sense of optimism are the many manifestations in the second quarter that our long-term strategies are working," he says. "Simply put, our traditional businesses are continuing to re-invent themselves and our newer businesses are showing great strength." In products, he says AS/400 revenues increased; Unix processors, led by the high-end SP2, "had an exceptional quarter;" and demand "remained strong" for System/390 products. And it was "the second quarter in a row of solid performance" by the Personal Computer Co. In services, he says, IBM closed nearly \$4,000m in new contracts.

INTERGRAPH PUTS ITS 50% OF BENTLEY SYSTEMS UP FOR SALE

Intergraph Corp, Huntsville, Alabama graphical computer-aided design systems builder is finding life tough following its decision to major on Windows NT and losses are mounting to the point where it needs to raise cash. It has retained investment banking firm Robinson-Humphrey Co to put a value on and to sell its 50% holding in Bentley Systems Inc, Exton, Pennsylvania mechanical computer-aided design systems specialist.

VIRTUALITY SHARES PLUNGE AFTER WARNING

Shares in virtual reality systems and technology manufacturer and developer Virtuality Group Plc plunged last week after the company said its results for the first half of 1996 would be lower than for the same period last year. By mid-morning on the day of the announcement the shares were 53 pence cheaper at 180 pence, but analysts said the shares had dropped more than the news warranted because technology stocks as a group had been hit badly recently. Despite the profits warning, the company said revenue growth for the full year would be similar to last year and earnings - in other words losses - were unlikely to be significantly changed. They were trading at 187 pence at press time.

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Sun king Scott McNealy said last week that he is now prepared to publicly retract his long-held oft-repeated opinion that there would be three surviving architectures after the smoke of the computer wars cleared: Wintel, Sparc and PowerPC. He is now prepared to consign PowerPC and all its baggage like Taligent and OS/2 to the dustbins of history and substitute the Web in its place. Naturally this gives McNealy a foot in both camps since the Web, where Sun already has a commanding position, involves Java chips, Hot Java and Java Beans among other things. Ironically McNealy had privately regarded PowerPC as a place to retreat to if Sparc and Unix bombed big time and supported it with Solaris.

Sun believes that Java trademark requirements and the way the Java licenses are written will save Java from the nastiness of compatibilities and the loss of control by Sun that would entail. It also believes that 99% Java-compatible apps would be blown out of the water by their very nature and that the huge unit volumes of the Java marketplace would be a policing factor.

It is believed **Netscape Communications Corp** will go the Corba-IIOP route in the next couple of weeks.

Despite **Sun's** attempt to stamp out unauthorised use of its Java trademark on the Internet, at last count there were 166 Web sites with Java in their domain names. Javac.com, one of the Web sites that received a warning letter, has posted all of the offending domain names - including such names as javaweb.com, planetjava.net, mochajava.com and snotjava.com - on its Web page.

Digital Equipment Corp watcher Terry Shannon notes that DEC has canned the Linux version of the Multia Universal Desktop Box and wonders how long the NT one can linger on in the face of the expected software-only Multia that endows any NT desktop with Multia attributes.

In the considered opinion of *Dean Witter*, "Competition in the Unix RISC markets is intense, and we think it will be difficult for **HP** to continue to gain significant server/workstation share from **Sun Microsystems, Silicon Graphics, IBM** and **Digital Equipment**."

Apple receptionists, since they have nothing else to do, created the latest Silicon Valley fad, according to *Newsweek*, wadding together discarded visitor name tags into "badge balls" the size of monitors.

SunSoft Inc has put its Solaris OpenStep operating environment and OpenStep Workshop development environment, based upon NeXTStep, into beta.

Bell Labs is supposed to put a beta of the Inferno operating system on the web this Wednesday July 31. So too the Limbo programming language, a software developers kit and some sample apps. Look for it on the lucent.com site. Bell Labs already has a first cut of the Limbo programming manual up along with an introduction called "A Descent into Limbo" by Brian Kernighan whose C instruction manual educated an entire generation. Try <http://inferno.bell-labs.com/inferno.csn>

We're only guessing, mind, but our sister publication *Client Server News* thinks its figured out who the mystery company is that's promising to unveil a new client/server development environment on September 16. The anonymous outfit has been running a series of blind ads suggesting the software has a "musical" flavour to it (Notes?). The copy's also on a web site leased from a tiny outfit in Bryan, Texas, a small town near Galveston. The web site supplier, **WebWright**, only has two other customers so far, one of them the Dallas White Rock Marathon. Part of the \$25,000 prize purse in the marathon is being put up by **Texas Instruments** whose enterprise-class environment is Composer. And we thought TI wasn't going to announce the new Internet-enabled version of its Arranger workgroup applications development program until the fourth quarter.

Ed Zander, president of **Sun Microsystems Computer Co** may leave Sun to become president and CEO of **Bay Networks Inc**, replacing Andrew Ludwick who's stepping down. Zander won't answer our phone calls anymore than he did the *New York Times* but rumours were so rife that Goldman Sachs thought Scott McNealy was going to announce Zander's imminent departure when Zander turned up for the first time on Sun's conference call with the Street over its Q4 numbers the week before last. We figure Zander was asked to put in an appearance as part of McNealy's scheme to woo him back. Zander did okay on the call but Sun still needs lessons on how to talk to Wall Street analysts. They were too abrasive which is why the stock didn't fare well the next day despite the record returns. They were also bit too conservative, Goldman says, seeing bogeymen where there ain't any. As we went to press the Sun rumour mill had it that Zander's departure is a done deal.

Andrew Ludwick, who held the same position with **SynOptics Communications Inc** prior to the merger with **Wellfleet Communications Inc** that formed **Bay**, has guided the transition from two companies into one. Bay certainly appears to be at the right point to make significant management changes: over the last year, it has followed through on its long-term strategy of evolving from product-focused units, to customer-focused units, and last week put the final piece of the puzzle into place with the announcement of a realignment of its sales force. Under the new organisational structure, sales are now divided in three groups: the US; international sales; and customer support. US sales will be headed by Gene Wahlberg; Gary Rogers will handle international sales; and Lloyd Carney will continue as VP of worldwide customer support.

The **Standard Performance Evaluation Corp** has announced its first SpecWeb96 Web server benchmarks, measuring servers' ability to deliver static HTML pages to clients. **Hewlett-Packard Co's** HP9000 K400 came out top of the first results with a SpecWeb96 mark of 500 running HP-UX. **DEC's** Alphaserver 1000A 4/266 running DEC Unix 4.0 posted 252, and the HP9000 D210 came in third at 216. Further results will be posted at www.specbench.org/osg/web96.

We suspect that **Corollary Inc** may have had a change of heart and isn't as anti-NUMA as it once was.

Acting **Open Group** CEO Jim Bell, who's on loan from **Hewlett-Packard Co** where he's director of open systems alliances, has retired from **Uniform's** board after eight years.

Software-watchers say Emeryville, California help customer information management company **Scopus Technology Inc** is going to raise its prices next quarter. Its first quarter results to the end of June showed a 69% revenue increase to \$10.3m; license revenue was up 101% at \$7.4m. The company has recruited the former head of Arthur Andersen's software audit practice Michele Axelson as CFO. According to Morgan Stanley licence revenues for the top three customer information management houses for the June quarter were: **Scopus**, \$7.4m; **Vantive Corp** \$9.9m, up from the \$7.1m it did in its first fiscal quarter to March; and **Clarify Inc**, \$7.7m, up from the \$5.4m it recorded in its first fiscal quarter, also to March.

Santa Cruz Operation Inc's Unix Computing Forum in-house replacement for **UTG Inc** will report to the company's VP enterprise solutions Mike Shelton. Carl Ziegler will manage the transition of UTG into an internal SCO organization

Siemens Nixdorf Informationssysteme AG calls its implementation of **SunSoft Inc's** Neo object request broker Sorbet, the Siemens Nixdorf Object Request Broker Environment. It runs on the Mips-based RM Unix boxes.

Anybody waiting for Oracle8 will have to wait a bit longer. The company was due to start the beta programme this month, a year after the product was originally due (UX No 580), but last week didn't have a thing to say about the whereabouts of the elusive software. Not alpha dates, not beta dates, nothing.

Santa Cruz Operation Inc has appointed Geoff Seabrook senior VP Europe, Middle East & Africa. He had been running the Asia-Pacific region since the start of the year, when SCO split its Europe-International operations in two (UX No 573). He'll continue in both roles, spreading him a bit thin, until a new Asia-Pacific person can be found.

Sapiens International Corp's ObjectPool application development toolset is available now on IBM Corp mainframes under MVS/CICS, MVS-IMS/DB, VSE/CICS AND VM/CMS. It'll be up under Unix in the fourth quarter, with Windows NT and AS/400 versions following in the first quarter of next year. Prices start at \$100,000.

Santa Clara-based **Rational Software Inc** has won **Microsoft Corp** and **Hewlett-Packard Co** as supporters for its Unified Modeling Language. The trio will present it to the **OMG** at the year-end in response to the **OMG's** Object Analysis and Design RFP. Rational has combined its earlier Unified Method with HP's Fusion methodology and Microsoft's ActiveX and COM standards.

We're sorry if sometimes *Unigram.X* offends with its irreverent attitude - but an antidote is at hand: The Unigram (no relation), the Newsletter of the Unitarian Universalist Fellowship of Columbia SC, is also now available online at: <http://www.scsn.net/users/dgriggs/uufc/unigram.html>

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SCO ENVISIONS LARGE NON-OS SOFTWARE BUSINESS

As anticipated (UX No 591), Santa Cruz Operation Inc is now articulating its intent to create a serious cross-platform business from non-operating system products, expecting its Client Integration Division and Layered Products group to generate as much as 40% of revenue from its fiscal 1997 and beyond. The products include administration, management, Internet, database access and PC-to-Unix connectivity software that run on SCO OpenServer and UnixWare as well as third party Unixes including Sun, HP, IBM and DEC, plus Microsoft desktops. They collectively contributed less than 5% to SCO's \$200m-odd 1995 revenues; they'll account for around 23% of the \$210m to \$212m SCO expects to do in fiscal 1996 to the end of September. The company's aiming to grow between 3% and 5% quarter-on-quarter overall. SCO's Client Integration Division (CID) was formed from the acquisitions of UK PC-Unix connectivity specialists IXI Ltd and VisionWare Ltd in 1993 and 1994 respectively, however SCO lost ground on competitive solutions having "waylaid" the two outfits for more than a year while it tried to put them together and fold them into the SCO structure. It says they're "now back on track and can make up the ground lost."

Hot-desk

This week CID introduces new versions of its PC X Server and SQL-Retriever 4 Unix-to-Windows software in the Vision Family of connectivity products. It already includes the VisionFS Unix port of Microsoft Corp's Server Message Block protocol, which SCO's positioning as a lightweight alternative to PC-NFS-based file and print sharing services (UX No 598). For heavy duty, tight-knit integration it still recommends SCO Advanced File and Print Services. XVision Eclipse allows 32-bit Windows and NT desktops to run X Windows applications hosted on Unix servers. Eclipse includes a new Vision Resume mechanism which allows users to disconnect from an X session on one computer and resume it on another without having to close down the session and then restart it. SCO says the feature will allow mobile users to "hot-desk" around Intranets without logging out, restarting an application and negotiating back to where the X session ended. It also means Microsoft clients can be re-booted without closing and restart large X programs on a Unix hosts. Eclipse's server component includes a SuperVision program allowing Eclipse desktops to be managed from a central point. Used in conjunction with Vision Resume, SCO says it allows administrators to distribute files to groups of PCs using a single instruction whether or not the PCs are turned on. It's also included a wizard-style component for creating multiple connections. Previous XVision releases were client-only technologies. SCO anticipates VisionFS-alike host-only implementations of Eclipse in future allowing X, Motif and Common Desktop Environment applications to be deployed without requiring desktop administration or installation. It'll follow that with a renamed XVision Eclipse product which will work with network computers using a small downloadable Java applet. XVision Eclipse is priced from \$390 for a single user licence; prices drop to \$270 per user for 50 licences. It runs on Solaris, SunOS, HP-UX, OpenServer, UnixWare, AIX and DEC OSF/1, plus Windows 95 and NT desktops. SCO claims Eclipse's Vision Resume feature puts its PC X server solution around 18 months ahead of the competition which includes leading PC X server supplier Hummingbird Communications Ltd, and NCD Inc, the latter claimed to be a single percentage point ahead of SCO in sales of PC X servers. Pricing Eclipse at 30% to 50% below rival products SCO says it's "pricing for volume and market share, not on the basis of software cost." It denies the product will be a loss-leader. It's offering \$50 competitive upgrades.

Highwayman

CID's also offering a new 32-bit version of its ODBC-based SQL-Retriever program allowing Windows 95 and NT desktops to access SQL data on Unix relational databases. SQL-Retriever 4.0 also supports the JDBC Java database connectivity specification. SCO says the client component includes a database-finder technology which searches out which databases are running on the server and installs the right host modules. SQL-Retriever 4.0 solutions can be managed by SuperVision; the software also includes a new Security Manager. It costs from \$185 per single user licence - \$125 per user for a 50 user licence. Character-based versions of the products will follow. By the end of the year the company expects to package all of its third party offerings on a single CD-ROM. It's got Mac and network computer implementations in its sights. Meantime CID's "Highwayman" project has effectively metamorphosed into three separate streams. One is Sole, SCO's ServerOLE product. Two others will provide web-based data access.

DEC TO ROLL OVER TO IIOP "WITHIN SIX MONTHS"

DEC is claiming Corba 2.0 compliance for its ObjectBroker object request broker now that it's added C++ bindings and says it'll embed the Internet Inter-Orb Protocol (IIOP) into ObjectBroker within six months. That's the OMG-defined transport DEC unsuccessfully lobbied against during the Corba 2.0 FRP. Java bindings will be added within nine months. DEC already includes the EISOP wire protocol in ObjectBroker, which is optional for Corba 2.0. It demonstrated ObjectBroker using DCE-derived EISOP linking with IBM's SOMI request broker earlier this year. With it's DCOM object hat on, DEC is promising OLE automation in the future, but there's no time frame for that. DEC has had the source code for Network OLE for some time now. There will be another new upgrade of ObjectBroker sometime in the fall including support for additional Unixes such as Solaris 2.5 and HP-UX 10.x.

BROADWAY MAY LOSE EARS

SunSoft Inc's pulled its engineers off the project to develop audio capabilities for the X Consortium's next-generation X Windows release, the web-enabled Broadway due by year-end. The Consortium's original idea was that if you can view an X application running in a browser window using Broadway, then you should be able to hear it too. Audio is one of Broadway's five core components, the others being network security, embedding, remote execution, and x.fast high performance. DEC and Santa Cruz Operation Inc have been working on the audio portion along with SunSoft and X Consortium. X Consortium, to be rolled into the Open Group once its first Broadway release is delivered, says it'll continue with the development, using subcontractors where required, though SunSoft's withdrawal will have other knock-on effects. "The loss of the SunSoft team does put the audio project into serious jeopardy. One of the most critical factors is whether there is enough participation to have confidence in the specification once it is completed. SunSoft indicated that they are interested in reviewing the specification but could not promise that there would be enough cycles there to complete the task. This raises doubts as to whether we could be ready to vote on adoption of a standard; SunSoft is no longer willing to be one of the drivers for that project." DEC's conclusion is that "there is now too much risk to industry adoption," and it too will withdraw its engineers, from next month. SCO apparently, will continue its work on the project.

Candidates

X Consortium's been examining the audio projects remaining tasks and reckons a full specification and implementation can be completed using subcontractors, though fewer hardware devices would be supported and some format conversion options would be dropped from the implementation. Its alternative is to stop work on the audio component and work on some security and network utilisation features that have already been dropped from the first Broadway release (X Consortium's last). Candidates are said to include proxies for transporting the X protocol across security firewalls, security for more X protocol extensions, enhancements to the desktop security manager, and an extension to the font server protocol and implementation to support transport of compressed glyph images. X Consortium warns "there is significant risk that we may still not be able to finish the audio implementation, primarily determined by how rapidly we can bring suitable contractors aboard." SunSoft declined to comment, but it's understood an internal reorganisation has forced it to reassign engineers away from the Broadway audio project to work on other more pressing matters.

THOUGHT OFFERS JAVA RELATIONAL DATABASE MAPPING TOOLS

Thought Inc a five person, three-year-old class library vendor turned Java adherent is offering a family of tools based upon the Java Database Connectivity specification (JDBC) it says can be used to create and maintain dynamic maps of Java objects to relational database tables that can be used across the Internet. The San Francisco, California-based company claims its new libraries, known collectively as CocoBase, create an internal catalog which can be modified without recompiling the application, allowing Java objects to point to new relational fields that might be stored in a completely different table. It claims a single map can span multiple database tables, not just for lookups, but also for updates, inserts and deletes. CocoBase includes CocoPowder, which allows multiple Java objects to share the same map, and object retrieval; and CocoButter a Java-based GUI tool for building and maintaining SQL, administering the mapping and access to the catalog. CocoBase costs \$4,000. Two add-on products at \$1,500 apiece are CocoNibs, providing remote access to CocoPowder using JavaSoft's Java remote method invocation interfaces; and CocoBeans, for remote access to CocoPowder using Corba. CocoBase can be integrated with Thought's non-GUI Java class libraries such as Nutmeg and VanillaSearch, for which it claims an installed base of 25,000 users. Thought's seeking a bundling deal with JavaSoft and claims to have two GUI vendors in its pocket. They'll bundle CocoBase libraries with their products allowing users to seamlessly add Java-based tickers, newsfeeds and the like without having to understand the Thought that's gone into it.

LINGO SPEAKS 64-BIT ROLAP

Lingo Computer Design Inc is now shipping Fiscal-64, a 64-bit relational on-line analytical processing (ROLAP) engine for DEC Alpha and Silicon Graphics Inc Challenge servers running Oracle. It's got Informix, Sybase and Sun versions in hand. Fiscal provides data warehousing and ROLAP to users with complex query and report needs. Lingo claims the 32-bit version of Fiscal is installed at 170 server sites, but the company expects its 64-bit product to account for 50% of its business next year and 90% in 1998. Toronto, Ontario-based Lingo differentiates itself from ROLAP rivals such as Information Advantage and Micro Strategy claiming it focuses on customers which want day to day, hour to hour query and report capability. It says the competition has to set up query functions to run overnight, reporting the next day. The nine-year-old privately-held company, which has 50 employees, has watched OLAP companies such as Arbor Software Corp go public and Holistic Systems Ltd get bought (by Seagate Technology Inc), but wants to remain solo for now. "ROLAP technology is so new that the entrepreneurial spirit is still important to it," the company says. \$85,000 buys a 25-user Fiscal licence.

BUSINESS OBJECTS REVENUE REDUCED IN RESTATED RESULTS

Business Objects SA, Paris is seeing the downside of floating in the US - the shareholder class action. The company is exposed because it has had to restate its results for its first quarter to March 31, cutting net profit to 10 cents an American depository share from 15 cents and reducing revenue by \$1.4m on reversal of a contract in Europe, which was found not to meet Business Objects' "strict revenue recognition policies." The restatement resulted from the actions of an employee who "violated company policies and circumvented standard financial control procedures" - rumour says that the chief in Germany has been suspended without pay, but the company denies this. Business Objects SA has reported second quarter net income up 30.3% at \$1.9m, on revenue up 61.4% at \$22.0m; mid term net income was up 36.1% at \$3.7m, on revenue up 59.8% at \$40.8m. Net earnings per share were up 2.2% at \$0.11 for the quarter, up 31.3% at \$0.21 for the six months. The company also said it was restating results for the first quarter ended March 1996 as it had lost a \$1.4m contract after it had been already accounted for; mid term figures have been adjusted to reflect this.

MICROSOFT READIES UNIX VERSION OF INTERNET EXPLORER

Microsoft Corp announced plans for Internet Explorer Web browser across three platforms last week, starting with a Unix version due by the year end. Whatever future ActiveX will have, we'll have to wait until next month's meeting to find out (UX No 600.5), but Redmond will still probably push it and will include tools to build ActiveX controls on the supported Unix flavors in the browser. Microsoft also put the beta 1 version of Explorer 2.1 for the Macintosh on its Web site last week, and promised a Windows 3.1 version beta by the third week of August.

DG CONTINUES TURNAROUND WITH 4TH PROFITABLE QUARTER IN A ROW

After 10 years, Data General Corp is still transitioning from a proprietary mini-computer vendor to an open systems house, but after reporting its fourth profitable quarter last week, the company may be seeing the light at the end of the tunnel. In the third quarter - traditionally its weakest - the Westboro, Massachusetts firm reported a small profit of \$7.1m against heavy losses of \$61.4m in the same period last year. The company put those losses down to the \$43.0m restructuring hit it took following the axing of 600 jobs in April last year (UX No 535), but that figure was offset by a \$44.5m pre-tax gain from the settlement of a software lawsuit against Northrop Grumman Corp. In the quarter Data General saw revenues increase 15% to \$323.2m, helped by increased product sales, up \$24.7% to \$224.1m, while service revenues fell 2% to \$99.1m. The Westboro, Massachusetts company expects profits to increase when sales of its Intel Pentium Pro-based enterprise servers pick up later this year; already about 37% of its revenues come from its Intel-based AViiON servers. For the nine-month period, Data General reported net profits of \$18.2m against a loss last time of \$48.2m on sales up 16.4% at \$986m. Data General formed two new business units during the quarter: the NumaLine unit to forge OEM relationships and worldwide distribution partnerships for its Non-Uniform Memory Access (NUMA) server technology, and the THiiNLine Internet Appliances unit to promote its Internet access terminal concept over the next year (UX No 595). Meantime, Data General has impressed Moody's Investors Service Inc that it really has turned the corner and has upgraded to B1 from B2 the rating on its 8.375% sinking fund debentures due 2002. Moody's also confirmed the B3 rating of the 7.75% convertible subordinated debentures due 2001 - and the outlook for the ratings is positive. The sinking fund debentures rank pari passu with a \$30m unsecured letter of credit facility, the agency noted.

BLYTH RE-CONSIDERS AIX VERSION OF OMNIS AS OS/2 PORT EMERGES

Blyth Software, one of those European software houses that have floated themselves on the US Nasdaq market (UX No 600), is dusting off its plans to enter the Unix market, moth-balled last year during a difficult product transition. The company, which under the blanket name Blyth Holdings Inc consists of Foster City, California-based Blyth Software Inc and Bracknell, Berkshire-based Blyth Software Ltd, struck a deal with IBM Corp back in January to produce an OS/2 version of its Omnis database and cross-platform client/server applications tool - and now the company hopes the deal can be extended to include IBM's AIX as well. It's also got its eye on other IBM technologies, such as MQSeries. While there's nothing confirmed to date, Blyth says it was at least three-quarters of the way through the AIX port when it had to halt the work last year, and that things wouldn't take too long to tie up. At the time, HP/UX and Solaris ports were also under development. Blyth's Omnis product came originally from the Macintosh world in the mid 1980s, but now also runs on Windows NT, 95 and 3.x. The SQL-compliant Omnis database is fairly unpretentious, aimed at small LAN-based workgroups, but over the last few years Blyth has been concentrating on its development tools, designed to build portable, client-server applications. These were first introduced with Omnis 7. Strengths include a version control system, change management, powerful debugging, a "modeless" development environment, cross-platform GUI toolkit, and "notation", a language feature which moves Omnis in the direction of object programming. Full support for object-oriented programming, along with the now obligatory Web additions to Omnis and upgrades to the database, should begin appearing later this year. Blyth got into trouble when, with Omnis 7, it upped the price of its software from \$450 to \$5,000 in one fell swoop, posting a \$12.4m loss in 1995 on revenues of \$16.7m, and shedding around 25% of its workforce. The loss was cut to \$5.6m this year, though revenues also declined to \$13.7m. It has now split its offerings into three: Omnis Workgroup, Departmental and Enterprise, with corresponding price-tags. Two of its Web additions may see the light as separate products. Web Vault will provide secure access to corporate data on Web sites, and Web Management extends the Omnis version control software to HTML Web pages. At its recent developers meeting in Dallas, it also demonstrated a Java-based Forms builder. IBM is thought to have been particularly interested in the healthy third party application package market for Omnis. The OS/2 version became available last week.

SILICON GRAPHICS' Q4 BEATS WALL STREET ESTIMATES

Silicon Graphics Inc only just missed its \$3 billion target for fiscal 1996, recording a profit of \$115m on revenue of \$2.92 billion in the year to the end of June, which includes numbers from its Cray Research Inc acquisition. Earnings per share for the year were \$0.65 compared with the \$1.28 it paid out in 1995 when it earned \$228m on revenue of \$2.22 billion. The \$731m Cray acquisition skewed both SGI's year-end and fourth quarter figures. For the June quarter it reported a loss of \$48.7m on revenue of \$977m. Included in the fourth quarter numbers is an operating loss of \$23m on \$151m revenue that Cray recorded in its June quarter. The figures also include losses incurred by Cray's Business Systems Division which was sold to Sun Microsystems Inc at the beginning of July. SGI took a pre-tax charge of \$102m in the quarter for the Cray acquisition, including \$98m written down to R&D. Unconsolidated fourth quarter results would have shown a profit of \$81m on revenue of \$826m, and earnings of \$0.46 would have beaten analysts' estimates of \$0.42. In the fourth quarter of fiscal 1995 it reported a profit of \$52.7m on revenue of \$653m. SGI's stock rose \$2.50 to \$26 in after hours trading last Wednesday following the results, a rise attributed to one large stock purchase made by a Toronto-based speculator. Wall Street indulged in some profit taking the morning after and were back down to \$22.50 as we went to press. For what it's worth, SGI's unconsolidated year-end numbers would have shown a \$245m profit on revenue of \$2.8 billion. For the first time North American sales accounted for less than half of SGI's sales - 49% compared with 52% in 1995. European revenue grew from 28% to 30%, whilst Asia/Pacific Rim rose a point to 21% of overall business. Revenue from high-end products declined from 41% of revenue in 1995 to 37% in 1996; low-end products accounted for 63% compared with 59% in 1995. SGI says server sales are growing faster than the workstation business due to internet-related purchases. Computer animation sales contributed around 20% of SGI's overall revenue; it's expected to rise a couple of points in fiscal 1997. SGI paid \$576m cash for 75% of Cray in April 1996 and acquired the remaining shares via a stock swap in June valued at \$155m, bringing the total paid to around \$731m. SGI attributes Cray's loss to the transition to its T90 and Alpha RISC-based T3E lines. SGI has recently shipped the first two T3E production units. It claims a \$572m order book at the end of June; it picked up the \$437m order book that Cray held back in March. At the same time as it released its results, SGI also announced the resignation of president and COO Tom Jermoluk, who's gone off to head-up much-fancied net prospect @Home. SGI chairman and CEO Ed McCracken assumes both of Jermoluk's roles; McCracken was SGI president from 1984 to 1994. No replacement is being sought. In March SGI reorganised into five business units; Silicon Desktop is headed by Michael Ramsay; Silicon Interactive, by Robert Burgess; the Advanced Systems Division, by David Orton; Cray by Robert Ewald; and Mips Technologies by Ron Bernal. All now report to McCracken.

Hot interconnects

SGI CTO Forest Baskin reports all SGI systems are go, now that it has its Mips RISC R5000- and R10000-based workstations and servers in production. The company will detail some of the NUMA server clustering plans it has using the Spider chip - its Scalable Pipelined Interconnect for Distributed Endpoint Routing switch (UX No 592) - at the Hot Interconnects conference at Stanford University, Palo Alto, between August 15 and 17. Baskin says the company's high-end clustering technology should no longer be referred by the name of a Danish toy company (UX No 579). Integration of Cray and SGI software environments with the goal of allowing SGI applications to run on Cray systems and vice versa with a recompile is moving on. Baskin says the 64-bit large file system from SGI's Irix Unix is now testing on Cray's Unicos Unix variant. Cray's file system and queue management technologies are now testing on SGI servers. Other compiler integration work is ongoing. Some APIs from each operating system will be transplanted by year-end. Two years out the company plans to have a common Unix running across SGI and Cray product lines. Baskin says Intel Corp's PA-RISC-enabled Merced part doesn't spell the beginning of the end for RISC; "we've been shipping RISC for years, Intel hasn't even delivered one RISC product," Baskin says.

JERMOLUK LEAVES SGI FOR @HOME

Silicon Graphics Inc's otherwise healthy numbers - *see opposite* - were tainted by news that president and COO Tom Jermoluk has been lured away to @Home Corp where he's been appointed chairman, CEO and president. @Home, the closely-watched Mountain View, California-joint venture between Tele-Communications Inc and Kleiner Perkins Caufield & Byers is bringing high speed data to homes, workplaces and schools via cable modem connections to PCs and televisions. The start-up must be offering some serious money; its roster of heavy hitters also includes former Sybase Inc CFO Ken Goldman as CFO. William Hearst III, lately @Home president and CEO, moves over to the vice chairman's seat and resumes his former role as a Kleiner Perkins director. @Home, which has trials running in Fremont and Sunnyvale in California, is expanding its coverage to a dozen cities across the US this fall, when it expects to sign its first paying customers and record its first revenues. It's up to 100 staff now. It claims its key technology is caching software that builds a hierarchy of services on local servers and allows a customer's internet and interactive content to be routed and stored on the local server until it's downloaded via a cable modem to PCs or televisions. Its value-add is the server infrastructure it's putting together for the cable suppliers. @Home claims its alliances with the cable companies - Comcast and Cox Communications, now also have stakes in the company - means it can already potentially access 40% of the 80 million cabled homes across the US. @Home expects the cable companies will begin to include cable modems in flat rate charges of between \$35 to \$45 per month for unlimited, high-speed internet access. It expects cable modems to become retail items shortly after. The @Home software runs on Sun, SGI and other Unix servers used a local hubs; on the network backbone it's forged it sees no reason why the software shouldn't go up on NT if required. Jermoluk, who's been working with @Home for around six months, said it was the attraction of leading a small team and the prospects for the company that lead him from SGI. Jermoluk is the latest industry executive to strike out for a fledgling net concern. He follows the likes of previous SGI chairman Jim Clark (now at Netscape), Lotus' Jim Manzi who went to at Nets Inc, SAP America's Klaus Besier who is now with OneWave Inc (which just changed its name from Business@Web), and Novell's Sheldon Laube who is at US Web.

HITACHI CLAIMS FASTEST MPP SUPERCOMPUTER

Hitachi Ltd has doubled the performance and scaling of its existing SR2201 massively parallel supercomputer, claiming that at 600 GFLOPS the 2,048 processor monster is the world's fastest. Hitachi will make its first SR2201 sale outside Japan to University of Cambridge in the UK and says it'll now target Europe as well as its home market for parallel supercomputer sales. The SR2201 uses a re-designed Hewlett-Packard Co's PA-RISC developed by Hitachi in Japan. A compact model, with from eight to 64 CPUs which performs from 2.4 to 19.2 GFLOPS can be leased beginning at around \$14,000 per month. It takes up around 60% less space than previous models. It supports 64Gb disk and 1Gb RAM and uses a 300Mbps two-dimensional cross-bar switch. Lease prices start at \$14,000 per month. The high-end model supports up to 2,048 CPUs. Lease prices start at \$46,000 per month. The pseudo-vector processor runs Hitachi's HI-UX/MPP Mach 3.0 implementation and uses Parasoft Corp's Express parallel support system rebadged as ParallelWare. The company hopes to sell 30 of the systems before March 1999. Hitachi's first SR server, the 2001, launched more than two years ago, was a 128-way system that did 23 GFLOPs. Hitachi hasn't quite made the 1 teraflop goal it set itself of reaching by the end of this year. Last July it introduced the 1,024-way, 300 GFLOPS SR2201. Outside Japan Hitachi sells PowerPC-based Unix servers sourced from IBM Corp and Compagnie des Machines Bull SA.

CANDLE INKS DEAL WITH ACROSS DATA

Turns out that Candle Corp, Santa Monica, California - now lead by former IBMer Bob LaBant - is increasing its commitment to IBM MQSeries messaging technology by acquiring MQ/Secure middleware from the Level 8 subsidiary of New York City company Across Data Systems Inc (UX No 600). Candle is to pay \$2.7m for a 4% stake in Across Data, a developer of business software, consultancy and ancillary services. Level 8 will distribute Candle's MQSeries products. With MQ/Secure under its wing, Candle says it's able to offer its first security product. Candle will also sell and support Level 8's Falcon External Gateway, a joint project with Microsoft Corp to facilitate message transfer between Windows and other environments. Candle said in May it was seeking partnerships with integrators, including Level 8, Logica or AFSC, to promote use of its MQSeries products and said last week it may announce more deals with system integrators this year. Candle said it will still add OS/2 and AIX support in Command Center this summer.

DEC LOSES \$433m BUT STREET IS RELIEVED IT'S NOT WORSE

With yet another whopping charge, this time of \$492m - are these things any more extraordinary at DEC than they are at IBM Corp? - Digital Equipment Corp last week reported a \$433m net loss for its fiscal fourth quarter - and the market marked ~~the shares up, in part because DEC, for two decades debt-free but now with significant borrowings, is to buy in up to 10m of its shares - which would currently cost it \$380m out of cash reserves that have built up to \$2,000m. They closed up \$0.63 at \$36.13 on the day of the announcement. It's entirely academic, because such charges for lay-offs and plant closures seem to be part of the normal course of doing business at DEC these days, but without the charge, profit fell to \$59m or 33 cents a share from \$160m or \$1.01 a share. DEC had of course already warned earlier this month that its fourth-quarter results would be well below expectations and that it would take the restructuring charge - and would cut 7,000 jobs over the next 12 months (UX No 597). It said it ended the quarter with some 59,100 employees, a reduction of 1,800 in the quarter and 2,600 fewer than a year ago. The company said cost improvements and more competitive products pushed its profit margins up 3.1 percentage points to 34.3% of revenues in the fourth quarter.~~

Strengthening our management

Revenue for the quarter was near flat at \$3,720m but revenue for the year was \$14,600m, the highest in the company's history - which sounds impressive until you realise that it did \$14,371m in 1992-93 and had done \$13,900m in each of the previous two fiscal years. For the full fiscal year, the net loss was \$112m or 97 cents a share. "During the 1996 fiscal year, Digital made progress toward growing its strategic businesses and improving its financial performance," said chairman Robert Palmer, confessing "We still have a good deal of work to do in a number of areas, but I am confident that the foundation is there for a stronger and more profitable Digital in fiscal 1997." Revenue in some European markets was down due in part to the economic slowdown in major European countries, including France and Germany, but the company said it did well in Japan, the UK, Italy and Latin America. "In Europe, we are strengthening our management, significantly expanding our direct sales coverage and initiating a campaign to better focus with channel partners at the country-level," Palmer said. Although DEC was hurt by weak performance in its personal computer business, it insists against all logic that it has to be in the business for the sake of its Windows NT strategy. While it may still be worthwhile to build high-end iAPX-86 servers, it makes no sense for a firm used to high margins to compete in desktops and notebooks. Personal computer revenues were down 3% in the quarter, although the iAPX-86 server business is growing at over 25%. Alpha revenues were up 34% compared with a year ago, with the new mid-range 4100 AlphaServer and high-end 8000 AlphaServer leading the way. Unix revenues grew by 33%, NT business more than doubled. Chief financial officer Vin Mullarkey said the company would get rid of at least 3.5m square feet of space over the next two years, around the world. He wouldn't give any specifics, but said that "planning is well underway." Mullarkey also added that the \$90.5m hike in sales, general and administrative expenses in the quarter year-on-year was "one of the major disappointments of the quarter", caused by lower than expected revenues. Digital Equipment Corp has reported a fourth quarter net loss of \$432.8m after \$492m in restructuring, redundancy and plant closure charges, against a profit last time of \$159.8m, on revenue that slipped 0.8% at \$3,719m. Net loss for the year to June 30 was \$111.8m against a profit last time of \$121.8m, on revenue that rose 5.4% to \$14,562.8m.

IBM WINS \$93M CONTRACT FOR NUCLEAR WEAPONS SIMULATOR

IBM Corp has secured a contract from the Lawrence Livermore National Laboratory in California to build what's dubbed as the "world's fastest supercomputer". For \$93m, IBM will build an RS/6000 SP-based system to be installed as part of the Department of Energy's Accelerated Strategic Computing Initiative (ASCI). This is all necessary because of the various nuclear test-ban treaties around the world denying scientists the pleasure of blowing the things up in the desert and recording the results. The supercomputers in the ASCI program will be used to construct three-dimensional simulations that scientists will use to analyse the effects of aging and other problems associated with storing large numbers of nuclear warheads: what is known as "stockpile stewardship." The eventual machine, called DOE Option Blue, will have 4,096 RISC shared-memory processors clustered together and 2.5TB of memory, with the first components delivered next month. The full 3-teraflop device is slated for December 1998 delivery. Another 3 teraflop device contract is currently being negotiated with a vendor other than IBM for a Los Alamos lab, also involved in the ASCI program, along with the DOE's Sandia National Laboratories, which has facilities in both California and New Mexico. There are five teraflop stages involved in the program: 1.8, 3, 10, 30 and 100-teraflops. The 1.8 teraflop machine is the one Intel Corp won the contract to build last year for \$45m at Sandia. But each stage may take more than one computer, as is the case with the 3-teraflop machine.

ANOTHER POWERPC SHRINK: FIREPOWER GOES TO MOTOROLA

Motorola Inc's Motorola Computer Group has been such a dog of a business for so long that the jury is still very much out on whether the transformation it has promised will be realised, and the past six months have not been encouraging - ~~but last week it made a move that could make a significant difference.~~ It has bought FirePower Systems Inc in a deal that should enable it to get PowerPC Reference Platform-compliant machines out in very short order. The deal is striking because it is an admission of defeat by Canon Inc - although the Japanese company would no doubt point the finger of blame at IBM Corp for so lamentably failing to deliver on all its PowerPC promises. In this light the deal doesn't look so great for PowerPC's overall fortunes. Firepower, in Menlo Park was formed - as Powerhouse Corp - by refugees from NeXT Computer Inc's hardware business, in which Canon also lost a small fortune. Canon holds a 98% stake in Firepower and says it is selling it to Motorola because the PowerPC business isn't advancing as it wished.

Multiprocessing

Motorola particularly likes the company's multiprocessing technology used in its PowerPC desktop systems and servers, which are offered with NT. Motorola's Joe Guglielmi says the acquisition will bring additional engineering and product development resources - FirePower employees will join Motorola and continue to develop PowerPC-based technologies and products at their existing base. Dr Glen Miranker, FirePower VP engineering, will manage the site, renamed the Menlo Park Design Center, which will also be the base of operations for the PowerPC Application & Systems Solutions Group on the West Coast, and will be dedicated to Windows NT on the PowerPC; it will also offer facilities to help independent software vendors to put their applications up under NT on PowerPC. Miranker becomes a Motorola VP. FirePower co-founder John Rubenstein will be there for a while. FirePower was majoring on Windows NT in part because it had been unable to negotiate a licence for Apple Computer Inc's Mac OS. Canon's making noises about continuing with PowerPC products, which it has been doing in Japan, including the Thinkpad 820 it re-badges from IBM Corp as its PN-100 Power Notebook. It's expected to make similar noises about partnering with Motorola. FirePower has some revenues and supplies Ken Olsen's Acton, Massachusetts-based Advanced Modular Solutions Inc; Japan Computer Corp; and IPC Technology, the Austin, Texas-based arm of IPC Corp of Singapore.

NETCHANNEL, HAUSER'S I-NET SERVICES COMPANY REVEALS ITSELF

NetChannel Inc, a company formed by Acorn Computer founder Hermann Hauser last March - but unheard of until now - will develop a suite of entertainment and information services to supply to users of Network Computers, when they become available in the fall. NetChannel is separate from NChannel Ltd, the British company Hauser formed to sell and distribute Acorn Computer Group Plc's NetStation Network Computer (UX No 597). Palo Alto, California-based NetChannel will become in effect a service provider, levying a \$20 or less monthly charge. The company promises that its offerings will "become just another channel on your television", but offering very easy to use Web access. For instance, the interface will eliminate the need to type 'http' or 'www' or other things that virgin Internet users could find intimidating, according to Harriett Donnelley, VP marketing.

Focus

Details of what the content might be were not forthcoming, other than that not surprisingly, entertainment, information and electronic mail would be the focus. The browser would take users to relevant sites based on a profile they complete. Although extremely friendly with Oracle Corp, NetChannel was at pains to emphasise that its services will be available to any box complying with the NC Reference Profile set of standards (UX No 591), not just Oracle-designed ones. But Oracle will be "endorsing" NetChannels' offerings and NetChannel will be one of its launch partners. Hauser's other NC baby, NChannel, will only sell the Oracle-designed box for the time being, and only in the UK. But an Acorn-related company will be assigned to sell the thing in the US, though it is not clear yet whether a company will be formed for the purpose or not, though that seems likely. And when it is launched, NetChannel will be the service provider's software recommended. NChannel's box is due on October 11 for \$619, including an electronic mail address and smart card, ready to go shopping. NetChannel's CEO is Dave Atkinson, formerly VP multimedia products and services at AT&T Corp, and former Yahoo! Inc internee Philip Monego is president of NetChannel services, leading the company's services group.

NETOBJECTS DEBUTS FUSION WEB SITE TOOL

Eight-months old NetObjects Inc has launched its NetObjects Fusion Web site building and maintenance application, claiming it's the easiest way yet of building a site and ensuring everything's kept up to date (UX No 575). The Redwood City, California company also signed deals with ~~IBM Corp, VUNet Technologies Inc, Netscape Communications Corp~~ and Sun Microsystems Inc's JavaSoft Inc division for various support and marketing initiatives. The company is claiming the tool to be the first to take a "site-oriented" approach, rather than a page-oriented one, and somewhat grandiosely, that it's a quantum leap akin to the Macintosh interface over text-based interfaces in the 1980s. Its principal features are SiteStructure, which gives a hierarchical view of the site, and enables pages to be dragged and dropped around the site. PageDraw is the visual page development tools that gives pixel-level control over a page's content, supporting Java, ActiveX and Shockwave, with no HTML knowledge required. And SiteStyle enables a uniform look-and-feel to be applied to the site. It also includes some 50 pre-designed site styles. In fact, style is something the folks at NetObjects are very keen on. The so-called chief creative officer is Clement Mok, a leading Web site designer and CEO Samir Arora was one of the Macintosh interface design team in the 1980s, as well as the former CEO at Rae Technology Inc. NetObjects raised \$5.4m in first-round financing from Norwest Venture Capital in February, is currently negotiating for more. The beta version of NetObjects Fusion for Windows 95 and Windows NT Workstation 3.5.1 is free at www.netobjects.com, while version 1.0 will be released next month for \$700; \$500 if bought before September 25. IBM will bundle NetObjects Fusion with DB2, including NetObjects Fusion in a new offering called *net.data*, a database interface for the web.

SGI READIES COSMO 3D AND COSMO GL LIBRARIES

Silicon Graphics Inc has announced a couple of new libraries for its Cosmos development tools suite in the shape of Cosmo 3D, a graphics toolkit and Cosmo GL, a version of the company's OpenGL three-dimensional graphics application programming interface for personal computers to run modeling systems and games without any additional graphics hardware. Written in C++, the Cosmo 3D toolkit supports more than 30 graphics file formats, including Virtual Reality Modeling Language (VRML) 2.0, and includes Java bindings to enable Java applications to use it. SGI has been working with Sun Microsystems Inc's JavaSoft Inc division on 3D rendering in Java, and SGI will propose Cosmo 3D as synonymous of what 3D rendering should look like when called by a Java applications. It incorporates the scene graph data structure technology with geometric morphing, 3D audio and texture mapping used in SGI's Inventor and Performer products that enables not only 3D graphics but other media types including sound to be stored, and more importantly, co-ordinated, so that the right sound goes with the right graphics. Cosmo GL is what SGI calls a full implementation of its Open GL application programming interface, a lower-level interface for graphics rendering, according to John Schimpf, open GL product manager. He claims it's a high-performance version of Open GL for PCs, rather than specifically a Web technology, which makes a change. Both products are both for SGI's and other companies' development purposes and are aimed at both Web and high-end standalone graphics applications that the Web is still some way off supporting. Cosmo GL will be downloadable for free from www.sgi.com from the start of next month for Windows 95 and Windows NT, while Cosmo 3D goes into beta "for all platform" this fall, no prices.

NETSCAPE PORTS TO NCR SERVERS

Partner-hungry Netscape Communications Corp announced last week that its Web software is being ported to NCR Corp's MP-RAS 3.0 Unix, as well as NCR Windows NT boxes. All of Netscape's SuiteSpot, which comprises the Netscape LiveWire Pro development tool, Netscape Enterprise server, Mail Server, News Server, Catalog server and Proxy Server, will be available on NCR WorldMark scalable server family from the end of November, and Netscape FastTrack server entry-level Web server will be bundled with NCR S40 servers running Windows NT by the end of next month. Proxy Server, Commerce Server and Navigator have already been ported to MP-RAS and are available now, with the rest of Suite Spot being released at the end of November. The whole of SuiteSpot will also be available on Windows NT as part of the agreement. NCR will also support Navigator 2.0, Navigator Gold and subsequent releases of the client software for Windows 3.x, Windows 95, Windows NT and MP-RAS.

PLATINUM BETAS POEMS LINE BY LINE

Platinum Technology Inc is slowly rolling out the beta programme for its Platinum Open Enterprise Management Systems (POEMS) architecture, but the time frame has slipped somewhat from the complete beta promised for this summer. A couple of elements are already with customers, and around the end of September a POEMS-enabled version of ~~the AutoSys job management and scheduling tool products will be~~ released for beta testing, but the majority won't be generally available until January. The Oakbrook Terrace, Illinois company doesn't plan a major product hoopla until then. The remaining POEMS-enabled products will be rolled out through the rest of 1997. An internal meeting is imminent when the managers will show where they're at with their APIs at the moment. Two elements already testing are Enterprise DBA database management tool, and AutoXfer Inventory, the software distribution tool. Overall the company is "75 percent of where we want to be," according to Cori Ferengul, technical manager for POEMS. The Platinum Repository/Open Enterprise Edition work is just over half way there, according to Ferengul. The repository is the first of the series Platinum plans to integrate with POEMS. But the Event Manager elements are a "little bit further along than that," though the company's got a security tool and performance monitor already talking to Event Manager, which is the part that controls protocols and procedures between the various POEMS components.

NCD BETS FUTURE ON NCs

Network Computing Devices Inc has had a difficult time of things recently, but reckons the future looks brighter now it's back concentrating on hardware. The Mountain View, California company sold its Z-Mail electronic mail business to NetManage Inc in June (UX No 593), leaving it just a skeletal software business, so it can concentrate on the Network Computer business. The sale itself didn't bring NCD any real financial gains, but it will be better off in the long term without Z-Mail. Rudy Morin, brought in June as executive VP of operations and finance cited Z-Mail as another example of NCD's "ill-timed and selected forays" into software, getting too far away from its core hardware competencies. But the move back is not without pain. The company had a lot of inventory earlier in the half that it needed to get rid of, but unfortunately most of this was DRAM chips, by then worth a lot less than the company had paid for them. This necessitated an inventory write-down of around \$3.5m in the second quarter, which together with redundancy charges made up charges totaling about \$4.0m. These ate chunks out of gross margins, which were halved in the second quarter and six months, compared to a year before. All of this put together drove the company into the red with losses of \$6.0m in the quarter, against modest \$85,000 profits last time. Revenues in the quarter fell 16% to \$29.3m, also hitting margins.

Turnaround

But the company believed the situation to be recoverable and the first dose of medicine came in the form of IBM Corp decision to resell NCD's X terminals last March, rather than make them itself (UX No 579). IBM struck another deal with NCD in June for the company to develop IBM's Network Computers that were spawned from the AS/400 division (UX No 597). This should make a real difference to NCD in the future, but only if IBM takes up its option to purchase a substantial part of its NCs next year and in 1998 from NCD, and that will only happen if certain, unspecified manufacturing requirements are met. The machines will be based on NCD's Explora machines, with IBM's work at the AS/400 division put on top of that. The Exploras use PowerPC 403 chips, the same chip IBM was believed to be dabbling with in its NCs. The company must hope the NC market rises fast enough to meet and overtake the X terminal business coming the other way. Morin, an old friend of CEO-since-May Bob Gilbertson, was persuaded to move from the East coast to attempt a turnaround at NCD. Morin said just doing the turnaround wouldn't be enough reason for him to move. It's NCs that excite him, and he's not alone in that. The pair engineered a turnaround at Data Switch Corp in the 1980s, which *CFO Magazine* reportedly dubbed the "turnaround of the decade". Well it's another decade and another turnaround is required. Network Computing Devices Inc reported second quarter net losses of \$6.0m, after exceptional charges totaling \$4.0m for inventory write-down of DRAM memory chips and other charges, against profits of \$85,000 last time, on revenues that fell 16.3% to \$29.3m. Net losses for the six months to June 30 were \$6.3m, against \$389,000 profits a year ago, on revenues that were down 17.6% at \$59.8m.

uni gram X

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Expect **Digital Equipment Corp** to announce a Unix-to-Windows NT interoperability scheme in the coming months, akin to Affinity, its NT-to-VMS translation package.

Iona Technologies Inc's OrbixTalk implementation of the OMG's Corba Events Service is now generally available for Solaris and HP-UX, having been in beta since May (UX No 589). A Windows NT version of the messaging system is out later this month, with AIX and DEC Unix versions due before the year-end. OrbixTalk is based on the UDP/IP (User Data Protocol/Internet Protocol) Multicast standard. Meantime, Iona also announced OrbixWeb 2.0, the next version of its Java object request broker. The difference between it and the first version is the ability to build back-end Corba services in Java, according to the company. It's in beta from next month.

Informix Software Inc and **Seagate Software Inc's** information management groups have inked a deal for Seagate's Crystal Reports 5.0 to include an Informix-NewEra class library, so Informix developers can make Crystal Reports engine calls in NewEra. An ODBC driver for Crystal Reports 5.0 has also been added so Informix databases can be accessed from Crystal Reports. The pair are developing a native Informix driver for Crystal ready next quarter.

Objectivity Inc, the Mountain View, California object-oriented database purist reports that its won a total of \$4.5m in venture funding, in two tranches of \$2.3m recently and \$2.5m earlier from **AVI Management Partners**, **Mitsui & Co** and **Sippl Macdonald Ventures**, in which Visigenic Software Inc's CEO and Informix founder Roger Sippl is a partner. It's going to use the money to consolidate its position in the telecommunications market and, it says, to establish leadership in the Web market with its Objectivity/DB database (UX No 573).

Sybase Inc is claiming the performance lead for its SQL Server 11 on IBM Corp PowerPC 604-based SMP server. It achieved 5774.07 tpmC at \$243 per transaction running the TPC-C mark on an eight-way RS/6000.

ICL Plc's having Cincinnati, Ohio-based **DialLogos Inc** resell its Dais Object Request Broker.

Visigenic Software Inc and **Intersolv Inc** are jointly developing an Open Database Connectivity 3.0 driver manager. Intersolv is licensing the ODBC software development kit that Visigenic has licensed from **Microsoft Corp** and as soon as Redmond announces ODBC 3.0, due in late summer or early fall, Visigenic and Intersolv will ship the driver for Unix, Macintosh and OS/2.

The first of the web-based management technologies **BMC Software Inc's** been talking about for so long will finally be announced today, Monday, as Patrol Knowledge Module for Internet Servers and a Patrolwatch browser front end. They're new options for its Patrol suite of application management tools. The \$1,000 Internet server module supports Netscape, NCSA, CERN and Apache. Support for Microsoft Information Server follows next quarter.

Like **NCR Corp's** already done for its Top End OLTP monitor, **BEA Systems Inc** is web-enabling and Java-ising Tuxedo as Jolt, for Java OnLine Transactions, allowing transactions to be processed from browser front-ends. Not that BEA sees it quite like that. It claims it Jolt will provide a "more intelligent implementation of connectivity over the Internet" than NCR. BEA's aiming to provide turnkey web-based transaction solutions. It says it's not simply bolting a web front end on to Tuxedo and Jolt will be delivered as new technology items. BEA considers itself looking from mission critical environments out to the web rather than from browsers into the back-end.

Bob Roblin, former marketing chief of **IBM Corp's** ill-fated Power Personal Systems Division, more lately VP marketing and strategy for big blue's consumer division has been hired by **Adobe Systems Inc** as its SVP marketing.

Campbell, California-based **Western Micro Technology Inc's** distributing Santa Cruz Operation Inc's Internet/Intranet bundle.

Hitachi Data Systems Inc and **Informix Software Inc** are to put the latter's OnLine Extended Parallel Server up on Hitachi's SR4300 Scalable RISC Complex (IBM's SP).

Santa Cruz Operation Inc expects to freeze its Gemini OpenServer/UnixWare code in October or November.

It thinks it'll come to a resolution with **NCR Corp** on Unix development. SCO wants to include the Reliability Availability and Servicability features of NCR's AT&T MP-RAS in its future Unix OEM product; NCR already does a healthy business running SCO products on its servers.

CenterView Software Inc, San Francisco, California, has garnered itself a further \$3m venture funding from **Hummer Winblad** and **US Venture Partners** in addition to a \$2.3m line of bank credit. The two VCs supplied CenterView with an initial \$2.6m in June 1995

Liant Software Corp's Ryan McFarland division is offering a VanGui interface builder for Delphi allowing Cobol developers to use Delphi and Visual Basic to develop Windows interfaces for Cobol applications running on Microsoft or Unix. Prices are from \$2,000. It's also offering Enterprise CodeBench enabling developers to edit Cobol source running on Unix or Microsoft from Windows from \$1,700.

Data General Corp's OEMing **Unidata Inc's** nested relational database and has provided Unidata with code to reduce CPU processing time. Unidata 4.0 is due in September.

Progress Software Corp has licensed Intersolv Inc's Data Direct ODBC driver for its database. Under the deal, Intersolv will develop 16- and 32-bit DataDirect Windows ODBC drivers for Progress, in doing so expanding the number of third-party applications that can access the Progress database. The 16-bit driver is in beta now for release later this month and the 32-bit version will appear in the autumn, both at \$100.

OpenVision Technologies Inc is claiming its part in a test with **Digital Equipment Corp** and **Oracle Corp** where an Oracle7 backup exceeded speeds of 500Gb per hour using OpenVision's Axiion-NetBackup storage management application. It was achieved using DEC's AlphaServer 8400 running 64-bit DEC Unix and StorageTek's Redwood SD-3 Helical Tape.

Santiago Pinetta, the Argentine journalist who uncovered the alleged bribery scandal over **IBM Corp's** \$249m order from state-owned Banco Nacion de la Nacion Argentina, had the letters I-B-M carved into his chest by a gang of two men and two women, who beat him up outside his home. Senator Leopoldo Moreau of the opposition Radical Party, who has pushed for more rigorous investigation of the IBM case, said he was threatened on Wednesday when an anonymous caller warned him "We'll do the same to you as we did to Pinetta." According to *Reuter*, Pinetta, repeating allegations that government security services were behind the previous attacks, demanded political asylum in Mexico "because there is no safety in the Argentine legal system."

IBM's letting distributors assemble RS/6000s.

Microsoft Corp wants ActiveX, COM and DCOM to go to an "aggressive and dynamic standards body, not one that was ossified." If a body like the OMG wanted to try to define ActiveX in terms of Corba then that would be an unacceptable solution, it says.

Object Design Inc, Burlington, Massachusetts priced its offer of 3m shares, all new, at \$7 per share, a big disappointment on the \$9 to \$11 the firm had been hoping for. Net proceeds are for working capital.

C and C++ house **XVT Inc's** now offering a version of its cross-platform GUI development environment for Ada based on work it did for a US Army contract. Prices start at \$22,000.

Client Technologies Co's Data Systems Support is integrating Cognos Inc's PowerPlay and Impromptu access, reporting and analysis tools with its Sales Information Response System (SIRS) asset management system. The partnership gives SIRS users online analytical processing (OLAP) capability and improved query and reporting functions, Data Systems said. SIRS is a client-server system which supports sales force automation, Internet marketing, lead generation and remote host connectivity.

NEC Corp has won another order for its SX-4 supercomputer - the same computer which is at the center of **Silicon Graphics Inc's** formal accusations that NEC under priced and took a loss on a recent supply order to gain US market share and injure competition. The latest supply deal is to Texas oil exploration company **Digicon Inc** and is reportedly worth about \$4.6m. Silicon Graphic's Cray Research unit accused NEC of selling vector supercomputers to the US National Center for Atmospheric Research, a US agency, much cheaper than it sold them in Japan.

Hitachi Data Systems Corp advises that its Unix server strategy won't be all OEMed PowerPC equipment and that it's developing its own, non-PowerPC servers internally.

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SOMERSET TO "RESTART" POWERPC

IBM Microelectronics and Motorola Semiconductor have laid down a roadmap for future generations of their PowerPC RISC up to and beyond the year 2000 in the hope they can restart their stalled microprocessor campaign. They say their Somerset Design Center's engineering team has grown by 50% in the last 12 months and that the original goal of the five-year-old PowerPC alliance, to challenge Intel Corp's dominance of the CPU industry, is still valid. Somerset claims it will be able to match Intel on price and performance at every step, although IBM has now shut the lid firmly on the notion it once had of executing iAPX-86 instructions on a PowerPC design - a project often referred to as PowerPC 615 - even though it says each of several approaches it developed were implementable. Somerset has described a four-year road map in which there are two further generations of the PowerPC architecture up to the year 2000 and beyond. There will be more than one chip family within each G3 and G4 generation and processors will be targeted at specific applications. G1 was the first generation PowerPC 601 and G2 accounts for the 603, 604 and 620. The current PowerPC architectures, 603/e, 604/e and the forthcoming 64-bit 620/e will top out at 300MHz and eight million transistors, 0.25 micron designs by the end of next year. Beginning around the middle of next year the two companies plan to offer systems built around a G3 architecture. G3 architecture includes 32-bit and 64-bit processors, a new bus, cache enhancements and 0.35 to 0.25 micron designs with up to 30 million transistors. The clock will start at 200MHz. Beginning in 1999 systems will be offered with chips based upon a new G4 PowerPC microarchitecture, again in 32-bit and 64-bit flavours, with up to 50 million transistors going on to 0.25 to 0.18 micron designs. G4 will use a new core described only as "a better implementation of the instruction set. A shadowy Project 2K will house the first post-2000 developments. There are no part numbers for any of the G3 and G4 work. G3 performance is slated at 10x G1, though Somerset emphasises it'll be new systems-enabling techniques that'll deliver the most striking performance benefits. Taking a swipe at Intel Corp's Merced and Hewlett-Packard Co's plans for it, Somerset says all of the new processors will be able go straight into high-volume desktops; they won't have to be handheld in expensive high-end server configurations. They'll also be 100% backwards compatible with other PowerPCs, it claims. Somerset's pinning its hopes on Windows NT and to a lesser extent Mac OS driving future volume. It reckons less than one third of Apple's installed base has upgraded to PowerPC. IBM says it's the availability of NT and applications on PowerPC that shut the lid on its Intel emulation projects. As far as the extended PowerPC family is concerned, the Apache and merged PowerPC/Power instruction set efforts known respectively as PowerPC 625 and 630 are both IBM projects. Design and manufacturing of future cousins will be handled on a case-by-case basis. They'll use other IBM and Motorola sites to mop up Somerset overspill. Surprisingly - or maybe not if previous form is taken into account - the two companies did not formally announce their plans, despite the obvious need to evangelize their RISC. They just want people to know there is someone behind the wheel.

SP DRIVING RS/6000

Meantime, with production versions of the 64-bit PowerPC 620 said to be on course for around year-end, IBM is looking at October 1997 deliveries for its 620 systems. PCI-based SMP servers will debut next year too. The quandary IBM's in is whether to go the Sun or DEC route to 64-bit Unix; either to roll 64-bit functionality into AIX piecemeal a la Solaris or go the whole hog at once like DEC. IBM is also evaluating several distributed shared memory architectures with a view to implementing some kind of NUMA capability around 1998/99. Meantime, the parallel SP systems are driving RS/6000 business (so much so it's said to be having trouble meeting manufacturing requirements). In fiscal 1995 it had 3,010 technical and 3,773 commercial SP nodes installed and sold around 700 systems. In the first six months of this year it installed around 2,000 technical and commercial nodes apiece and shipped 127 technical and 260 commercial systems. It's aiming to deliver 900 SPs in the year, just about doubling the overall installed base. In the first six months of this year SP sales accounted for between 15% and 17% of RS/6000's revenue. Workgroup servers did 24%, enterprise servers 29%, large servers 15% and workstations 32%.

OBJECTSPACE READIES VOYAGER JAVA AGENT, WORLD API

Everyone's looking for that killer Java app, the one they'll be able to charge real money for and get rich by. Dallas, Texas-based ObjectSpace Inc thinks it may have one in the form of a mobile, multi-platform, real-time Java agent technology called Voyager it'll introduce next year. Voyager will use what ObjectSpace calls a World API to resolve queries across the web, usenet, or any other available on-line resource. What will make Voyager different to other search engines or personalised information feeds ObjectSpace says, is its ability to carry and retrieve very specific queries employing concepts such as volume and space. A query could be broadcast to all available online information stores by turning query volume up or to a select few, or individual destinations by turning the volume right down. Similarly responses can be sent directly to local nodes rather than broadcast across the net. A key distinguishing feature will be a closely-held query method ObjectSpace won't reveal until its closer to shipment. ObjectSpace hasn't worked out a business model yet, figuring that by the time the technology's ready the internet market will have moved on several universes. It's open to offers. ObjectSpace doesn't intend to play in the commercial Java class library/development space. It expects give away technologies such as Netscape's Java-compatible foundation classes will deep six products such as Rogue Wave's JFactory, though that's hardly a surprising view given it's out to eat Rogue Wave's C++ base. \$15m to \$20m privately-held ObjectSpace will be up to 140 employees by year-end. It sees an IPO in two or three years. A UK office is on the cards.

SUNSOFT'S OO REPOSITORY FOR JAVA/CORBA APPS...

In the beginning there was Solaris, NeXTStep and Corba. Then Java came along and turned SunSoft Inc's object world upside down (UX No 590). As a result Sun Microsystems Inc's software shop believes users and developers will "have to live with both [Java and Corba models] for some time." However "until one goes away" it's prepared to allow developers to move between the two worlds without impediment. With that in mind SunSoft is developing an object-oriented repository and design method it says will allow developers to generate Java and OMG Interface Definition Language (IDL) stubs from a single program. Given its belief that there will always be more Java developers than Corba programmers, the default repository will be Java-based. There's no timeframe for the work though it says it'll start making noises about the work in the fall. It's building the repository from pieces of technology culled from other projects, but it's prepared to buy additional work in. It says it'll continue to support the Corba tools and IDL compiler it offers for use with its Solaris-based NEO object environment as long as they are required, but expects Java developers won't actually want to learn Corba, just access it. SunSoft stresses the work isn't a universal CASE-type object repository. It believes Corba will retain its usefulness for back-end and DSS but says it isn't suitable for real-time work which Java can do. "There will always be a trade-off using Corba because of its language binding and language neutrality issues." It says a uniform language binding for Java and Corba is needed as soon as possible, not one that's just "close."

...CORBA-TO-OLE NEO TOOL

SunSoft's other mission is to tie Microsoft desktop developers into its object world by allowing Visual Basic programmers to use Corba objects running on Solaris NEO servers in their applications transparently as if they were OLE automation servers. It especially wants to attract PC developers that aren't going to use Java or Corba. At next week's Object World show SunSoft will unveil a tool that converts OMG IDL code into its OLE equivalent based upon OMG's OLE-to-Corba spec. SunSoft says it will allow Visual Basic developers to see, access and use Corba objects as if it they were VB code. The tool creates services for the Corba object in VB and the developer uses it like an OLE automation server. SunSoft claims it'll also relieve back-end Solaris managers from VB integration concerns. The tool only works with the Solaris NEO object request broker (ORB), though SunSoft admits it could break the tool out and offer it as a plug-in to other ORBs. It says it hasn't settled on a name for the thing yet, which will be bundled with a future NEO release. The IIOP-enabled NEO ORB is now in beta. The tool, which uses an OLE automation server proxy and real-time mapping service on the client, isn't targeted at PC-based ORB developers who might use the Iona Technologies Ltd Orbix ORB.

OMG HOPES TO REVIVE DCOM-TO-CORBA RFP

Following disclosure of its plan to turn ActiveX, COM and DCOM object technologies over to an "industry standards body" we understand that Microsoft Corp has also contacted the Object Management Group with a view to resuscitating OMG's stalled DCOM-to-Corba initiative, the Corba 2.0 Part B request for proposal. That effort, to develop interoperability between objects using Microsoft's forthcoming Network OLE and OMG's Common Object Request Broker Architecture, went into a holding pattern at the beginning of this year lacking a fully-functional Network OLE specification from Microsoft. OMG hopes to revive the RFP at its Hyannis, Massachusetts meet in September. We guess the newly 'open' Microsoft will at least tolerate co-existence with the Corba world although it's clear Redmond still won't touch OMG with a barge pole as far as its object crown jewels are concerned. Last week it told us it wants ActiveX and the other technologies to go to an "aggressive and dynamic standards body, not one that was ossified." (No prizes for guessing who it means). If a body like the OMG wanted to try to define ActiveX in terms of Corba then that would be an unacceptable solution, it says. No Corba or OpenDoc proponents we spoke to, including OMG, Component Integration Labs, Apple Computer Inc or IBM Corp have been invited to Microsoft's meet in New York at which the fate of its object architecture will supposedly be decided (UX No 600.5). OMG president Chris Stone believes the internet will drive the two object worlds into coalescence.

IBM TO DEFINE IN-CAR NETWORK ARCHITECTURE WITH DAIMLER-BENZ

Motorola Inc hopes that it will get embedded PowerPCs into hundreds of thousands if not millions of cars made by Ford Motor Co, and IBM Corp hopes it has pulled off the same trick for its own variants of the same RISC with Daimler-Benz AG's Mercedes-Benz unit. IBM and Mercedes will develop a new in-car network architecture that will monitor and control many parts of the vehicle, such as lights, engine and climate control. The new network architecture will be developed with participation of automotive parts suppliers to ensure standardisation. Helmut Werner, chairman of Mercedes agreed the deal with Louis Gerstner, "while they were talking business at the Olympic Games."

3DLABS UPGRADES GLINT GRAPHICS CHIPS

3DLabs Inc has upgraded its high-end Glint processor, begun shipments of its low-end Permedia three-dimensional graphics chips, and introduced a combination chip set aimed specifically at Windows NT systems. The Glint 500TX, pin-compatible with the current 300SX Glint, which will still be sold, boosts three-dimensional performance up to 1m Gouraud shaded, Z-buffered, 32-bit colour, 25 pixel polygons-per-second, according to the company. It makes the chip capable of full OpenGL-based texture-mapping and geometry acceleration without the need for any additional hardware - Silicon Graphics territory, says 3DLabs. By using the Glint Delta geometry pipeline processor, which diverts load away from the host CPU and PCI bus, multiple chips can be glued together to deliver performance of up to 100m shaded, Z-buffered pixels per second. At the low end, the Permedia chip, announced last year, supports two-dimensional and OpenGL three-dimensional graphics, and Microsoft's Direct3D graphics applications programming interface, with a price tag under \$200 - it is shipping now. Texas Instruments signed up as a second source for Permedia back in May, and promises its own variants on the technology in the fourth quarter. And Permedia NT is a new chip set consisting of the Permedia chip and the Glint Delta pipeline processor in a single package, aimed specifically at authoring and computer-aided design, three-dimensional Web browsers and games on Pentium Pro systems running Windows NT 4.0. It uses the same drivers as high-end Glint boards, but cost less than \$300. It is available now. 3DLabs is based in San Jose, California, and Egham, Surrey.

PRETTY GOOD PRIVACY TO LICENSE TECHNOLOGY TO FTP SOFTWARE

Redwood Shores, California-based Pretty Good Privacy Inc has signed its first licensing deal for its encryption software, with FTP Software Inc. FTP will use the encryption software in its newly-launched suite of network applications, OnNet 32 v 2.0. The software is embedded within the suite's Mail OnNet electronic mail application. A two-icon system enables users access to a tool bar, designating options to encrypt or decrypt a message and make a digital signature. Mail messages can also be left on a server or computer in an encrypted format, to be decrypted and read at will. FTP Software's implementation of the Pretty Good encryption software is interoperable with current freeware versions.

PORTABLE GRAPHICS HAS NEW VERSION OF OPENGL-BASED OPEN INVENTOR

Two companies are still battling it out to win business around Silicon Graphics Inc's OpenGL graphics libraries and Open Inventor tool kit. At Siggraph, Evans & Sutherland Computer Corp's Portable Graphics Inc, ~~unit, launched a version of Open Inventor for Windows NT that runs on~~ Alpha-based RISC machines. It's part of a new release, also for iAPX-86 that includes ActiveX support, the V-Realm 3D Web browser and additional data and image files. Portable Graphics also announced new versions of OpenGL, Open Inventor, and the NPGL GL-to-OpenGL conversion tool for Hewlett-Packard Co, Sun Microsystems Inc Solaris (Creator 3D), DEC iAPX-86 and Alpha (PowerStorm). Meanwhile, Template Graphics Software has won a distribution agreement from SunSoft for OpenGL and Open Inventor on Sparc and UltraSparc boxes.

SGI PUBLISHES COSMO PLAYER PROGRAMMING INTERFACE

Silicon Graphics Inc has announced the public availability of its Cosmo Player application programming interface. Cosmo Player, its VRML 2.0 browser and plug-in to Netscape Navigator, runs under Windows95, NT and on Silicon Graphics workstations. The Silicon Graphics-led VRML 2.0 specification was ratified at Siggraph last week. By publishing the interface, it says its developers will be able to extend the functionality of the player, creating cross-system Java plug-ins to add multimedia capability like streaming media and real-time data feeds. Developer companies such as Black Sun Interactive and Worlds Inc supported the move. The interface is published at <http://vrm1.sgi.com>.

AXIAL SYSTEMS CLAIMS INSIDE TRACK IN VR TOOLS RACE

Former Autodesk and Silicon Graphics executive John Ison has joined Axial Systems Inc as president and CEO; the 1996 start up is developing and selling software tools for creating VRML 2.0 interactive content. The Saratoga, California company is racing to beat the likes of Silicon Graphics Inc and Autodesk Inc to market. Ison has worked inside the multimedia divisions of both SGI and Autodesk. "I've seen the high end, I know the competition and I know we can do it better." VRML 2.0, or virtual reality modeling language, is an interactive 3-D industry standard. Activity in the VRML market heightened last week when Microsoft Corp last week dumped its plans to develop Active VRML and instead licensed Dimension X Inc's Liquid Reality VRML 2.0 platform, confirming the VRML as the sole standard for 3-D graphics. Axial's VRML tools will enable developers to create 3-D content for Web sites and games in interactive real-time, rather than having to render the animation. Ison explains the difference: watching content created with VRML 2.0 tools is similar to playing the game Doom, whereas watching rendered animation is like watching a movie of Doom. Axial received an undisclosed amount of venture funding from Altos Ventures, Discover Ventures and Partech International and expects to begin showing a profit by this time next year. Axial wouldn't say what language the tools would be written in, claiming that with the VRML 2.0 file format, that issue is irrelevant. Axial, which has 16 employees, also wouldn't say when its tools would hit the market or what they would be called. It expects to announce partnerships with other tools and browser vendors and a number of content providers in the near future.

FAR FROM SPENT FORCE, SEYMOUR CRAY FORMS SRC COMPUTERS TO TRY AGAIN

After the foundering of his Cray Computer Corp, Seymour Cray is back in business, still in Colorado Springs, with a new company called SRC Computers Inc - but he told *Associated Press* he doesn't know yet what the company will be doing. "We think we'll build computers, but who knows what kind or how," he said. He's hired five people so far and "we'll talk it over and see if we can come up with a plan." He formed Cray Computer Corp around the successors to the original Cray 1 after Cray Research Inc decided it didn't want to proceed with the Cray 4, but the effort to bring that machine to market bust the company. Cray says he won't be using the same Gallium Arsenide chip technology this time.

ORACLE CONFIRMS EUROPEAN HEAD

Oracle Corp confirmed that it's hired former AT&T Corp executive Pier Carlo Falotti to be its top officer in Europe. His mission is to unify the European operations, which have included independent subsidiaries for each big country. Reorganising vertically, there'll be four pan-European groups selling software for the telecoms, energy, financial services and consumer packaged-goods industries. Oracle will also shift a major portion of its sales and marketing efforts to independent distributors.

OPEN GROUP DEBUTS DCE-WEB

Last week Open Group Research Institute - the former Open Software Foundation Research Institute which until this Tuesday is being run by Dr Ira Goldstein - made its DCE Web technology generally available. Goldstein describes DCE Web as a "new value proposition," which uses DCE to secure protected access control of any internet protocol. DCE Web intercepts any code and puts in into a 'hardwired' channel done in software. DCE Web provides secure access to documents and services running on Distributed Computing Environment (DCE) servers over the web. Specifically OSF has enabled DCE naming, security and access control mechanisms to be deployed over the web. An interface module allows browsers to interact with servers via DCE. It will work with off-the-shelf browsers and won't require source code alterations. OSF claims existing web applications can be ported to DCE Web using a toolkit without changing existing protocols or interfaces. DCE Web components include the WanD (Web and DCE) web server which supports standard TCP/IP-based http plus OSF's own DCE Remote Procedure Call (RPC). Other protocols, including telnet, ftp and SNMP have already been demonstrated using DCE Web. DCE Web can function as a standalone web server or as an add-on to existing web servers. A Secure Local proxy provides secure DCE web access from client browsers. The Security Domain Gateway integrates web protocols such as SSL with DCE Web. DCE Web's been in development for a relatively short time; after a year of US Defense funding and a year of industry money, companies such as Dascom Inc - see page 5 - are already shipping product. Industry support came from AT&T GIS, CP Labs (now Dascom), DEC, Gradient, HP and the University of Michigan. Meantime, Gradient Technologies Inc has already released its implementation of DCE-Web as WebCrusader (UX No 588). It's now integrating WebCrusader with Spider Technologies' NetDynamics Java development system. The work should be complete in October. Gradient's already got Siemens Nixdorf Informationssysteme AG distributing its entire DCE-based product line. Gradient also offers PC-DCE and Mac-DCE allowing DCE applications to be accessed from Microsoft and Apple desktops.

Java for DCE

In addition to its JavaLite Java OS which Goldstein describes as "a software version of a network computer" (UX No 598), other projects the Research Institute has underway include Jade, effectively Java for DCE. The idea is to allow DCE clients and servers to be written in Java and make existing DCE applications accessible from Java applications. Between the fourth quarter and the end of next year the Institute will modify the DCE ISL compiler to generate Java stub code and provide access to the DCE API through a set of Java classes modelled on Hewlett-Packard's OODCE. Indeed Jade is effectively the Java equivalent of OODCE, which might just as easily be called C++ for DCE. Deliverables will include a DCE IDL to Java mapping specification, an abstract Remote Procedure Call class specification; a DCE IDL to Java compiler; and a DCE runtime encapsulated as Java native methods.

TurboJ

TurboJ is a project exploring the compilation of Java on the fly. The idea is to create code that's more efficient than can be achieved with just-in-time (JIT) compilers. TurboJ will compile groups and classes rather than individual methods. The Institute will also make its improved Java garbage collection mechanism to Java licensees. Other collaborative work includes a project sponsored by Oracle to create document version control over DCE Web that also allows annotation. The Institute has 100 staff and recently signed two new deals with the European Commission.

TRANSARC OFFERS DFS CLIENT FOR PCs

Distributed Computing Environment (DCE) house Transarc Corp is offering another one of its thin clients to provide access to additional DCE services from Microsoft Corp desktops. DFS-Light is effectively a Windows NT gateway which allows LAN Manager to send requests to a Distributed File System (DFS) server and retrieve DFS files in their native format to PCs. A user completes a password routine to authenticate a request; the routine is cached for subsequent access requests. Transarc recently began shipping a DCE and Encina client for Windows called DeLite. DFS-Light does not require DeLite. Transarc's plans for Java-enabled clients are still under wraps (UX No 598). DFS-Light costs \$150 per seat on Windows and NT this quarter. Meantime Transarc parent IBM Corp has put its DFS-Web extension for Web servers out to beta. DFS-Web links the DCE-based Distributed File System to the net through a browser. DFS-Web will allow client browsers to access DFS without requiring changes in the client APIs. General availability is scheduled for the first quarter.

BMC BEGINS WEB CAMPAIGN

First of the web-based management technologies Houston, Texas-based BMC Software Inc's been talking about for so long were finally announced last week as the Patrol Knowledge Module (KM) for Internet Servers and a Patrolwatch browser front end (UX No 576). They're new options for BMC's Patrol suite of management tools. The Internet KM can monitor web, proxy, mail, ftp, news and remote servers and supports Netscape, NCSA, CERN and Apache. Support for Microsoft Information Server follows next quarter. The Internet Server module is \$1,000. Information from Patrol KMs, which are available to monitor all relational, hierarchical and object databases plus 16 applications, can be viewed from Patrol Consoles and other SNMP network management interfaces. A new Patrolwatch option allows administrators to view events from Netscape Navigator now and from Microsoft Internet Explorer in future. What it doesn't do is provide the full management functionality of Patrol Consoles. Administrators can only monitor events, they can't go in and change them from Patrolwatch as they can with other Consoles interfaces. BMC says it's all down to net security considerations and that it will add other security mechanisms to Patrolwatch to provide full Consoles services in future. Patrolwatch is \$500. BMC claims the new products conform to web management specifications being developed by Microsoft, Cisco, BMC et al (UX No 599).

DAZEL ADDS WEB SERVICES TO OUTPUT MANAGEMENT TOOLS

Austin, Texas-based document output management company Dazel Corp is the latest company to take itself on to the web; this month it will demo MetaWeb which it says will allow users to receive information to their browsers. In addition to sending documents to printers, faxes and email systems through the Dazel Output Server, users will be able to publish documents to MetaWeb, an Output Server add-on in the form of a web repository. Instead of requiring users to surf web pages for the published material, MetaWeb incorporates a subscriber feature which allows users to sign up for particular document feeds and have them delivered into a web box. MetaWeb goes to alpha customers in November and is due to ship next April, supporting the 2.5 cut of Output Server introduced last week and a 3.0 revision due in the same timeframe. Dazel will add other HTML transformation mechanisms to MetaWeb, plus extensions for handling Adobe PDF, GIF and JPEG file and image formats. Further down the road it envisages MetaWeb handling audio, voice mail, even print-to-audio services. The new Output Server 2.5 has been enhanced to support department-level print policies. Administrators can now configure specific output domains (fax, printers, email systems) for individual departments or offices. Specifically output can be segmented to multiple domains. It's looking at partnering or developing browser-based admin for Output Server. The Dazel software no longer requires Distributed Computing Environment underneath, which it did in its early days. The company says it doesn't know how long it'll continue to support it. Although an NT version of Output Server will be announced around year-end, it may not ship until towards mid-1997 and users will still require a Unix server to do inter-domain routing. There's also a new 1.4 release of the Dazel Express client for Microsoft and Motif desktops. Output Server costs from \$420 per user for a 100 user licence; Express is \$100 per seat. Dazel claims around 70 customers, a third of them production sites. It'll use its recent \$9.5m venture funding to ramp overseas distribution and will likely open direct operations in the UK, Germany and France from which it'll hang regional distribution networks. It's also looking at technology acquisitions for some of the MetaWeb enhancements.

UNIKIX PROVIDES BATCH PROCESSING ON UNIX SMP, INTEGRATES WITH UNICENTER

Bull HN Information Systems' Billerica, Massachusetts-based UniKix Technologies Inc is now offering a parallel processing facility (PPF) for running batch processes on Unix SMP and MPP servers. UniKix, which offers a compatible version of IBM's CICS mainframe transaction software on Unix, explained that one of the biggest issues in migrating mainframe users to Unix is the batch window, the time period allocated to running large groups of transactions at once, jobs that on mainframes are usually time-limited to overnight hours. They're normally sequential operations and run on a single processor. UniKix says PPF allows batch jobs to be spread across as many as 64 processors and works with its Extended Batch Management system for Unix. Prices go from \$12,000 depending on CPU configuration. PPF will be available from September for a new 5.0 cut of the UniKix transaction monitor. UniKix has been integrated for use with Computer Associates International Inc's CA-Unicenter suite; the work will be announced at CA World which starts on the 25th in New Orleans.

ORACLE SAYS ORACLE8 IS BANG ON SCHEDULE

Oracle Corp was apparently offended by reports that the beta program of Oracle8 might be late, and said the first CDs left the factory last week heading for beta sites. It said about 300 beta testers ~~have been trained and are ready to receive it. The company is still~~ clammed tight shut as to what's in Oracle8 though. All Ken Jacobs, VP product strategy and Oracle8 program manager would say is that it's object-oriented and aimed at high-end systems - but he wasn't ruling out it having object and relational capabilities too. Oracle8 and Sedona, its next generation server development environment and object database extensions, are merely "integrated, but not co-dependent", according to Jacobs. He said Sedona will work with Oracle7.x as well. They are both slated for general availability in the first half of next year. As for the competition, Jacobs believes Informix Software Inc to be "confused", Microsoft Corp's SQL Server to be "not useful for the real world", and poor old Sybase Inc to be "dead meat." Jacobs put Oracle's reticence down to its storming financial performance in recent times. In other words, if it ain't broke, don't fix it.

EXCALIBUR VISUAL RETRIEVALWARE FINDS PIX IN A DATABASE

Rather like Bolt, Beranek & Newman Inc, the Cambridge company that is now so ashamed of its founders that it calls itself BBN Corp, for most of its life, Excalibur Technologies Corp, San Diego is much better at coming up with brilliant technologies than it is at making money from them, but Excalibur is hoping that its latest variant on its core pattern recognition tricks will change its fortunes. It sounds as if the company is borrowing from Microsoft Corp the fashionable tag Visual when it calls the software Visual RetrievalWare, but in contrast to the Microsoft usage, the name describes exactly what the software does. Excalibur reckons that it is the first commercial software system able to index and retrieve multiple types of content based on its native digital patterns, which means that you could search a database to find a picture of a person that looked like Cary Grant or Pamela Anderson without having to describe them first. It can be used to search information repositories containing not only facial images, but photographs, video and other digital media. The Visual RetrievalWare software developer's kit is aimed at companies building strategic systems for commercial and government customers, including information services, and information management over corporate intranets, and Excalibur says it has been beta tested by graphics workstation, relational database, applications software developer and other organisations. The company reckons Visual RetrievalWare can be used for anything from positive identification for security and law enforcement through video and photo archive management to quality control of manufactured products. Informix Corp plans to ship Visual RetrievalWare with every copy of the Informix-Universal Server. It supports Sun Microsystems Inc, Hewlett-Packard Co, IBM Corp, Silicon Graphics Inc and Digital Equipment Corp Unix systems, Windows NT and Windows95.

RetrievalWare Kit

The Visual RetrievalWare kit components include colour, shape and texture feature extractors, feature vector indexing and retrieval, image processing library, C libraries and header files, a Visual C++ class library, a Tel/Tk interpreter, sample scripts and programs with source code, and reference documentation in HyperText Mark-up Language. General availability, including pricing information, will be given in September. Separately, Excalibur announced it is expanding its European operations to meet growing market demand. It has established Excalibur Technologies NV as a joint venture with Belgians PCS NV and Flanders Language Valley Fund CVA. The company will establish offices in Belgium, the Netherlands, Austria and Italy, from where it will serve those markets and Germany, Denmark, Norway, Sweden, Finland, Switzerland and Luxembourg. Excalibur Technologies International Ltd is in Windsor, Berkshire with offices in Marseilles. It has licensed Visual RetrievalWare to Keyware Technologies NV of Ypres, Belgium. Keyware, backed by the Flanders Language Valley Fund and the CompuVision Group, will develop secure electronic transaction applications for the Internet.

NCR SERVERS SCALE UP TO 4,096 PENTIUM PROS

Eleven months after their introduction, NCR Corp has upgraded its Intel-based WorldMark server family, adding support for 200MHz Pentium Pro processors (with their 512Kb cache) and expanding scalability ~~beyond four processors. And for its top-end system, the World-~~ Mark 5100, the company has expanded the system from a maximum 16 nodes up to 128, using its Bynet interconnect technology, meaning that a fully configured system could scale up to 4,096 Pentium Pro processors, given a customer with a large enough wallet. Existing servers, which were always advertised as Pentium Pro-ready, can be easily upgraded. WorldMark 4100 servers, which are desktop models, now support from two to eight chips, and each processor can be supplemented with an additional 8Mb of static SRAM cache. The 4500 now reaches up to 16 processors, each with 8Mb or 16Mb of supporting SRAM, depending on the model. The 5100s come in three models: the 5100S servers now scale up to 32 processors, each with 16Mb SRAM - and this is the basic building block for the 5100C (cluster) and 5100M (massively parallel) models. Clusters can contain up to 256 processors, while the massively parallel systems can include up to 128 multiprocessor nodes, connected via an upgraded Bynet now capable of a total interconnect bandwidth of 64Gbps. Pricing starts from \$40,000 for a dual processor, 8Mb cache-per-CPU board for the 4100/4500, rising to \$125,000 for the quad processor, 16Mb cache-per-CPU board for the 4550 and 5100, with general availability in the fourth quarter - though customers who can't wait can buy existing 166MHz Pentium systems now and upgrade in the fourth quarter.

CI LABS BEGINS BRANDING OPENDOC OBJECTS

Meantime, hoping to lend more credence to its flavour of component object architecture, Component Integration Labs (CIL), home of OpenDoc, last week shipped a Live Objects validation kit for MacOS designed to test that OpenDoc objects created by ISVs actually work together on that platform. Components that pass the test will be branded as Live Objects by CIL. The Labs reports that 16 developers will announce branded products at MacWorld this week, including Digital Harbour, Addison Wesley New Media, ComGrafix, Corda Technologies, WorldSoft, MetaMind, SoftLinc, Kantara Development, Eclipse Services, Theta Group, Totally Hip Software, Network Multimedia, PowerProductions, Eastgate Systems and Bowers Development. The kit is free to CIL's 2,000-odd members from its web site. <http://www.cilabs.com>. Meantime, Apple Computer Inc claims there are 30 ISVs developing OpenDoc components for the Macintosh. It'll announce an optimised, reduced footprint OpenDoc 1.1 at MacWorld this week. IBM Corp promises another drop of its OpenDoc 1.1 code next month. Its Windows implementation of the architecture is now out at 200 beta sites and general availability is slated for the fourth quarter.

TI CLAIMS NEW PERFORMER TOOL OUTPERFORMS RIVALS

Texas Instruments Inc's software division is expanding the beta program for its new Performer application development environment, expecting sales from the tools to make up 10% to 15% of its total revenue in 1997. TI is reaching down from its computer aided software engineering (CASE) perch to sell Performer, but says its from-the-ground-up development approach makes the environment superior to "light" tools from Borland International Inc and Oracle Corp. Specifically, its modelling capability is integrated, whereas other products have bolted-on capability, the firm claims. By leveraging its Composer tool, TI says it enables modelling at a level above the code, as well as incremental generation and compiling. Performer, due to ship in October, costs about \$5,000 per developer seat. It includes a shared model repository to allow users in separate locations to develop together. Performer supports Windows NT and Windows 95 on the client side and Windows NT and HP-UX, with Java as the only other platform on the horizon. As far as ActiveX support goes, TI says, "We're probably there now." TI plans to be fully Corba-compliant "in the future, when it becomes widely deployed." Its applications can hook into the Internet now using the WebCenter technology it uses with Composer and Arranger CASE tools. Expect more details out of Dallas September 16 when it demonstrates the first VAR-built applications using the Performer beta. As predicted (UX No 600), with this announcement TI has revealed itself as the anonymous firm advertising its "music-related" development environment.

DASCOM OFFERS INTRAVERSE DCE WEB SERVER

Computer Protocol Labs, the Santa Cruz, California-based 1994 start-up formed by engineers who left Unix System Labs' Pacific unit prior to its integration into Novell Japan (UX No 566), has changed its name to Dascom Inc. ~~Hired Jim Curtin, former managing director of OSF's Asia and Pacific operations as its president and CEO, and introduced a suite of products based upon Open Group Research Institute's DCE Web technologies and its own OSF/1, Mach microkernel implementation. Dascom claims it's essentially taken the 1.0 DCE Web cut and turned it into a 2.0-level technology productised as IntraVerse. Designed to be used as a secure web server, IntraVerse uses the OSF/1 and Mach microkernel operating system technologies CP Labs productised for Intel Corp boxes as AD V1.1, plus DCE and DCE Web. Think of it as the best of DCE applied to the internet rather than internet applied to DCE, Dascom says. Dascom says IntraVerse provides mutual authentication of clients and servers, end-to-end encryption, user-level authorisation at the object level, distributed administration and detailed journaling of user activities. The \$25,000 IntraVerse WebStarter includes a Pentium PC, AD V1.1 and a 100-user WebSeat client for Unix and Microsoft that can be downloaded over the net to provide access to DCE services. WebSeat's based upon the Research Institute's client proxies. Dascom's got WebStarter versions in hand for Solaris and other Unices. An IntraVerse manager allows web services to be managed from distributed management consoles. Dascom has also developed secure servers for ftp, telnet, news, conferencing and Corba request brokers for use with the core IntraVerse Web Server. No prices given. It's readying a WebSeal product that extends IntraVerse security to third party web servers, again based upon DCE Web technology. IntraVerse is aimed at Internet service providers and by companies who manage their own intranets. It distances itself from rival DCE Web purveyor Gradient Technologies, claiming Gradient builds applications on DCE for an operating system. Dascom says it builds pieces of DCE into applications.~~

China

Dascom's forked out \$750,000 to become an executive sponsor of the Open Group Research Institute and has spent at least \$1m on code and intellectual property rights, including \$250,000 for DCE, \$125,000 for OSF/1, \$300,000 annually for the Mach microkernel and \$100,000 or so on other technologies. It figures \$1m for work that's been created by hundreds of millions of industry dollars is well worth it. It takes Research Institute technologies and productises them. It's got Java on the way. Dascom's hired former X/Open Co Ltd marketing chief Allen Brain as managing director of its European operation based in London. Australian and Japanese units will come on line soon. It's also hired a bunch of USL Pacific refugees for its Santa Cruz headquarters. Many jumped from USL when Novell Inc bought Unix from AT&T and new Unix Systems Group chief Kanwal Rekhi told them all they'd be working on NetWare. Dascom's got thirty staff now and expects to double that number shortly. It expects to sell its products as part of wider solution and service sales rather than as technology or OEM wins, though it's not about to turn any offers down. It's got wins in China and Japan up its sleeve. Dascom has taken the name of the Hong Kong-based Dascom Holding Ltd software company which was part of the Unix System Technologies of China joint venture with the People's Republic of China's Ministry of Electronic Industries and Novell Inc that has been using Tuxedo to develop applications for China's major industries (UX No 485). It stresses it has no formal connection with Dascom. One of Dascom's biggest clients is the Hong Kong Jockey Club. Dascom also does work with FTP Software Inc's Firefox Communications unit and has already announced a DCE implementation for Wind River VxWorks real time Unix (to which it has rights) and a DCE firewall product.

DEC REGAINS DESKTOP LEAD WITH 500MHz ALPHA BOX

Digital Equipment Corp has cranked its 21164 Alpha RISC to 500MHz and is using the part in a new AlphaStation 500/500 workstation. DEC claims that at 15 SPECint95 and 19.5 SPECfp95 it's the highest performing desktop machine. It should be, those numbers are achieved with an 8Mb cache. It doesn't quite edge Hewlett-Packard Co's K460EG deskside workstation which uses a 180MHz 64-bit PA-8000 RISC and is rated at 20.2 SPECfp95 and 11.8 SPECint95, though neither are available until September in any case. However DEC's latest hot box certainly outpaces HP's high-end C180-XP desktop, rated at 11.8 SPECint95 and 18.7 SPECfp95. DEC is offering its new PowerStorm 2D and 3D graphics cards for the 500/500, which runs Digital Unix, Windows NT and OpenVMS. It supports up to 512Mb RAM, five slots and four PCI bays, one of them 64-bit. DEC's aiming the thing at mechanical CAD, entertainment, GIS and scientific markets. 500/266 /333 and /400 models are upgradable with a board swap. An NT version with 2Mb cache, 4Mb texture memory, 128Mb RAM, 2Gb disk and 21" screen costs \$54,660 from September. The 8Mb cache option is available in the fourth quarter. For Unix and OpenVMS add \$2,000. No upgrade prices available.

UNISYS GOES TO DATA GENERAL FOR cc-NUMA; DG LICENCES UNISYS' BIG BUS FOR SMP

Intel Corp's ubiquitous Standard High Volume (SHV) PentiumPro boards are quickly spawning a market for commodity Unix SMP server technology. Data General Corp last week added Unisys Corp to its growing roster of cache coherent ~~Non-Uniform Memory Access (cc-NUMA) acolytes, a list rival Sequent Computer Systems Inc must be eyeing jealously. Sequent's problem is that its NUMA-Q doesn't support UnixWare. Whilst Unisys is the latest convert to DG's flavour of NUMA system design, the traffic's not all one way. Unisys has licenced its 533Mbps Synchronous Coherent Memory (SCM) bus and Sierra Pro ASICs to DG for use in SMP servers. Unisys will use DG's cc-NUMA backplane design and software plus Scalable Coherent Interface boards to link Intel's four-way SHV cards in a future series of SMP servers, but not in the ClearPath 61000 SMP servers which use the incompatible SCM bus. Unisys won't ship its first cc-NUMA servers until Santa Cruz Operation Inc cc-NUMA-enables its Gemini UnixWare/OpenServer blend; Unisys says it should be able to deliver systems towards the back end of next year. DG's cc-NUMA, PentiumPro-based AViiON servers are due around year-end running DG-UX and supporting Clariion RAID storage. Unisys' cc-NUMA servers will run Gemini Unix (or what ever it's called by then) and support its own storage solutions. They'll target different vertical markets.~~

Eight-way NT

Unisys uses SCM to create mix-and-match non-NUMA ClearPath 61000 SMP servers with up to 10 Intel CPUs. SCM works in conjunction with Unisys' Sierra-Pro ASIC set which adds a third level of cache memory on the motherboard. DG's current design has a third level cache on a separate board. DG will use SCM and Sierra-Pro to build PentiumPro versions of its eight-way, non-NUMA Pentium-based AV5800 servers. DG says it simply wasn't practical to upgrade its own bus architecture to support PentiumPro. Meantime, Unisys will offer PentiumPro versions of its one-to-10 way ClearPath 61000 SMP servers from October or November. A hardware abstraction layer (HAL) will allow it to run Windows NT 4.0 on the things. Unisys says the six- and eight-way 61000s with NT it will sell from December or January will be way ahead of most Intel-based NT designs which are restricted to a maximum of four processors.

Audio Group

It explains that SCM is Unisys' own implementation of the Scalable Coherent Interface specification defined by the Audio Group (UX No 512). Audio was named for the initials of its members - AT&T GIS, Unisys, Data General, ICL and Olivetti. Back in 1994 the quintet was in league with Intel pursuing development of P6/P7 interconnect and investigating the longevity of symmetric multiprocessors versus the volume potential of parallel processors. Unisys SCM was designed to support multiple operating systems with no re-architecting, hence its forthcoming support for eight-way NT via a HAL. It was also able to get SCM to market two years ago. Unisys and NCR went the "big bus" route, whilst Sequent and Data General used the spec in their NUMA bus designs. At the same time Unisys also finally inked its Big E agreement with SCO on future Unix development and for OEM Gemini product on which it will major. It says that in future all of its Unix development work will be carried out in conjunction with SCO. Unisys' own Unix SVR4.MP implementation will give way to SCO's OEM product over time, though SVR4.MP will be supported until the end of the century. UnixWare 2.1 is now up on all of Unisys' ClearPath SMP servers. Unisys and DG says their cc-NUMA and SMP designs will beat competitive RISC solutions on price/performance. Unisys set a benchmark record of 6,253 tpmC (\$303.80 per tpmC) running Oracle 7.3.2 on a 10-way 150MHz Pentium server running SCO UnixWare 2.1, the largest Intel TPC-C number to date.

LUCENT'S INFERNO SUFFERS BAD KARMA

So where's the beta of the fabulous Inferno operating system that Bell Labs promised to post on the 'net July 31? Well, we asked them and got an answer we haven't heard before. The United States government is holding it up. Seems it has to be okay'd by some bureaucrat or another because of its RSA security and Lucent Technologies-Bell Labs lawyers simply forgot that check-list item. The soonest it can go up is now August 21. Bell of course swears it's ready but it seems to be cursed with a bad karma. It could put the documentation up right away if the AT&T server in Columbus, Ohio that it's dependent on right now was working. But it's not. It's down though it could be up again any minute. It doesn't help that AT&T is about to spin off Lucent. No leverage there. Good thing Lucent is expecting delivery of its own Silicon Graphics server which will give it control over its own destiny. Meanwhile, potential customers - network service providers, device makers, server vendors and equally unidentified start-ups - are reportedly playing with the alpha.

BAAN MAPS OUT ITS STRATEGIES FOR HITTING THE BILLION DOLLAR MARK BY THE MILLENNIUM

By *Wale Azeez*

At its BaanWorld 96 conference and exhibition in Berlin last month, Baan Co NV, the Ede, Netherlands-based Enterprise Resources Planning software vendor, spent a lot of time and effort to steal a march on its rivals, by letting its public know it has seen, and has a handle on, the future of Enterprise Resource Planning. It took the opportunity to make several new announcements, all revolving around what it calls Dynamic Enterprise Modelling, "the next generation of Enterprise Resource Planning." This, it said, enables companies to deploy and automatically configure BAAN applications rapidly as their businesses change. It also disclosed plans to expand into Enterprise Resource Planning for smaller companies. According to Baan, Dynamic Enterprise Modelling means "continued business process improvement: support for on-going incremental business processes, as opposed to "Big Bang BPR and software implementation." Coupled with this, it said, was the treatment of software components as business objects and the use of Services Partners for reference models from which business process templates could be built. Central to Baan's strategy to take Enterprise Resource Planning into the 21st Century is its focus on the desktop. Given this, Baan felt the need to re-emphasise recent strategic agreements with Microsoft Corp and the launch of the BAAN IV BackOffice suite for the current version of its client-server manufacturing software. Microsoft's involvement is essential to Baan's desktop strategy, and will include the implementation of Windows95, Windows NT and the ActiveX Object Linking & Embedding technology for developing desktop applications, as well as the integration with Baan applications of existing Microsoft products, such as SQL Server, Word, Excel and Internet Explorer 3.0.

OrgWare

Just in case this began to sound like a forsaking of Unix, from whence Baan came, Laurens van der Tang, senior vice-president of research and development was eager to make it clear that despite the extensive pact with Microsoft and the consequent in-roads being made into the desktop arena, Baan was "still committed to the Unix world completely." A measure of this commitment was given in the announcement that Baan and Digital Equipment Corp are opening a jointly-funded Co-operative Technology Centre, based at Baan's Barneveld, Netherlands facility, to develop technologies revolving around Windows NT and Unix environments. It will be staffed by engineers from both firms using DEC's 64-bit AlphaServer RISC systems. In addition, Baan and IBM Corp are to extend BAAN IV's database server to IBM's DB2 for AIX, and the application server is to be converted for the OS/390 system's Unix interfaces. Delivery of the database will be by the year-end, with the application component sometime in 1997. Ernst & Young LLP, one of Baan's Service Partners, has an Engineering-to-Order Enterprise Reference Model module for Baan's Orgware methodology and development system. Orgware's Enterprise Reference Models component is a library of "best practice" business processes derived from developing systems by Baan and partners, for many of Baan's customers. The Models are used as templates, intended to enable firms to develop their business systems rapidly using Baan software, to match a firm's particular processes as they change. The Engineering-to-Order Model in particular is intended to provide a starting point for such development as well as to guide the management of the business re-engineering process, and can be continually updated. Ernst & Young plans other Enterprise Reference Models.

Eye

While Baan's emphasis is definitely on the future, it also has an eye on the past, in the form of Enterprise Resource Planning's predecessor Materials Resource Planning: Baan has also integrated BAAN IV with Menlo Park, California-based BA Intelligence Networks Inc's MANTA Materials Resource Planning software to form BaanPDM, an engineering and manufacturing system. The tool is claimed to be able to bridge companies' disparate materials and Enterprise Resource Planning and Product Data Management systems. BaanPDM, according to the companies, will provide document management, versioning and change control and product structure and workflow management capabilities. It is up under Windows, Windows NT and Solaris, HP-UX, AIX and Digital Unixes. Baan also discussed its Internet-intranet strategy, indirectly declaring its own interest in the Network Computer, in the form of Internet Terminals that would connect to internal or remote servers, enabling the user to download information and applications from the Web. The company may have made sure there was no conflict of interest with partners like Microsoft, with which it has wide-ranging desktop-based agreements, but there seemed to be an in-house difference of opinion over the actual usefulness of the thing. Doug Sellen, vice-president of corporate communications, said "Internet Terminals are something worth supporting," but was "not sure they were viable." Explaining his scepticism, he pointed out that since memory and disks are relatively cheap, it was hard to envisage a time when users would forfeit these without a significant drop in the price or physical size of their machines. Sellen responded to the suggestion of conflict of interests between Baan's essentially desktop-based agreement with Microsoft and intentions to enter the Network Computer business by speculating that even Bill Gates could change his mind about the idea of a desktop computer with no applications of its own to speak of. "Microsoft's mission is basically to have its operating systems on every machine on the planet. Plus we all know what they first thought about the Internet." Van der Tang thought that because there are some processes that do not require desktop software to run, particularly within manufacturing, this sector automatically presents itself as a market for the Internet Terminal. He did however dismiss the idea of Baan working with other Network Computer vendors, saying the company intends to "work on its own, in getting the architecture ready." But what makes it all worth-

while for Baan, says founder and chief executive Jan Baan, is that it already has the technology in place for today's data, in the form of ASCII terminals. The rest of Baan's Internet-intranet strategy hinges on plans to develop a browser user interface for BAAN applications, which would enable the use of the Internet Terminals; ready-to-use applications that would be built using Java, ActiveX and OpenScape and integrate with Internet Explorer; Web Function Server to enable BAAN IV Dynamic Link Libraries to be activated from the Web; Supply Chain Connection enabling Electronic Data Interchange over the Web, and pacts with Internet content providers. Finally, Baan unveiled details of a new company, Baan Business Systems Ltd, established to address the small-to-medium enterprise sector of the Enterprise Resource Planning software market.

Vertical markets

Where Baan Co addresses the needs of the larger, multinational "chain masters" like Boeing Commercial Airplane Group, Baan Business focus on their suppliers further down the chain, which it says make up two-thirds of the Enterprise Resource Planning market. Baan Business was formed out of a merger between Baan Investment BV, a capital investment firm that has a 48% stake in Baan Co, and also holds other Enterprise Resource Planning vendors, and Ditech Informationstechnologie AG of Munich, Germany. Baan Business is headed by Paul Baan, also managing director and vice-chairman of Baan Co. He sees it as "a gateway for Baan into the global small-to-medium enterprise market," with the eventual aim of being its number one. Presumably, this is where Baan's NT strategy work will have the most impact. But before this happens, Baan Business must contend with the likes of Woburn, Massachusetts-based PivotPoint Inc, already established in the Enterprise Resource Planning market for smaller manufacturing and distribution firms and with Point.Man, also styled a next-generation client-server offering, since 1994. Baan ultimately sees its future in its ability to provide products for specific vertical markets. These include the automotive, electronics and project industries, as well as food and beverage processing. The company has already forecast that its vertical markets business would account for up to half of its total by the end of this year. By the millennium, it hopes to see annual revenues climb to \$1,000m from \$216m last year.

OSF CHIEF SCIENTIST HEADS BACK TO HP

Open Software Foundation chief scientist Ira Goldstein is returning to his former employer Hewlett-Packard Co as Internet technology officer and CTO of HP's Computer Systems Organisation. Goldstein has headed OSF's Research Institute since it was founded in 1988 which is credited with development of OSF's Mach-based operating system, distributed computing environment (DCE) and web technologies and more recently the JavaLite operating system and tools. The newly created positions mean Goldstein will be driving HP's so-far rather lacklustre internet strategy and formulating HP's future technology architecture. He'll also be one of the Research Institute's biggest customers. Goldstein reports to computer systems chief Richard Watts in his role as CTO (that's all computer systems minus PCs and printers), to HP boss Lew Platt as company Internet guru. Goldstein was previously research and development manager for HP's former technical systems sector. Before that he worked at Xerox PARC. Together with X/Open Co Ltd, OSF is now part of the Open Group, whose acting CEO, Jim Bell, is on-loan from his position as HP director of corporate alliances. Goldstein is replaced by Paul Dale who becomes Open Group VP responsible for all activities of what's now called the Open Group Research Institute, which is based in Cambridge, Massachusetts, and Grenoble, France. Dale was previously responsible for the day-to-day running of the Institute's Cambridge facility. Dale, a seven-year OSF veteran, was a founder and VP development of Applix Inc. In his new role Goldstein's expected to be one of the Research Institute's largest customers. OSF said it was inevitable that Goldstein would one day return to HP which "liked what he was doing so much they wanted him back." Goldstein presented the Research Institute's work to HP back in May following which the company decided it needed him back to implement the stuff.

I-KINETICS AND IONA TEAM ON OBJECT DEVELOPMENT BUNDLES

I-Kinetics Inc, the Burlington, Massachusetts object component house has inked a deal with Iona Technologies Ltd to offer two packages containing products, training, consulting and support aimed at companies looking to adopt Corba-based solutions. And I-Kinetics has a whole lot more up its sleeve that it was talking about last week. Called Quick Start and Power Start, the packages each contain Iona Orbix object request broker licences and I-Kinetics' Corba consulting services, plus its Database Component server for Sybase and Oracle. The goal is to accelerate adoption of Iona's Orbix object request broker and to encourage adoption of Corba-based projects in general. Five of the bundles have been sold to date. Both Quick Start and Power Start are available now from the ComponentWare Consortium, of which I-Kinetics is the lead member. The Database Component server is the only component I-Kinetics has right now, but the promised ObjectPump Corba-based component is still on track for beta testing around November with five sites lined up thus far.

ObjectPump

ObjectPump puts an object wrapper around non-Corba code to make it available to the component server, to automate the procedure of building business objects using legacy data, from which various applications can be built. It's also talking to a company with a financial, mathematics and engineering toolkit, which it wouldn't name, which it will license for release as a component early next year. I-Kinetics is using Iona's Orbix as the way it implements Internet Inter-ORB Protocol (IIOP) and was recently said to be eyeing SunSoft Inc's NEO object request broker as well as IBM Corp's DSOM and Hewlett-Packard Co's ORB Plus (UX No 590). Well, things have changed somewhat now. After spending more than year talking to IBM about DSOM, the IBM marketing contact got "reorganised", resulting in "15 months work down the drain", according to marketing director Brian Cottman. He added that users were after a true multi-platform ORB, and DSOM didn't fit the bill, with some 90% of revenues coming from Solaris, HP-UX and Windows NT-based systems. But IBM's time to market problems cost the company the deal, according to Cottman. As for SunSoft's NEO, I-Kinetics is "backing off" at the moment, according to Cottman, waiting for IIOP support. But SunSoft's IIOP-enabled NEO object request broker is now in beta, so I-Kinetics won't have to wait much longer. He said the company is also looking at doing something with Joe, the Neo-to-Java ORB. With HP ORB Plus, I-Kinetics is employing a "wait and see" attitude. The company doesn't run into HP much in the marketplace and is "just holding off for a bit", probably around six months, but there are no important technology reasons for doing so, Cottman said.

Partnering

I-Kinetics is partnering with Los Gatos, California-based Bullet-Proof Corp to integrate its JDesignerPro Java GUI builder with Database Component server and Iona's Orbix. And will announce this week that it has inked a deal with Visigenic Software Inc to be its training, consulting and component provider for Visibroker, Visigenic's name for the Black Widow Java-enabled object request broker it got its acquisition of PostModern Computing Inc (UX No 592). Cottman believes I-Kinetics' future lies in providing vertical Corba components for the financial, telecommunications, satellite systems, aerospace and medical markets. At present, its revenues are split 80-20 in favour of consulting and federal contracts against software. He expects this to be a 50-50 split by the middle of next year, and 60-40 in favour of software by the end of next year, and is on track for \$7m revenues in fiscal 1997. The Quick Start package costs \$25,000 and includes two Iona Orbix developer licenses, three ComponentWare product line licenses, six month of support, two of training and five of consulting. Power Start has three Orbix licences, six ComponentWare ones, 12 months support, five days training and 15 days of consulting.

- Computer Associates International Inc, Islandia, New York, now says it will buy back an additional 18.75m of its shares under the buy-in programme dating from July 1992, originally covering 56.25m shares; it now has 379m shares out after the three-for-two split on July 15.

HITACHI SOFTWARE REVS DEVELOPMENT TOOLS

Hitachi Software plans to introduce a revamped development tools line in September, including a new version of Object IQ, the firm's team-based development environment and a new visual programming product called AppGallery. As part of the new release of Object 3.1, Hitachi's two other development products Object Reuser, an object repository, and Distributed Object IQ, the mechanism Hitachi provides for distributed communications, will be housed under the Object IQ brand name. Version 3.1 of the software will include support for the Object Management Group's Corba 2.0, OLE 2.0 and CGI (Common Gateway Interface) - it currently uses DCE. A new version of ObjectReuser is also underway. It has been completely re-written, says Tony Jones, Hitachi Europe's marketing manager, to allow developers to browse HTML documents of their C and C++ developments. This, says Hitachi, provides a much easier way to classify reusable components, because all you need to store in the object repository are URL references. AppGallery, meanwhile, is a new venture for Hitachi and has been specifically designed for desktop developers. Already shipping in Japan, it's to go on the market in Europe from September. It comes with a component palette, wizards and end user customisation capabilities. It will be available for Windows95, Windows and Windows NT. Support for Java applets is also promised.

PLATINUM ADDS REPOSITORY FOR PROCESS CONTINUUM 4.0

Platinum Technology Inc is offering what it claims is the first integrated process and project management tool in the shape of Process Continuum 4.0 for software development lifecycle management. The suite comes from the Oakbrook Terrace, Illinois company's December 1995 acquisition of Protellicess Software Inc, itself the result of a merger between Structured Solutions Inc and Poc-It Management Services Inc (UX No 568). Protellicess had a product framework called Enterprise Process Continuum, which makes up the majority of the integrated Process Continuum. In fact, all the tools came from Protellicess, and the new part is some added methodologies and a new common repository, as well as the ability to launch Paradigm Plus, its object-oriented design and analysis tool from Process Continuum. It comprises five tools in all. Map is a tool for authoring, customising and maintaining routes, which are methodologies for implementing software applications on mainframes and client-server systems. It's an automated and graphical version of software design methodologies. Platinum says Process Continuum has 15 mainframe, routes and five client-server ones, as well as other design methods and user-customised routes.

Estimator

Estimator, as the name suggests, works out the resources required to implement any given application. The Project Manager integrates with Estimator for staff management, scheduling and project reporting. The Status and Time Reporting tool does time management, task assignment, tracks progress and records changes. The metrics generated are stored in a repository to develop so-called best practices. And the Workflow tool does what any workflow tools does: generates timetables, to-do lists and the like. It's called version 4.0 because the Protellicess EPC product and the old SSI workflow products were at the 3.x stages of their lives. Its available now for Windows 95, Windows NT and OS/2. Along with everything else at Platinum, Process Continuum will eventually be integrated with its POEMS Platinum Open Enterprise Management Solutions program, and the single repository used by the two products that made up Protellicess is the first step towards that integration, said Linda Fritzsche, Platinum's application lifecycle business unit's marketing manager.

COGNOS READIES OLAP TOOLS BASED ON ANGOSS ENGINE

Cognos Inc will put the first fruits of its licensing agreement with statistical analysis specialist Angoss Software into production by the end of the year with the announcement of another business intelligence tool, DiscoveryAgent. According to Cognos, DiscoveryAgent is a newly engineered product using core technologies from the Angoss KnowledgeSeeker engine to provide a guided analysis tool that employs artificial intelligence techniques to pinpoint trends. DiscoveryAgent will be sold as a separate product, but will work with the company's two reporting and analysis tools, Impromptu and PowerPlay. A beta version is expected by the end of the year will general ships starting in 1997.

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The graphical Wingz spreadsheet and its attached HyperScript analytical development environment was meant to be the killer application for Apple's ill-fated A/UX Unix implementation way back in 1987. Wingz also ran under MacOS, but authors Informix Software were only marginally wiser choosing their next major port, to the doomed Next Inc box. They eventually gave up on the software in January 1995, selling it to the London-based **Investment Intelligence Systems Group**. Now IISG has a new release, version 2.1, for the Macintosh - the first upgrade for Macintosh users for around half a decade. "These customers have waited a long time for a new release of Wingz," said IISG vice president Stefan Zauchenberger, "and IISG intends to continue to develop high quality analytical tools for the Macintosh". Since it took on Wingz, IISG has released versions for Sun, HP, IBM and Silicon Graphics Unix systems, along with a 16-bit Windows version. It anticipates an NT/Windows 95 implementation during the fall of this year.

Bentley Systems Inc, preparing for life after **Intergraph Corp**, which is trying to sell its 50% stake in the Exton, Pennsylvania mechanical computer-aided design systems specialist (UX No 600), has joined the Open GIS Consortium as a principal member. The group is developing specs for the geoprocessing industry, and Bentley will join other principal members, including Intergraph, IBM Corp, Mitsubishi Corp, Oracle Corp and Sun Microsystems Inc.

Mobius Management Systems Inc has launched its DocuAnalyzer data mining tool for Unix, MVS, AS/400, OS/2 and Windows NT. No prices.

Visigenic Software Inc is the latest in what is becoming a long string of hopeful newcomers to market that have had to disappoint their venture investors. The San Mateo company's offer of 2.1m shares finally got away at \$7.50 where its connections had been hoping get between \$9 and \$11 a share. Its red herring shows it never made a profit.

Back home in Japan, **Canon Inc**, which builds NeXTstep on iAPX-86 systems in the US as well as the PowerPC machines made by its **Firepower Systems Inc** is making it clear that the sale of the latter to **Motorola Inc** is because of the failure of the PowerPC Alliance to live up to its promises, and does not mark a withdrawal from computers per se - it says it will devote all its resources to machines built around the **Intel Corp** processors.

Sun Microsystems Inc is feeling pretty good with life at the moment, so much so that it's splitting its stock two-for-one as of November 18. It only split the stock similarly nine months ago, when it was hovering around the \$70 mark (UX No 563). It's been around the \$50 for a few weeks now.

MicroUnity Systems Engineering Inc, the much-troubled chip-maker (UX No 600) has licensed a low-power CMOS processor architecture to a major semiconductor company that it's not naming, according to the *Microprocessor Report*. The chip itself is still in development. Most of the 100 or so staff at its fab, which is up for sale, have lost their jobs.

SunSoft Inc will put its Neo object environment up on Solaris x86 this autumn.

Sequent Computer Systems Inc has shipped its first beta cache coherent Non Uniform Memory Access system, the cc-NUMA-Q, to **Oracle Corp**. The Intel Corp Pentium Pro-based systems are not due for general release until Christmas. Following the release to its software partners, of which Oracle is the first, Sequent said it would stop development and the things would go into a full beta program. Oracle will use the machine for software certification and performance testing.

Unexplained "philosophical differences" have led to the departure of CEO Gary Haroian from **Stratus Computer Inc**. Haroian, who's been 13 years with the company, became CEO in January this year, when founder and Chairman Bill Foster relinquished the role. Yesterday, Bill Foster announced the intent to return to the CEO post.

Silicon Graphics Inc may have lost Tom Jermoluk to **@Home Corp**, but at least the young joint venture between **Tele-Communications Inc** and **Kleiner Perkins Caulfield & Byers** has bought some kit from its fellow Mountain Viewer (UX No 601). Not surprisingly, given Jermoluk's presence, @Home has chosen SGI's WebForce Challenge servers combined with **Netscape Communications Corp's** Proxy software - what SGI calls its WebForce Proxy servers - for the caching servers at its cable head-ends. It will buy about 1,200 over the next two to three years and deploy them across existing cable television networks giving fast response time and continuous Internet access, @Home claims.

Iona Technologies Inc has joined the Telecommunications Information Networking Architecture Consortium (TINA-C). The consortium has developed a spec called the Distributed Processing Environment for implementing services based on distributed computing and object-orientation, and focuses on the broadband and multimedia markets.

Iona Technologies Inc and **Objective Interface Systems Inc** have announced Orbix/Ada 1.0, an Ada95 binding for Iona's Orbix Corba 2.0-compliant object request broker. It out now for Solaris 2.x and Irix 5.x.

Silicon Graphics Inc's Alias/Wavefront subsidiary has got together with **MetaTools Inc** to integrate MetaTools applications with the SGI digital graphics software packages. First up is the combined Final Effects for Composer video and animation special effects tool set. It's a combination of MetaTools' Final Effects tool, which generates fire, smoke, rain and such and SGI's Composer, which is its two- and three-dimensional composition and special effects tool.

Data General Inc's Clariion RAID unit is claiming to be the first to ship a RAID 3 storage subsystem with the availability of the 2830 and 2930 20-slot arrays for Solaris, AIX, DEC Unix and Windows NT Intel platforms. **Silicon Graphics Inc** has signed to take the units. No prices

Digital Equipment Corp would dispute that claim, with the launch of its Enterprise Storage Array addition to its StorageWorks line. Scaling from about 150Gb to more than 10TB, the StorageWorks ESA line supports RAID levels 0, 1, 0+1, 3 and 5, with all the usual redundancy features and command console software. It supports DEC Unix, HP-UX, Solaris, OpenVMS, AIX and Windows NT, starting at \$200,000.

Four Seasons Software Inc has won \$5m in venture funding from a syndicate led by **Gilde Investment Funds**, a company also with Dutch origins. Four Seasons was spawned out of a Dutch company called **Transmedia** formed in the late 1970s "to spread the word of Unix", and started up in Bilthoven, Holland in 1988, before setting up in Edison, New Jersey a year later. Its main product is SuperNova, a 4GL used across industries, according to the company. The company has been profitable every year since inception and self-financing until now, and did \$7m in 1995. The new money will all go on marketing to increase the company's US presence.

Tandem's ServerWare unit has appointed Roger Harvey as VP object-oriented transaction processing. He was previously **Taligent Inc's** director of the distributed computing group and did 20 years at **IBM**, including chief strategist for enterprise database systems.

We haven't heard this ourselves and it seems a bit far-fetched but RISC watcher Andrew Allison claims there are rumors abroad suggesting **Silicon Graphics Inc** might adopt **DEC's** Alpha chip. Allison also suggests that any port of Solaris to the Merced would be a "complete waste of time and money" in the face of the HP/SCO-led 3DA effort which would be the Unix implementation of choice for Intel platforms.

Six-year-old object-relational database company **UniSQL Inc**, Austin, Texas, is now offering Windows 95 and NT client environment for its object-relational database. Prices go from \$375 and include C++, ODBC, VBX, OLE/OCX, Visual sqlX, Embedded SQL and Smalltalk. It thinks the NT version will reduce prototyping projects by a quarter or more. The NT server version costs from \$1,600. UniSQL thinks it'll grow 15% to 20% between now and the end of its fiscal year in March. The company's anticipated web environment is still under wraps (UX No 590). It'll use what UniSQL describes as a virtual schema to transparently access information across the net. It's due by year-end. The base technology is a proprietary system developed by its Japanese **NTT Data** backer to run on the UniSQL database and sold only in Japan. UniSQL will add its own technologies and productise the software for sale in the US and elsewhere. UniSQL says its additions will make-up 80% of the code - the NTT will account for the other 20%.

Dear, dear. What ever happened to the Netra NFS? Sources claim it's been stymied by reliability problems, delaying it from June until apparently sometime this month.

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UNIX ROYALTY BUYOUTS RAISE A STINK WITH SCO

Sources report that at some time in recent months Silicon Graphics Inc bought out its Unix royalty stream, following an example laid down by Sun Microsystems Inc 29 months ago (UX No 479). SGI is said to have paid in the neighborhood of \$60m-\$70m, less than the \$82.5m Sun forked over. Observers reckon that the move may be related to its acquisition of Cray Research Inc, which bought out its own royalty stream from Novell Inc at the end of 1993, and the fact that SGI intends to unify Cray's Unicos system and its own Irix Unix within two years (UX No 602). It is believed SGI's dealings were with Novell, Unix's former owner, and not with the Santa Cruz Operation Inc, its current proprietor, or so we thought. At this point the plot thickens. Sources also report that - apparently after the SGI deal went down - IBM Corp negotiated its own royalty buy-out with Novell and that Novell signed the agreement on behalf of both itself and SCO. Sources claim that for one reason or another SCO is livid about this and is reportedly bringing lawyers into it. SCO VP Scott McGregor, who we hear is carrying the can on this one, is said to have dumped a lot of this argument at Novell CEO Bob Frankenberg's office door and Frankenberg wasn't even involved in the Novell-SCO dealings netting SCO the Unix football - other than to sign the paper. Why SCO is so ticked off remains unclear and a conversation with Mr McGregor last week did nothing to illuminate the situation. He declined to confirm that SGI bought out its royalty stream and needless to say, he claims that parts of our tale are wrong (but they always do). According to his story, everything is right as rain between SCO and Novell and of course there's no legal commotion. However that same day during an internal SCO meeting he alluded to some legal issues between them on the matter of binary royalties stemming from a buy-out so it's hard to credit the position he took with us. He did venture to explain one thing however. A buy-out of any pre-UnixWare royalties - such as IBM's - would have to involve both Novell and SCO; royalties relating to UnixWare and code going forward would only involve SCO. It is believed that at the very least the IBM deal required some kind of performance on SCO's part that Novell blithely agreed to and that - if SCO countenanced the deal at all - they dispute how to divvy up the money. Officially IBM's claiming there's been "no change in its licensing arrangements." It also appears that Novell and SCO have been hassling over how much of NetWare Directory Services - among other things - was supposed to be bundled into UnixWare.

SCO PITCHES UNIX NC/OS AT NETWORK COMPUTER HOPEFULS

Meantime, Santa Cruz Operation Inc's network computer operating system (NC/OS), announced last week and being shown at SCO Forum this week, is a small footprint version of Unix that it previously sold as its point-of-sale system, but with Netscape Navigator, a TCP/IP stack and some networking glue on top (UX No 593). Crucially, it runs on standard Intel Corp processors, from a 80386 up. The OS itself takes up 1.45Mb, with Navigator added SCO reckons the whole thing requires no more than 8Mb. Scott McGregor, SCO's senior VP product marketing said the Netscape cache could either be held on a very small hard disk or in flash memory. The operating system and browser can be held in ROM, he said. SCO apparently took just 45 days from concept to having the thing ready, hardly surprising as the kernel was already written and being used. The company is currently hawking it round to its existing OEMs who might be interested in building NCs. They apparently "went goo-goo" when they were shown it, according to VP Internet, Jeff Ait. Two are said to be "ready to go" with some sort of device, while around eight others are currently developing products, according to Ait. Other companies are being shown the operating system, including some in Taiwan and elsewhere in the far east, including Tatung Ltd and Acer Inc, as well as some large US personal computer manufacturers, none of which SCO would reveal. One of them was said to be "very, very nervous" about word getting out it was looking to build an NC. HDS Network Systems Inc, which claimed to be the first company anywhere with a network computer when it launched one back in June is just about to start talking to SCO about possibly using the NC/OS, despite having its own Posix-compatible microkernel, which only takes up 300Kb, including Spyglass Inc's Web browser, as part of its Universal Client environment (UX No 590). The NC/OS will appear in a variety of embedded systems in the near future according to McGregor - apart from point of sale systems - including handheld devices. McGregor said SunSoft Inc's Java OS can't compete at the moment, as it doesn't have any networking or systems management capabilities yet. Things that were stripped out of Unix to make it fit in such a small space include SMP support and large file management support. SCO is hosting an NC pavilion at the Forum this week, where numerous vendors will be showing their wares. As we went to press the list comprised Sun Microsystems Inc, Apple Computer Inc, HDS, SunRiver Corp, Diba Inc, NetChannel Inc, Unisys Corp, Idea Corp, Akai Electric Co, ViewCall America Wyse Technology Inc and Maxspeed.

IBM CLOSE TO THIN CLIENT DEBUT

IBM Corp is set to unveil its "thin client" network computers within a month or so, although it's still trying to pull the cross-division announcement together and hasn't got a firm date in mind yet. At least one US report indicated the things should have seen the light of day last month. Product roll-out is still on course for November or December. The thin clients will cost between \$650 and \$750 without a monitor, and a shade less than \$1,000 with one. As reported earlier, there will be a family of products, consumer, commercial and possibly a personal digital assistant too. The AS/400 team in Rochester, Minnesota is co-ordinating the development of the commercial product, but not officially leading the effort. It's just that it was the first division to get a thin client ready, and is believed to have been chosen over two prototypes built by the Personal Computer Co that means its work will likely form the basis of all IBM's network computer offerings. It was demonstrated to a user group last month. The AS/400 team, for want of a better name, is working with the S/390, RS/600 and PC server people to ensure each server is compatible with the thin client. The processor used in the thin clients will be a PowerPC, but officially IBM has not decided whether the 403, 603 or even the 604 will make it. As for the deal with Network Computing Devices Inc, whereby NCD will manufacture NCs for IBM, Bruce Anthony, senior technical member of the AS/400 division, said NCD would not be the sole hardware supplier, and other partners were going to be brought in. On the software front, IBM is predictably enough heading towards Netscape Communications Corp's Navigator product. The thin client will also include a Java virtual machine, and 5250 and 3270 terminal emulation.

COGNOS TARGETS BROWSERS, MICROSOFT DCOM, VIPER

GUI builders are dead, long live browsers. Cognos Software Inc told us it's putting most of its interface R&D effort into wiring up the RealObjects component-based application development tool and Axiant 4GL for browsers. It's also putting all of its eggs in the Microsoft Corp basket as far as distributed objects and transactions are concerned. On the RealObjects side it plans to use Network OLE and Active X as the middleware for inter-object communication. It'll use Viper, Microsoft's forthcoming transaction processing system, to supply client/server communication and distribution. Product is way off in 1997 Cognos says.

IOMEGA IS A FIRM TRANSFORMED - BUT CAN IT SURVIVE THE COMPAQ-LED FLOPPY ONSLAUGHT?

By Adam Page

Iomega Corp, Roy, Utah launched its Zip removable storage device a year ago last April, but by July, officials were faced with a severe problem. **"It's a manufacturing nightmare,"** said Srini Nageshwar, senior vice-president, at the time. Demand for the \$200 Zip cartridge drives exceeded anticipations 10-fold, and the company was struggling to keep its customers supplied. Iomega has since gone into overdrive, cranking out huge volumes of cartridge drives, shipping over 1m, and entering computer industry folklore. Iomega, which just over a year ago turned in first quarter revenues of just over \$40m, recorded \$222m in its first quarter 1996. Iomega's dramatic rise to prominence is barely a year old, but analysts are asking whether it is ready to deal with the revolution it helped to spark.

Overwhelmed

The company's innovation was to offer high capacity 100Mb drives as an alternative to the increasingly inadequate 1.4Mb floppy drives. Now other suppliers have recognised the advantages of this approach, and are threatening to break its lucrative but short-lived monopoly. It's easy to see why Iomega was overwhelmed by Zip's success. Its business had previously concentrated on high-end removable Bernoulli cartridges, a technology popular with demanding clients such as the UK's Ministry of Defence. Iomega engineers used the Bernoulli effect to pull up stationary read-write heads using strong air currents. The cushioning air, and the lightweight flexible medium, made the cartridges and their in-built spinning disks shock-resistant and thus portable. Kim Edwards, Iomega's chief executive since 1993, saw a limited future for such specialist products. For its Zip drives, Iomega jettisoned most of its expensive technology and started from scratch. The devices store up to 100Mb of data, and have fast enough seek times and transfer rates to run applications directly from the drive. The Zip drives use a combination of drive technologies from floppy drives, hard Winchester drives and the high spin-rate flexible media used in Iomega's existing products. The disks cost under \$20, look similar to 3.5" floppies, but are slightly thicker. Initially, Iomega did not realise the Zip drive might have a chance of replacing the ageing 1.4Mb 3.5" floppy. Having lost its software distribution role to the CD-ROM, the floppy's main role is now moving and backing up files. But as the size of desktop hard disks has increased, and average file sizes have expanded beyond the 1.4Mb limit, need for an alternative became increasingly urgent. A 2.88Mb IBM Corp floppy disk scarcely relieved the problem. Iomega's first Zip drives were attached via external SCSI drives aimed at the Mac market. Personal computer versions would only work via the slower parallel port, or with a SCSI adaptor.

Surged

But even then, Zip sales surged, driving up revenues. Iomega introduced IDE versions of the Zip, for internal use in personal computers, and signed up its first six major OEM customers which will build the drives into their personal computers: Micron Computers Inc, Hewlett-Packard Co, Unisys Corp, Escom AG - and much good that one will do it - Packard-Bell Electronics Inc and Acer Inc. This was recently crowned with a deal to supply drives to IBM. But while consumers may delight in a high capacity alternative to the floppy, Iomega's shareholders are starting to worry that Zip's technology is about to become obsolete. In March, Minnesota Mining & Manufacturing Co (3M) launched its own contender for the replacement floppy, a 120Mb laser servo magneto-optical drive: the LS-120. 3M has developed the drive with Matsushita-Kotobuki Electronics and O R Technology (parent company to Optics Research), and, ominously, with Compaq Computer Corp, the personal computer market leader. Compaq has agreed to ship the LS-120 with some models of its high-end Pentium systems. In June, Mitsubishi Electric Corp said that it intended to manufacture LS-120 drives - news that caused Iomega's share price to tumble. Arguments rage over which offers the best technology. The LS-120 offers greater storage capacity, and, most crucially of all, will read 1.4Mb floppies as well. The Zip drive is claimed to be twice as fast in both average access times and sustained data throughput, but does not offer backwards compatibility. 3M argues that the ability to read older disks is an advantage, but Iomega's Nageshwar points out that there was no backwards compatibility in the transition from 5.25" to 3.5". "If that had been an issue we'd still be using five-and-a-quarter," he says. Iomega says it gave up on magneto-optical three years ago when it realised that the price-performance figures did not add up. Ironically, it sold its 'floptical' technology to 3M. At the high end, the storage companies argue that optical drive technology (aside from CD-ROM) has not kept far enough ahead of magnetic to deliver its promises. "Magnetic is the bull market right now," said storage guru Fred Moore at a recent briefing organised by Storage Technology Corp. But at the low end, it may be different. 3M has kept below the crucial \$200 price point for its new drives, and has the advantage of higher capacities.

Cut prices faster

At the very least, Iomega is likely to have to cut prices faster than it originally expected. Elsewhere, disk and cartridge drive manufacturers are scrambling to build a presence in the new markets. SyQuest Technology Inc, which has built up annual revenues of \$300m selling traditional, removable magnetic cartridge drives with upwards of 40Mb capacity, has slashed the prices for its drives and introduced a 230Mb drive, the EZFlyer, for less than \$300. The LS-120's ability to read floppies may yet turn out to be key. While personal computer users maintained 5.25" and 3.5" drives simultaneously during the previous transition, the space for a second slot has been taken up this time by CD-ROM. Iomega is stepping up its marketing efforts. Aware that any standard needs multiple sources of supply, it has signed up Epson Corp to make drives, and Fuji Photo Film Co, Hitachi Maxell Ltd and Sony Corp to produce Zip media. 3M says announcements of support for the LS-120 are imminent, and confidently expects Compaq's involvement will help keep its revolution permanent.

TRANSACTNET BREWS JAVA TOOL FOR WEB AUTOMATION

Adding to the never-ending list of start-ups claiming to have the next revolutionary Java tool, TransactNet Inc, Fairfax, Virginia, will enter the caffeinated fray in late September. At the heart of TransactNet's WebInterface Toolkit (WIT) is the concept of a second window to the Web - in addition to a browser - which it says makes it easier for users to pull information through the Internet and integrate it with their applications. WIT will be the basis of a tools suite with a second tool appearing in early 1997. Privately-funded TransactNet says it'll have drained its cash supplies by the end of the year, but is set to close a first round of venture capital in the next month or so. The pure-Java WIT, which went into beta this week, will allow developers to create systems which integrate external Web-based services, such as order and package tracking, with internal processes. TransactNet claims this function is currently impossible without weeks of code generation to enable automated processes to funnel through traditional Web browsers. WIT includes a set of Java classes, code generators and an interface. It generates applets, applications and "servlets" which can be deployed on Netscape Communications Corp's servers and the upcoming Jeeves servers from Sun Microsystems Inc's JavaSoft's division. WIT will cost \$2,500 per server, \$200 to \$300 for an unsupported developer seat and \$40 for a run-time license. The firm is the fourth start-up for TransactNet president Philip Merrick, one of three founders, who most recently was VP for development at Open Software Associates Inc. Merrick says the company is in talks with a handful of middle-tier systems integrators to spread the WIT gospel and help train users.

ARIS ACQUIRES CRAY SOLUTIONS

Privately-held IT services company Aris Corporation, based in Seattle, Washington, has acquired Cray Solutions, the Dallas-based software consulting arm of Cray Research Inc (now a wholly-owned subsidiary of Silicon Graphics Inc). Cray Solutions specialises in Oracle consultancy, and was acquired by Cray Research back in 1994, when it was known as Savant Systems. Aris is a 225 person, \$23m outfit founded five years ago. In May of this year it acquired SQLSoft Inc, a Microsoft systems integrator based in neighboring Bellevue, and says it has other acquisition targets in the wings it's not yet free to talk about. Aris is buying companies for their skilled employees, their clients, and their locations, and is looking next at the San Francisco area. It is also building up a product division, and recently launched the Aris Database Workbench for Java, which helps developers create Java applications which can dynamically interact with ODBC compliant databases.

PERSISTENCE INTEGRATED WITH IONA ORB

Netscape Communications Corp's plan to incorporate Visigenic Software Inc's PostModern-derived object request broker in its Netscape browser and server software is still a year or so out at best (UX No 600.5), which means widespread deployment of end-to-end solutions based upon the Object Management Group Corba object model with commercial browsers sitting at the front-end are still some way off. Object-relational mapping and caching software house Persistence Software Inc believes that most organisations doing real distributed object work are creating solutions with intranet-based client applications in mind anyway. If commodity non-customised browsers become an option then fine, but the world will likely have moved on considerably before that option arrives in any case. Meantime Persistence and others are engaged in putting longer pieces of distributed object piping together. As anticipated (UX No 582), Persistence has integrated its software with Iona Technologies Ltd's Orbix object request broker (ORB), saying it'll allow multiple distributed clients to access objects stored in the Persistence live objects cache as C++ objects. Applications created by ORBs need to store objects in relational databases. Persistence maps database objects into what it calls a live object cache, minimising database queries and thereby speeding application performance. The software creates what it calls transaction application servers (TransApp Servers) that concentrate application data and logic in a middle tier between client objects and databases. Multiple clients share a TransApp server which maps object changes back to database transactions and optimises performance by loading frequently accessed information into a shared object cache. Clients can view the C++ objects in any language supported by the ORB, including Java, C++ and Active X. Persistence supports Iona's version of the Corba persistent object service allowing Corba objects to be stored in a relational database, and the pair have also integrated their respective transaction managers. Persistence has tailored a version of its software that is ready to run with Iona out of the box.

Hand-stitched

Until now similar solutions had to be hand stitched. Campbell, California-based Halcyon Software Inc connected Persistence with Visigenic's PostModern-derived VisiBroker ORB. Longtime Persistence partner SunSoft Inc connected the technology with its Neo ORB and had Persistence add support for multiple threads at the same time. That project, plus the persistent object specification Persistence has written for relational-to-ORB mapping and offered up to OMG provided the impetus for the Iona integration work. Persistence's Iona-optimised software is available now as a special order item; the two companies share European distribution channels. Persistence is now up to release 3.3 of its software which includes both the object builder mapping and object server caching mechanisms. It plans to extend the caching technology with a discrete line of TransApp server products. Version 3.4 of the software is due next month. It's got an event manager notification system underway. It's also accelerated some of its other development work - support for ActiveX will be demonstrated at Object World this week and will feature in a 3.5 cut of the software due by year end. Persistence currently supports Windows NT, 95, C++ and Java clients. 4.0, due in the first half of 1997 will support Network OLE. A 4.2 release in the second half of 1997 will support Java servers and the caching of Java applets. Before that Persistence is readying a Coffee Grinder Java mapping tool that'll use JDBC. The growth of Persistence's three-tier application technology isn't being pushed by key partner Sybase Inc which markets the Persistence mapping software as OpenConnect middleware for users that want to connect object applications with Sybase SQL Server tables. After all the database companies want customers to use their databases as the distributed mechanism. Privately-held Persistence's up to 50 staff.

ORACLE'S OLAP DILEMMA

The Morgan Stanley people believe Oracle Corp is currently debating how or if it should integrate its Express multidimensional OLAP engine into its relational database architecture. Express competes with Arbor Software Corp's Essbase, which both started out as stand-alone OLAP engines that front end a relational database. Arbor's is supposedly simpler and easier to configure. Express has the advantage of being sold and supported by Oracle and users have a single source of support for relational and OLAP data with the possibility of better integration of the two areas. However, "whether an OLAP engine should be subsumed by the relational database and perhaps lose some of its simplicity and special purpose characteristics remains a debate inside of Oracle and the industry as well," the securities house advises. OLAP, or On-Line Analytical Processing, is the 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. Oracle bought the Express software from Information Resources Inc for \$100m cash in June 1995 (UX No 543).

HP AND SCO SEND UNIX API SPEC TO REVIEW

Hewlett-Packard Co and its Unix development partner Santa Cruz Operation Inc have delivered an application programming interface (API) specification for their next generation 3DA Unix architecture to some two dozen OEMs and ISVs, including SCO's key "Big E" UnixWare acolytes. Their feedback will be incorporated into a new version of the 32- and 64-bit API in a couple of months that will be reviewed again before publication by year-end. HP and SCO will use the APIs as the basis of new versions of their Unix operating systems which are being designed specifically to run on the Merced processor, the first implementation of Intel Corp's 64-bit IA-64 instruction set. HP and SCO identify 4,185 APIs in the initial spec (up from the 3,500 they had found when they unveiled their 3DA three-dimensional Unix architecture initiative back in February (UX No 577)). The three dimensions of their 3DA Unix architecture are described as modular functionality, processor optimisation and system optimisation. 75% of the APIs, or 3,153, are common. 2,785 are derived from Unix 95 and other industry standards, and carry no extensions. 292 are unique to UnixWare/OpenServer, 76 to HP-UX. The other 25% of the APIs describe new work, including extensions to Spec 1170, new common functionality and other proprietary work. The first release of the API specification includes definitions for Unix 95, 64-bit extensions (Aspen), Distributed Computing Environment, X11 X Windows, OSF Motif, Common Desktop Environment, Posix.1x, XPG 4.2, network, graphics, management and Internet services. Future releases of the spec will address clustering and security, techniques which will be supplied by HP, SCO or their development partners. HP has already said it'll incorporate the spec into the 11.0 release of its HP-UX Unix due mid-1997. SCO will support the spec in its Gemini merged UnixWare/OpenServer Unix release also due mid-1997.

Advanced features

HP and SCO say that all of their 3DA requirement and architecture work is complete and they are now working on three fronts. The first is to port 3DA to Merced and the compilers which will supposedly allow PA-RISC instructions to execute on the chip. Intel's working with HP and SCO on this. HP and SCO will admit only to be working with Merced specifications. The second task is an ongoing best of breed analysis, or cherry picking of HP-UX and Gemini technologies for 3DA. It includes choosing a TPC/IP implementation installation software for 3DA. HP-UX and Gemini are each expected to contribute 40% each towards these requirements. The other 20% will be built or bought. The third task is development and integration of advanced features, including clustering and high-availability. The two companies claim existing HP-UX and UnixWare/OpenServer applications will be 100% compatible with 3DA, though not all of the 3DA APIs will have been implemented in their respective operating systems by the end of next year. Applications will have to be recompiled for enhanced performance, including 64-bit addressing.

Target

According to the February 1996 roadmap for next-generation Unix technology, the API specification was supposed to have been released by mid-year. There's no word on the universal developers environment specification of 3DA tools and frameworks, including compilers, linkers and loaders that was due around the same time. They claim the work is still on track but offered no indication of how late UDE will be. The roadmap says a beta of that spec for use by developers targeting the future Unix should be available early next year. Other programming interfaces expected to be detailed for system and builders shown on the roadmap included an SPI, a description of how the three 3DA components interface. It will allow OEMs and ISVs to modify the interfaces to extend functionality but retain compatibility. The roadmap describes SPI as a fourth quarter deliverable. Preliminary ISV developers' guides are due by year-end; preliminary OEM developers' guides by mid-1997.

HITACHI TO DISTRIBUTE VISIBROKER

Hitachi Ltd has extended its agreement with object request broker (ORB) partner PostModern Computing Inc to distribute the company's C++ and Java ORBs to Hitachi customers worldwide. Netscape Communications Corp is supporting the Java ORB in its server and Navigator products. PostModern was recently acquired by Roger Sippl's Visigenics Inc; its products are now called VisiBroker for C++ and Java. Hitachi and PostModern have created a TPBroker transaction-based version of VisiBroker which is now in beta.

JAPAN TRIES ON DATA WAREHOUSING FOR SIZE

By Anita Byrnes

Japan recently experienced its first data warehousing exhibition. Consultants and vendors vied to demonstrate new alliances and to educate the Japanese market on the possibilities of data warehousing. NTT Data Communications, the systems integration arm of Japan's telecommunications major Nippon Telegraph & Telephone Corp, appears to be trying to have a foot in all camps. It showed three data warehousing products, Red Brick Systems Inc Warehouse; Databridge, a data migration toolset product being developed by Stanford Management Group; and relational On-Line Analytical Processing (OLAP) tool DecisionSuite from Information Advantage Inc. None of these companies yet have formal distribution relationships with NTT Data, although Red Brick said one was being negotiated with a view to being finalised in two to three months. Biaggio McPhee of Red Bricks' Colorado office, in Tokyo for the exhibition, said the Japanese market looked huge for data warehousing, and that he saw a pent-up demand for a software product that was easy to use and that would support a large data warehouse. NTT Data staff were demonstrating Information Advantage's DecisionSuite, saying it was suitable for relational databases with many users, and tied in well with UniSQL, which NTT Data sells in Japan. Stanford Management Groups' representative, Edward Thometz, project manager for Pacific Rim, said the company was developing a data migration toolset, according to NTT's spec. It'll be called Databridge in the US, but because of legal problems with that name in Japan, it is still nameless there. NTT Data will own the product but SMG will have marketing rights in Europe and the US. Release is scheduled for this fall. Mr Aoyama of NTT Data said the product would find most takers in the financial sector, including Japan's commercial banks, where it could be used for better risk management. The product will permit huge data quantities to be handled, permitting managers to extract data as desired, the company said.

Several years behind

The so-called "father of data warehousing", Bill Inmon of Prism Solutions Inc, attracted a large attendance to his presentation on the basic strategy of data warehousing. Later he said that he felt that Japan was several years behind the US, but only slightly behind Europe in its awareness of data warehousing. In Europe some very good results had been achieved, especially in the UK and the Netherlands. "(Japanese) users now have some appreciation of the problem and the solutions available", and the market should develop quickly, he said. Arthur Andersen Japan has been the agent for Hyperion Software's Enterprise tool for several years now. From a slow start, sales really took off after the so-called Japanisation was completed two years ago, and the number of people involved in software sales and support has grown from three to 35. Arthur Andersen has sold the software to more than 50 corporations, including Toshiba Ltd, IBM Corp and Fujitsu Ltd and users such as Teijin and department store Takashimaya. Enterprise is priced at about \$138,000. It can map any data source and provide a range of management and statutory reporting functions claims the company.

PLATINUM ADDS TWO MORE ACQUIRED PRODUCTS TO ENTERPRISE PERFORMANCE MANAGEMENT SUITE

When you have bought as many companies as Platinum Technology Inc has over the last two years, you are going to have a lot of products to tweak, re-badge, and re-launch. And so the Oakbrook Terrace, Illinois is set to add two products to a upgrade to its Enterprise Performance Management suite of management tools for networks, databases and servers. It has also added the recently-enhanced version of its DBVision and ServerVision agents to the suite (UX No 578). The 'new' products are WireTap and TransTracker, both of which come from the acquisition of Advanced Systems Inc/Distributed Computing Group in January this year (UX No 575). WireTap is a network monitoring and performance management tool that provides a view of the network usage, response times, transactions and individual application components. Thus network managers can analyze traffic patterns, including the number and identification of Web page visitors, and plan for future capacity requirements. TransTracker is a distributed transaction measurement tool for application developers to gather system, network and database performance statistics through the development cycle. It can also be used to evaluate third party products before purchasing them, according to the company. Platinum's also added Windows NT support to its DBVision and ServerVision, as well as IBM Corp DB2 Common Server support for DBVision. TransTracker's available from next month from \$35,000 for a console, and six "probes" and WireTap will be out in the next quarter, with pricing yet to be finalised.

HP SHARES FALL AFTER DISK DRIVE EXIT HITS Q3 FIGURES

The effect of leaving the disk drive manufacturing business hit Hewlett-Packard Co hard in its third quarter figures, though not quite as hard as it had thought it would. Nevertheless, the statement by chief executive Lewis Platt was couched in the kind of language that makes the market react badly. The shares closed down \$0.13 at \$43.38, but quickly started tumbling, and were down \$3.50, or 8% to \$40 in after-hours trading on Thursday night. The Palo Alto company's exit from making disk drives meant taking a \$135m hit in the third quarter, it had been expecting \$150m (UX No 594). This reduced earnings per share by \$0.13 in total; \$0.08 from the charge and \$0.05 from operating losses at the disk drive business. It was a "difficult quarter" apart from the disk hoopla, according to Platt, and he said it confirmed the company's earlier suspicions that it would be hard to grow consistently at the rates some had come to expect of HP. Overall, net profits fell 26% in the quarter to \$425m, as revenues rose 18% to \$9,105m. Orders in the quarter also slowed, up 8% on a year before at \$8,700m, with US orders up a mere 4%. HP put this down to a "significant order decline" in the components business and ordering patterns from inkjet printer and PC resellers. Even taking into account the effects of currency translation, "we're concerned about this quarter's slowdown in the US and Asia Pacific," said Platt. In the computer business, PC orders posted good order growth, though slower than recent quarters, with HP NetServer and mobile PCs as the strongest contributors. Unix systems and services followed the same pattern as PCs. Electronic components orders fell 39%. For the first time, HP this year is reporting orders as received, rather than when delivered. The cost of goods line continues to rise at HP, which worried the markets last quarter. It was 68% of revenues last quarter, up from 63.4% a year before and 65.8% in the second quarter. This too was affected by the disk drive exit and losses there, but also by competition in inkjet printers and workstations. Leaving aside the disk drive business, it was still 66% of revenues. For the nine months to the end of July, net profits were up 10% to \$1,938m, on revenues that were up 26% at \$28,273m. Orders were up more than 20% to \$28,900m compared to a year ago. Looking to the future, Platt, never one to sugar-coat it, said factors other than the one-off disk drive exit "including a slow-down in some economies around the world, could remain challenges in the months ahead," adding that the "near-term outlook in our business looks uncertain." Still, at this rate, HP looks like heading for between about \$35,000m and \$38,000m for the year. HP reported third quarter net profits down 26.2% at \$425m, after a \$135m pre-tax charge related to the company exiting the disk drive manufacturing business, on revenues that rose 17.7% to \$9,105m. Net profits for the nine months were up 10.4% to \$1,938m, on revenues that were up 25.8% at \$28,273m. Net earnings per share were down 27.3% at \$0.40 in the quarter, and rose 10.2% to \$1.84 in the three quarters.

B&B AND CANDLE IN MQ SERIES MANAGEMENT TURF WAR

Boole & Babbage Inc says it'll overtake Candle Corp in the MQ Series management race with a new suite of tools for managing IBM Corp's messaging middleware. Candle shot back immediately claiming that it'll pick up contracts with a couple of Boole-only shops in the next few weeks. It's also snared former IBM MQSeries business manager Steve Craggs to be its VP middleware solutions. He will be responsible for directing Candle's overall middleware strategy and will be based in Candle's UK office in Camberley. Meantime Boole's new Command/MQ suite marks the beginning of an MQ Series management turf war between it and Candle; both insist their tools are superior. San Jose, California-based Boole is shipping the host component of Command/MQ this week, and will ship the automation component and event management agents in September. Boole has offered discreet MQSeries management tools in the past, but the suite now also includes Sysplex systems management software. Hoping to take some market share away from Santa Monica, California-based Candle's CommandCenter for MQ Series suite, Boole is touting the fact that it built its tools in-house and claims its Command Post technology allows it to identify external network problems as well as internal ones. It says Candle's system can't see problems outside the network. Candle denies this but admits Boole is a threat to its MQ Series business. Candle points to the 33 customers it already has as evidence of its lead over Boole. Candle claims it's sitting on deals with "some users which have been Boole-only shops until this point in time." Boole's suite is priced from \$35,000. Candle's tools begin at about \$25,000. Meantime, adding credence to it campaign.

SCO TO RESELL ORACLE WEBSERVER

SCO is to begin reselling Oracle WebServer 2.0 for OpenServer in an Internet product bundle when Oracle's product is finally up on OpenServer early next month. It'll also offer WebServer 2.0 for ~~UnixWare 2.1 to OEM's and large corporates before packaging that in a~~ bundle towards the year-end. WebServer will actually be one of SCO's so-called layered products for its Internet family of products. These sit on top of either OpenServer or another its FastStart Internet bundle. FastStart is a bundle of an enhanced version of OpenServer, PPP software, Netscape Communications Corp's Web Commerce and Proxy servers, an IP to IPX gateway, Navigator browser and some of SCO's Vision family of products, as well as security and other software. The company will also announce FastStart Internet Bundle 2.0 at the Forum this week, which will include some updated Netscape software, among other enhancements. The agreement will continue when WebServer 3.0 becomes available in the autumn (UX No 599). Oracle is also in the process of porting its WebServer 2.0 to HP-UX, Windows NT and Solaris on Intel.

ORACLE DEMONSTRATES PARALLEL SERVER FOR UNIXWARE

Oracle Corp will unveil the fruits of its labours with Santa Cruz Operation Inc, Intel Corp, Compaq Computer Corp and Novell Inc to port its Oracle7 release 7.2 Parallel Server clustered database to UnixWare running on clustered Intel-based systems at SCO Forum this week (UX No 563). The company will demonstrate it running on single-processor Pentium servers running UnixWare from Compaq, Digital Equipment Corp, IBM Corp and Unisys Corp with the Oracle database residing on a Data General Corp Clariion disk array. But Oracle says it's demonstrated the thing running on a cluster of four 8-way machines from Chen Systems Inc - whose hardware business is now owned by Sequent Computer Corp (UX No 596) - and is more concerned with showing it running over different vendors' systems to emphasize its failover capabilities. It's also going to be available for SMP Pentium Pro-based servers when it's actually released in October, after a couple of months' beta testing. Parallel Server for UnixWare supports standard 10Mbit and 100Mbit Ethernet connections, and will also be available for Compaq's ServerNet interconnect, licensed from Tandem, Computers Inc (UX No 581) and PCI/Scalable Coherent Interconnect technology from Dolphin Interconnect Solutions A/S, when they are ready.

IBM PORTS DB2 WEB INTERFACE TO SCO OPENSERVR

IBM Corp is porting its net.data web-based database interface for DB2 to Santa Cruz Operation Inc's OpenServer platform. Net.data is a framework for web-enabling existing applications, specifically DB2 applications. It includes Java tools and libraries and NetObjects Inc's Fusion web site building and maintenance application (UX No 601), and enables any browser to access DB2 data, according to IBM. The idea is to turn applications that use DB2 data into Web-based applications. IBM is moving unusually fast with net.data and admitted that porting to OpenServer is not the usual porting route it takes. And eight-month old NetObjects is creating a bit of a stir with its Fusion tool, which it claims is the easiest way of ensuring everything is kept up to date on a web site. Net.data was previously available under another name for OS/2 and AIX. IBM says the reason for choosing OpenServer so early in the cycle is the proliferation of Windows-based clients on Intel platforms, which OpenServer works with. The beta of net.data for OpenServer is available for free download from IBM Software's web site from this week, and will be generally available in a couple of months.

SAP TAKES 14% STAKE IN INTELLICORP OFF INFORMIX

SAP AG, has relieved Informix Corp of its remaining 1.74m shares in Mountain View, California-based IntelliCorp Inc, leaving the Walldorfer with a 14% stake in IntelliCorp; terms were not disclosed. The investment belatedly seals a deal signed in April under which IntelliCorp made two agreements with SAP - a joint development agreement and a licensing and distribution agreement granting IntelliCorp the right to include the R/3 Reference Model with LiveModel. LiveModel is IntelliCorp's business modelling tool, and is designed to accelerate implementation of SAP's R/3 client-server enterprise application system - everything you could possibly need for running a firm in mix'n'match modules

SYBASE OFFERS DATA MART BUNDLE

Trying to cash in on the data warehousing wave, Sybase Inc is shipping what it calls the first all-in-one data mart package by reselling products from Carleton Corp, Cognos Software Inc, Brio Technology Inc and Business Objects SA with its Sybase IQ database query technology. The bundle, called QuickStart DataMart, may be a one-stop-shop for customers; it's also an admission that the sixth largest software company can't dominate the data mart market without a little help from its friends. Although the Emeryville, California-based firm has a data warehouse strategy - centered around the Sybase MPP 11.0 enterprise server - it says only 2% of its customers are implementing full, data warehouse systems and claims most users want data marts. The rationale: its data mart bundle supposedly won't require users to make crystal ball predictions about what their future data warehouse needs, but allow systems to evolve department by department. To target mainframe users, QuickStart DataMart is initially shipping with Carleton Passport data access tools and a five user license for Cognos Impromptu business intelligence tools. Next month Sybase will bundle BrioQuery and BusinessObjects. Sybase chose the partners in part because they all use MDI gateways and because Carleton has an IQ loader for meta data integration. QuickStart DataMart costs \$125,000 - Sybase says the per-product cost is twice that - which includes training on Passport tools by Carleton and four weeks consulting and implementation from Sybase. The latter is a key selling point, according to Sybase data warehouse solutions group director Joshua Bersin. "If Informix offered this same bundle, they couldn't provide that service, they'd have to call in a third party," Bersin said. Sybase is currently schooling its 1,300 professional service organisation employees world-wide on Sybase IQ tool integration. Sybase is targeting its own customers and MVS users with the bundle. It's recommending Solaris, is in beta for AIX and will add HP-UX in the fourth quarter and Windows NT by year end.

SYBASE OLAP ENGINE SLATED FOR Q4 UNVEILING

Although Sybase Inc sees a bright future for its data warehousing business, it's still hasn't come up with its promised online analytical processing (OLAP) database. Sybase was expected to introduce its OLAP product, codenamed Highgate, in July (UX No 543); it's now likely to be announced in the fourth quarter. In the meantime, Sybase data warehouse chief Joshua Bersin was happy to point out the kinks in Oracle Corp and Informix Corp's OLAP strategies. Bersin said Oracle Express isn't really a database but a "20-year-old mainframe programming language." Of Informix Meta Cube, he added: "They're out to lunch, Meta Cube is a non-player" and said Informix was taking a Frankenstein approach by trying to integrate it into their database engine. The OLAP market is still an extremely immature market, Bersin said, presumably to explain why we won't see Highgate until 1997. But back to Sybase's data warehouse strategy check list. First, it has almost 300 people working on data warehouse-only products and projects and eight dedicated product marketing people. Second, it's identified data warehousing as one of three core areas, alongside Internet-enabled client-server applications and distributed computing. Third, the coming year will also see Sybase spend about one-third of its enterprise business group marketing budget on data warehousing. And with good reason; Sybase admits it hasn't done a good job explaining to its users who it is and where it's going. "We need to get out of the marketing hole, because the truth is we can be profitable," Bersin said. Sybase had to re-camp after reporting losses of \$25m on sales of \$250m and laying off about 10% of its 6,100-strong workforce as well as dump non-core products (UX No 597). Bersin explained: "We were a \$1.2bn company with a \$1.5bn infrastructure and bureaucracy." Its bundling arrangements illustrate how it's saving resources by partnering rather than building; it dumped its Silo meta data integration project and now bundles Carleton Passport tools instead. Meanwhile, Sybase has completed its sales force restructure, which it planned to implement in 1997, but moved ahead one year. Sybase now has a grid structure with both vertical market divisions and product areas. The vertical segments are financial services, telecommunications; state and local government; oil and gas; and health care. Sybase called the move a "dramatic reorganisation."

MARIMBA LAUNCH SLATED FOR EARLY OCTOBER

Expect Kim Polese's Marimba Inc to launch its Java development tools in early October, slightly later than planned. Names have been decided, but the company is still tight-lipped about them or really what the stuff does, apart from its being aimed at those wishing to deploy Java applications across networks and do real business on-line. But we do know that although the tools will "complementary to the browser", they are "not browser-centric," according to Polese. That is the applications built using the tools would not necessarily have to be launched from a browser to be on the Internet, they could have their own access via another type of interface built in to the application. All the work has been done in-house and the company is planning to distribute them directly, on-line through third parties' web sites and through OEM deals. The tools are currently being tested by about 25 companies in the financial, publishing and other arenas (UX No 590).

IBM GIVES STARQUEST EXCLUSIVE RIGHTS TO DRDA CODE, HANDS OVER SUPPORT

IBM Corp will announce this week that it's licensed the source and object code of its Distributed Relational Database Architecture (DRDA) application server software to StarQuest Inc, which will develop data access and data sharing applications for DB2 and licence the code on to third parties. Berkeley, California-based StarQuest, a data communications software developer that specialises in connecting IBM mainframes to PC and Unix systems, has exclusive rights to the code and will also hand support of existing customers over to StarQuest. StarQuest changed its name from StarWare Inc in May (UX No 590). It's flagship product, StarSQL Pro is an ODBC-to-DRDA driver for remote access to DB2, midrange or Unix systems from PCs.

DIVISION PUTS ITS HEWLETT ADVENTURE BEHIND IT AS MARKET GOES PROFESSIONAL

Bristol, Avon-based virtual reality systems - now turning itself into a software - company Division Group Plc, is still turning in losses and still aiming for profitability next year. It says the virtual reality market is maturing and the company's focus is sharpening. Division's losses rose again, to £2.3m from £1.6m last time, on turnover that was up 23% to £3m. Late last year the company was at the end of its tether over a deal with Hewlett-Packard Co, under which the two were developing three-dimensional graphics accelerators based on PixelFlow technology licensed from the University of North Carolina. Division finally threw in the towel and sold its Pixelfusion unit to Hewlett-Packard in June (UX No 595), and said this at least leaves it free to focus on its core virtual reality business. Hewlett is paying Division \$5.6m, together with a royalty of 3% on future sales of resulting products. The company is now concentrating on selling its dVS run-time and dVISE virtual reality authoring tool, particularly to the engineering market. It says this market is demonstrating tangible benefits of from the use of virtual reality prototyping. Division says its product sales mix has also changed. It is now selling very little of its own hardware, but sales of its software, which now runs on standard Unix workstations, with those from Silicon Graphics Inc leading the way, have more than doubled. This, it says, is a reflection of the growing maturity in the virtual reality market. The company has released a Windows NT version of dVISE, and says market response has been encouraging. Ever optimistic, chairman Iann Barron says "the prospects for virtual reality continue to improve", and the company is confident that it will continue to grow as the market develops. In line with its stated policy, Division does not pay dividends.

IBM BACK IN ANTITRUST DOG HOUSE WITH STORAGE TEK

No sooner has IBM Corp finally seen off the 1956 antitrust consent decree it so detested than it finds itself in hot water with the Justice Department's antitrust division yet again. This time the issue is the alliance with Storage Technology Corp under which IBM takes over all marketing of the Louisville, Colorado company's mainframe disk arrays. StorageTek disclosed in a quarterly filing with the US Securities & Exchange Commission that it received a civil investigative demand from the Justice Department on July 30. "We anticipated that this could happen, and we were very thorough in our examination of whether the agreement would meet all the legal requirements," StorageTek told the *Wall Street Journal*. Justice would say only that "We do have an investigation looking into possible anti-competitive practices in the direct access storage devices industry." IBM asserts that it and StorageTek will "remain vigorous competitors" in tape system and optical storage devices.

SUNRIVER POSTS SECOND QUARTER LOSS, READIES FIRST NC SHIPMENTS

Pushing to be one of the first companies to get Network Computers out onto the market, SunRiver Corp, Austin, Texas, moved into the red to the tune of nearly \$1m during its second quarter, and \$500,000 for the six months up to June 30. The figures conceal an operating profit of \$1.4m on lower margins from the company's SunRiver Data Systems subsidiary, offset by a \$1.8m loss at its other subsidiary, TradeWave Corp, and a \$800,000 increase in interest from the company's acquisition of Digital Equipment Corp's VT and Dorio terminal business last October. That acquisition was largely responsible for the 30%, \$7.7m increase in sales during the second quarter. SunRiver president and CEO Gerald Youngblood claimed that the company had nevertheless passed several corporate milestones down the road towards Network Computers for the commercial market, and had moved into beta testing on the first of its family of NC products, for which it has licensed Sun's Java and HotJava software. The first NCs could ship this month, he said. TradeWave is working to establish its electronic commerce business: last May it won a competitive tender to build a secure public-key infrastructure system for a consortium of 250 US public utilities, controlling around 40% of the transmission line mileage in the US.

LOTUS PROMISES COMPONENTS FOR WEB APPLICATIONS

Alongside its Domino web application server, Lotus Development Corp will also try and proliferate Notes across the internet by offering web-enabled versions of its current OCX- and ActiveX-based Lotus Components application building blocks from next year. The idea is that web developers will use the Components - current examples include Chart, Comment, Draw/Diagram, File Viewer, Project Scheduler, Spreadsheet and Component Template Builder - within web applications. Users will activate a Lotus component with their browsers to access and run the application. Lotus says a brokerage house could use the Components to create an internet application which queries investment portfolios. When posted to the web site customers would be able query their portfolios and use the Spreadsheet and Chart components to analyse and display their data. Meantime, Lotus says it's now shipping ActiveX versions of the six core Components (not web-enabled) in a starter pack at \$50 per client seat. Later this year it will offer Lotus Components Product Warehouse, a Note 4 application allowing for distribution of Lotus Components and licence monitoring within an organisation. The next version of Lotus Word Pro which will ship as a part of SmartSuite 97 in the fourth quarter will include a container for Lotus Components.

INFOSPACE'S OFFERS JAVA-BASED DATA ACCESS AND ANALYSIS

The browser environment will find many more applications once three-dimensional graphics libraries become more widely available for it. The problem is they usually require large amounts of time and money to develop and then often use so much memory that performance is a dog. One of the companies that's already jumped through that hoop and is trying to build a business on the back of the 3D libraries it's developed is San Mateo, California-based Java developer and data warehouse consultant Infospace Inc. It's already written its own 3D graphics libraries to fit in 200Kb and as well as incorporating them into its Java-based browser products is also looking to OEM them. Infospace is offering a reporting and charting tool for access and analysis of databases over the web called WebSeQuel. The company claims the Java mechanism will provide access to any relational database and allows users to run queries and perform analysis from any browser. WebSeQuel supposedly allows users to select databases tables and rows by pointing and clicking or to create advanced query designs using table join logic and "where" clauses. The standard product generates all underlying SQL statements whilst a WebSeQuel Gold edition includes an SQL editor for direct entry of queries. Various types of reports can be generated and stored in multiple formats. WebSeQuel works in conjunction with the company's WebCharts product for generating three-dimensional graphics in a browser, home of the 3D graphics libraries. Infospace says WebCharts provides real-time visualisation of information in line, bar, pie, area, contour and XY charts. WebSeQuel caches query results so that data can be sliced and diced on the server without having to reissue requests to the database. Once downloaded WebSeQuel applets can run independently of the server. Queries designed with the software are sent to the server which executes the query and sends information back to the applet which produces the desired reports and generates graphics within the browser. Reports and graphics can be saved to the server or emailed elsewhere; the applet is trashed. When needed again it's downloaded from the server. WebSeQuel supports Oracle now, with Sybase and Informix connectivity to follow. It works in conjunction with most browsers and web servers and costs \$400 for each WebSeQuel Gold seat - \$50 for WebSeQuel.

DG OFFERS SECURE INTERNET SERVER IN NETWARD LINE

Data General Corp's finally productised the combination of its B2-secure DG/UX Unix and McClean, Virginia-based BDM International's **CyberShield Internet security system**. It's put the two together with the Open Market Inc WebServer and is offering the bundle for intranet-to-electronic commerce requirements running on its Intel Corp-based AViiON servers. An entry-level CyberShield package including a two-way AViiON, DG-UX with B2 options, BDM and Open Market software, plus service and support, starts at \$50,000. Open Market's other web-based electronic commerce and security packages are also supported. It's the first in a series of server-oriented secure internet combinations the company will offer in a Netward line of products. Data General's expected to add Oracle Corp's Web Request Broker product in due course as it expects organisations which want to web-enable their relational database systems to be amongst its best customers for the solution. The Oracle product requires a Java licence for server-based applications. Open Market on Windows NT and UnixWare and other firewall-based Netward packages are expected. DG already supports Raptor Systems firewall products on DG-UX. DG hopes that CyberShield, accommodating three roles in one, will prove especially attractive to UK-based internet service providers which are now being limited to an allocation of 16 IP addresses each. The software is also available to DG's 88000-based AViiON base. The company says Netward products should be thought of as addressing traditional data processing markets. Its anticipated "thin servers" being created by Tom West's Thiin Server unit will provide routing, caching and ISDN connections to thin clients. They'll be targeted at consumer appliance, home and small office environments. Meantime Tektronix Inc says it'll offer a customised version of Data General Clariion Series 2000 RAID 3 disk storage system as its PR200 Profile RAID system.

CASH-RICH SUN TO BUY BACK MORE EMPLOYEE'S SHARES

Sun Microsystems Inc has pulled the other stunt almost guaranteed to drive your share price up, a major stock re-purchase scheme to buy back another tranche of the shares it will issue as part of a long-term equity incentive plan announced in 1990. Two weeks ago it announced that it's splitting its stock two-for-one come November (UX No 602). Sun had almost \$1,000m of cash at the year end in June (UX No 599). The company said the purchase program, spread over the next three years won't exceed \$450m, and will be funded from available working capital. It ran a similar re-purchase scheme, which terminated in 1993, buying back shares from the same plan. The buy-back is aimed at avoiding dilution caused by the share issues from the scheme. It's a trade-off between rewarding employees for good work and looking after the value of the earnings per share line. The company plans to re-issue the shares it buys back at some point in the future.

NETSCAPE AND AUTODESK'S KINETIX COLLABORATE ON THREE-DIMENSIONAL FILE STANDARDS

Netscape Communication Corp and Autodesk Inc's Kinetix multimedia arm, have cozied up still further with mutual pledged support for each others three-dimensional file formats. At Siggraph, Kinetix introduced a plug-in that enables its 3D Studio Max package to output VRML 2.0. It says it will ensure the plug-in will also support Netscape's Live3D. Kinetix will also incorporate Live3D as a native object within its Hyperwire two- and three-dimensional Web title authoring tool. In return, Netscape says it will incorporate support for two Kinetix and Autodesk file formats - .3DS and .DXF - into Live3D. The agreement is the latest stage of an understanding which has been going on since the beginning of the year. Kinetix gets a massive audience for three-dimensional models authored using its tools, Netscape gets influential support for Live3D and access to some nice three-dimensional technology and expertise. Netscape says it will extend Live3D substantially, by incorporating support for the Kinetix file formats. Kinetix is also a Netscape ONE licensee - it is taking Netscape's Java Internet foundation classes and has agreed to support Netscape LiveConnect for linking Plug-ins, Java applets and JavaScript. There are no timescales as to when the company will implement the stuff.

NETWORK COMPUTING DEVICES GETS JAVA-STYLE RELIGION

Still setting the pace in the Network Computer market, Mountain View, California-based Network Computing Devices Inc last week **announced its schedule for Java on its Corporate Network Computers** so as to integrate Windows NT, Java and legacy applications "on easy-to-manage intranet-enabled desktops." It will begin shipping Java with both its Explora and HMX lines of corporate Network Computers in the fourth quarter, and a software upgrade for existing Explora and HMX machines will be available. And it is enhancing its PC-Xware remote application access software to provide Network Computer emulation on Windows personal computers. The company stresses that the products are designed for use in corporate intranets, not the home, and anyone looking for prices of \$500 or lower can look again. Gartner Group Inc, the outfit that advised you that the Year 2000 problem would cost between \$300,000m and \$600,000m, estimates that 20% of new shipments to the corporate desktop market in 2001 will be thin client devices. Java-enhanced NCDware will ship with Exploras and HMXs by mid-December. There is no date for Network Computer emulation within PC-Xware, which already has an optional suite of TCP/IP networking applications and Network File System for all Windows.

VRML ARCHITECTURE GROUP FORMALLY RELEASES FINISHED VRML 2.0, THINKS IT MAY BE TIME TO WIND ITSELF UP

After remarkably speedy consultation and voting, the ad hoc VRML Architecture Group formally released the second version of the Virtual Reality Mark-up Language at Siggraph last week. Version 2 adds a number of features that should make the virtual worlds more realistic, in particular the ability to interact with the objects and support for scripted behaviours. As decided back in April (UX No 585), the finished proposal is fundamentally based upon Silicon Graphics Inc's Moving Worlds proposal. Version 2 has been adopted by the International Standards Organisation and the International Electrotechnical Commission as a committee draft (ISO/IEC CD 14772). At the same time, the Architecture Group moved to reduce its own importance with the establishment of the VRML Consortium, a not-for profit group charged with fostering the development of both the standard and the community. With the language out of the labs and into the commercial world, the Architecture Group has decided that its work is virtually done. <http://www.vrml.org>

TWO FOURS MAKE AN EIGHT-WAY WITH NCR OCTASCALE

Unlike most vendors that have migrated to Unix and Windows NT and thereby made themselves inessential except to the extent that they can add sufficient original value to prevent their customers defecting to the vendor of cheaper Unix and Windows NT systems down the road, NCR Corp will have a raison d'etre as long as banks need automatic teller machines and it continues to make some of the best ones around. Nevertheless, AT&T Corp sold off so many of its ancillary activities, some of which still had considerable potential, that it needs to add original value in its general computer systems business if it is not to waste away to a specialised builder of special functions terminals. And it has done just that, coming up with symmetric multiprocessing technology for tying two four-processor boards together - and the system, called OctaScale, has delighted Intel Corp so much that it has licensed it. OctaScale is a memory controller architecture designed to tie two boards such as Intel Corp's Standard High Volume four-processor Pentium Pro boards together. Intel says it will incorporate OctaScale into future products aimed at the enterprise server market - when you are talking about a 300MHz eight-processor Pentium Pro machine as we very soon will be, that's a very big machine indeed. NCR describes it as a simplified Non-Uniform Memory Architecture technique, but is not marketing it as a NUMA implementation. It says that in contrast to interconnect technologies such as Scalable Coherent Interface that cluster two or more four-processor symmetric multiprocessing servers, OctaScale is cheaper and eliminates the overhead of the interconnect, giving users the performance of a true eight-processor symmetric multiprocessor in a single cabinet. No alteration is needed to the operating system or the applications when users move to eight from four processors. NCR says it plans a phased release starting late this year, and is offering the technology OEM to other vendors as well as using it in future releases of its scalable WorldMark family of servers.

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Some people collect postage stamps, others collect the cricketers' bible, Wisden, **IBM Corp** is a collector of viruses: according to the *New York Times*, the company's Thomas J Watson Research Center claims to have a complete set of the world's known computer viruses.

San Francisco-based **Black Sun Interactive**; specialising in adding multi-user capabilities to VRML worlds, has implemented its CyberHub Client plug-in to **Silicon Graphics Inc's** Cosmo VRML 2.0 browser. CyberHub Client, formerly known as CyberLife, already runs with Netscape Communications Corp's Live3D facility in Navigator. The plug-in adds multi-user interaction with three-dimensional avatars and voice chat.

Shares of **System Software Associates Inc**, Chicago fell sharply recently, as the company warned it expects a substantial loss for the third quarter. The company is suffering from the migration pains of moving all its AS/400 software over to Unix, and the move is turning out to be tougher than it expected. It warns that sales for the fiscal third quarter to July 31, will be less than \$90m, compared with \$105m in the same period of 1995. It says sales were hurt by delays created when prospective clients wanted to evaluate more fully its new BPCS Client/Server version 6.0. It says it has shipped BPCS Client/Server version 6.0 to more than 160 clients, 50% of them Unix users.

Sybase Inc has appointed former **Primavera Systems Inc** marketing VP John Capobianco as its new VP corporate marketing. Capobianco steps into Mitchell Kertzman's shoes, the former marketing chief who last month replaced Sybase co-founder Mark Hoffman president and CEO. Capobianco was with Computer Associates for 11 years before moving to project management company Primavera.

IBM will unveil some of its San Francisco shareable frameworks development environment work at Object World this Wednesday (UX No 575).

Santa Cruz Operation Inc has been authorised to buy in up to 2m or some 5% of its 37.4m shares outstanding.

Although there's no formal management relationship between Santa Cruz, California-based **Dascom Inc** and its **Dascom China** namesake, the \$2bn Chinese chemical and printing conglomerate holds a 10% stake in the company, having provided seed capital for the USL Pacific spin-out formerly known as CP Labs. Dascom Inc is peddling Internet and distributed computing solutions based upon Open Software Foundation technologies (UX No 602). The company has an R&D and sales office in Danvers, Massachusetts and offices in Australia, Korea, Hong Kong, Japan, and UK.

Sun Microsystems Computer Co named **Ingram Micro**, largest computer distributor in the world, as a master reseller to recruit new value-added resellers for Sun's full product line. Initial emphasis is on Java, Netras and SparcStations. We assume Ingram will also peddle Sun's network computer devices as it's creating a new division with 38 employees to handle the product lines. It sees Sun's internet/intranet products as key. Ingram already distributes **SunSoft Inc** software.

NEC Corp's offering a low-power version of its 64-bit Mips R4000 implementation for PDAs, set-tops and consumer electronics. The 0.35 micron VR4101 operates at 3.3v and costs \$25 per 100,000-up. It's rated at 33 VAX MIPS at 33MHz.

The object-oriented transaction processing software dubbed TP Objects that **Tandem Computers Inc's** working on for next summer (UX No 593) is heavily web-based and will use a Java language concept, with Java ORBs talking to Corba ORB. The client-end will also be Java-based. Tandem's thrust these days is NT and TP Objects is supposed to ride on NT so there is likely to be some work under way to make an ActiveX version of the client software too.

Customer information management (help desk) company **Scopus Technology Inc** is getting into the Asian markets through a joint venture with Pacific Technology Group called **Scopus Technology Asia Inc** which will distribute its multi-lingual software. Pacific Technology has previously jump started **Sybase/Powersoft Pacific Rim** efforts.

Sun Microsystems Inc has decided on the name for its Java terminals, but would not confirm that the things will debut as "Mr Coffee", as was rumoured last week. They will be in "coffee-making realm" was its only comment. Despite what some sources say, the boxes it's showing at SCO Forum this week are the same as the ones at the Olympics, and nothing like the eventual Java terminal due next month (UX No 598). The Java stations are reportedly due in October and have been described as a stripped down SparcStation 5 with a PC keyboard.

With the **Informix** acquisition of **Illustra** now complete, Dick Williams, former Illustra chief executive and senior VP business development has resigned to pursue personal interests (UX No 576). No word on where he's going.

IBM Corp Tivoli Systems Inc has got two Tivoli/Plus modules that integrate its management environment (TME 10) with **Dazel Corp's** Output Server and Platinum Technology Inc's AutoSys job scheduler. Tivoli/Plus for Dazel and AutoSys cost \$9,000 per server and are out now.

TriTeal Corp, currently going public, will next month ship version 4.1 of its TriTeal Enterprise Desktop Unix interface including support for drag and drop integration between Netscape Navigator and TED, DCE and Kerberos login authentication and enhancements to the graphics workspace manager. TED is based upon Common Desktop Environment. NTED adds Network Computing Devices Inc's WinCenter Connect and Citrix Systems Inc's WinFrame for accessing Windows applications from TED.

Newly-quoted **Versant Object Technology Corp** and **SunSoft Inc's** joint proposal to the **Object Management Group** for connectivity between object databases and Corba object request brokers (ORBs) has been blessed by the **Object Database Management Group**. A specification for ORB-to-relational database integration has been written by **Persistence Software Inc** (see page three).

JavaSoft says its Java Beans spec is coming along well. Various sections have been out for review; a general public review may even begin a little ahead of the scheduled unveiling in September.

IBM Corp's DB2 2.0 for Santa Cruz Operation Inc's OpenServer is generally available from this week (UX No 593).

IBM and **SunSoft** are going to cross-licence some object technologies to each other at Object World.

As expected (UX No 593), **Dun & Bradstreet Corp's Pilot Software Inc** subsidiary has web-enabled its on line analytical processing software. Users of the Cambridge, Massachusetts-based company's Decision Support Suite 5.0 package can now access information from browsers, remotely download personal data cubes for analysis and use Java applets and ActiveX controls to do complex analysis. Pilot Internet Publisher will ship by year-end and cost from \$10,000 per server.

Next Computer Inc co-founder Susan Barnes has joined rising web star **NetObjects Inc** as CFO and VP operations. Most recently Barnes has been with merchant banking and investment houses.

Baan Co NV is to integrate **Planning Sciences International Plc's** Gentia OLAP technology into its technology, extending what Baan calls its Dynamic Enterprise Modelling capabilities. Gentia comprises an OLAP database, tools and development environment. It'll be ready in the first quarter of next year.

Antares Corp is to peddle Netherlands-based **Translogic BV's** entry-level EDA Unix and Windows-based package as AE/GE which Translogic markets in Europe as Ease. It's the first product sold under the Antares name. The graphical editor is reportedly the first product picked up by Antares since it was formed last year out of two Mentor Graphics subsidiaries, Model Technology and Exemplar Logic (UX No 564). AE/GE costs from \$3,100 with PC node-locked licenses or \$7,500 for Unix floating licenses; supposedly well below tools sold from parent Mentor Graphics.

OpenDoc for AIX is due early next year.

After being knocked back by at least one executive it had hoped to tap as a full-time president and CEO, it's understood the **Open Group's** got its sights trained on another candidate and is currently negotiating to bring him on board. The Open Software Foundation-X/Open Group Co Ltd combine's got Jim Bell on loan from **HP** in charge on an interim basis. Open Group's idea has been to hire a big league CIO-type capable of bringing representatives from the computer, consumer electronics, entertainment and teleco industries on to the Open Group board. The thinking is that industry-wide agreement and implementation of even a limited set of standards and technologies would allow companies to shave a percentage or two off their IT spending, freeing up enormous resources for re-investment and development. Open Group had ten European chief information officers come to a meeting of its executive inner circle of CIOs earlier in the year. The meet was chaired by Barclays Bank plc IT supremo Joe De Feo (UX No 582). A Paris meet in October will be open to US CIOs too.

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TERLINGUA POWERPC SERVERS TO EXTEND RE-BRANDED RS/6000 RANGE

To capitalise on the success of its SP line of SMP systems, IBM Corp is readying a line of desk-side workgroup servers codenamed Terlingua, a Spanish word meaning three languages. Expected to be announced in around six weeks time, and ship in November, they'll supposedly run AIX, Windows NT and, perhaps in special order, Solaris. The units will debut as one- or two-way 166MHz PowerPC 604e configurations, with quads to follow. IBM's expected to pitch them squarely at the emerging crop of Intel Corp SHV PentiumPro-based machines and target Notes groupware applications. Terlingua is just a working name. They'll get a shelf identity nearer the launch date as part of a full-scale re-branding of RS/6000 workstations and servers that's been ordered by the new RS/6000 executive team headed by Marc Bregman. It's apparently twigged that the motley collection of letters and numbers assigned to the various Power and PowerPC AIX configurations isn't very pretty and might even be losing it mindshare. The branding makeover is expected in September or October. Meantime, Terlingua 2 is due mid-1997, Terlingua 3 late next year, using faster 604es.

SUN AND IBM HONE COMMON JAVA, OBJECT APPROACHES

Sun Microsystems Inc and IBM Corp claim that it's because they share so many customers - they're not saying how many - that they've decided to implement some common client, messaging and connectivity technologies. IBM is licensing Sun's Joe Java object request broker which ties Java clients to back-end object environments, in IBM's case its System Object Model (SOM), version 3.0 of which is due by year-end. In return Sun will integrate interfaces to IBM's MQSeries messaging system and CICS transaction processing environment with Java, which used in conjunction with Joe will allow Java clients to access data from desktops through to mainframes. In addition the two have agreed upon and will implement a specification for a common naming convention which will allow their respective object models to locate, share and exchange objects transparently. In addition IBM has announced its long anticipated port of the CICS transaction processing server to Solaris, which is due in the fourth quarter. Sun's licensing of class libraries which include MQSeries APIs means they could be used to pass pass messages asynchronously between Java and Corba object request brokers over distributed networks. Java programmers will also be able to access CICS applications. The specification of a common naming convention is a semantic layer based upon the Object Management Groups' Corba naming services. The spec is available from their web sites and the companies are hoping third party object request broker vendors will adopt it. There's no plan, at least not yet, to merge the code bases of Sun Neo and IBM SOM object models, though the technology cross-licences do include provision for some code sharing.

IBM'S SAN FRANCISCO AIMS TO LIBERATE POWER OF JAVA

In an initiative that could at last see object-oriented technology deliver on some of its promise, IBM Corp picked Object World West in San Francisco to take the lid off its San Francisco Project application framework initiative (UX No 576) - which has now been firmly aimed at Java developers. San Francisco (for Sharable Frameworks) involves IBM's collaboration with over 50 independent software developers, and aims to establish a set of high-level business application frameworks, or business objects - general ledger, accounts payable, inventory control and the like - as a basis for customised applications in the wholesale, retail distribution, finance and other business areas. The availability of the frameworks, essentially class libraries for Java, should speed up core development work, reduce cost, improve reliability and allow new technologies and complementary business applications to be integrated more easily. IBM's prime partners in the project are still Birmingham, UK-based JBA International Plc and Stockholm-based IBS AB, but other software houses that are part of the team include Dun & Bradstreet Software, Lawson Software, Marcam Corp, Progress Software Corp, Software AG, Synon Corp and Template Software. In all, some 200 companies are showing a close interest, according to JBA International marketing manager Allan Davies. Initially funded by IBM's AS/400 division, San Francisco has turned into a full-blown cross-system development effort, with Windows NT and HP-UX joining IBM's plans for OS/400, AIX, MVS and OS/2 - and with hardware isolation provided by the Java run-time virtual machine, the frameworks should be easily transportable to any Java-supporting machine with little modification. The underlying object model will be compliant with the Object Management Group's Corba Common Object Request Broker Architecture. San Francisco components are not expected to appear until next year, and it has yet to be decided if they will be made available free or sold at low cost. IBM and JBA will likely integrate San Francisco frameworks in with their respective Visual Age and GuideLines development environments.

PARTNERS ADMIT UNIXWARE UNDERLIES 3DA

Despite promises (UX No 598), Santa Cruz Operation Inc didn't have much more to say about Gemini, the forthcoming merger of OpenServer v5 and UnixWare 2.1 due mid 1997, or its successor which will be based upon the 3DA Summit kernel it's developing with Hewlett-Packard Co at its SCO Forum last week. However ISVs did go away clutching a CD containing an engineering release of the Gemini software and hardware development kit, including a Java development kit. The software's so ISVs can move their stuff to Gemini as well as produce new applications for it. As for what's going to be pulled from where to make up 3DA Unix, the phrase "best-of-breed" has been the stock answer for some time now to describe the combination of OpenServer, UnixWare and HP-UX and it was trotted out innumerable times during the week by SCO executives. But Data General Corp was kind enough to tell us that as far as it's concerned, the kernel for 3DA Unix will be derived from UnixWare, the only SVR4-compliant Unix among the three. DG is one of SCO's Big E OEM partners. OpenServer will contribute stuff like Xenix-compatibility and scheduling. And any one of the numerous developers would gladly tell us that UnixWare is the core, with the rest of the operating system piled on top. In fact so much is going to be piled on top, in the form of networking, systems management, and all the Unix and other services, as well as the numerous interfaces, that some developers expressed doubts as to whether the hardware technology planned more or less to coincide with 3DA, the Merced chip from HP and Intel Corp (UX No 574), would be fast-and in sync-enough to get the I/O flowing fast enough. In two years' time, when 3DA is scheduled to appear, who knows how many vendors would've pledged support? The interfaces all need to be added. SCO's director of strategic planning Victor Krutel said the teams are mostly still at the design phase and will be until the first quarter of next year. Development has started in one or two areas, but gets underway properly this month and next, going through to the end of 1997. Integration and testing will begin in the fourth quarter of next year, through to the launch in the middle of 1998.

SUN FINDS VALUE IN TALIGENT LIBRARIES

Sun Microsystems Inc has been picking through what is left of Taligent Inc in the IBM Corp vaults, and has discovered something of value - the Taligent class libraries, which implement key components of the Unicode international character set. It wants to incorporate them in Java so that developers can create global applications and applets in it. The class libraries mean that Java, written by programmers working in American English, would automatically recognise the language differences of individual countries.

THIS TIME SCO'S GOT TO GET IT RIGHT

By Nick Patience

Santa Cruz Operation Inc chief executive of two years Alok Mohan has brought many changes to the California Intel-on-Unix company, biggest of all of course the acquisition of UnixWare and the Unix technologies from Novell Inc last year (UX 557). Mohan's currently in the process of changing company's structure, which will be reflected in the way it reports its figures. After the end of the current fiscal in September, the company will split the figures in three. SCO is projecting total revenues for fiscal 1996 of \$210.2m, according to figures Mohan showed to analysts and investors last week. That's a 5.47% rise from the \$199.3m it reported last year, which was up 8% on 1994. The share price stood at \$7 even last time we looked, hardly the stuff of investors dreams, but SCO is not like most \$270m-capitalised companies, holding as it does the future of Unix in its hands, even if they bound tight with Hewlett-Packard Co bonds. Packaged products sold through channels and VARs, basically OpenServer and a little bit of UnixWare, will be one revenue category; it accounted for 88% of revenues last fiscal, and 81% this time. Second comes UnixWare sold through OEMs, to show the results of the acquisition from Novell, according to the company, with the 5% it gets to keep from the pre-UnixWare deals, and all of any new ones as users convert to UnixWare. SCO says UnixWare was worth \$40m to Novell last year, and will net SCO \$9.4m this year. The third group is the company's new business opportunities: layered products, internet and client integration. Around a year and half ago these weren't really in the picture at SCO, for reasons detailed later. This year they'll account for \$32.1m, or 15% of revenues, up from 12% in fiscal 1995, but down somewhat from what the company told us a month ago (UX No 601). But this is from a mere a six months' contribution from the layered products and half that from the internet. Who knows what the internet products will contribute next year, including the NC/OS operating system for network computers announced a couple of weeks ago (UX No 603). At one point the company was going to give it away, before deciding to charge a nominal sum. As for next year's contribution from Ray Anderson's client-integration division, "it's not inconceivable that it could double" Mohan said, speaking like the one-time CFO that he is. The client integration technology is based on technology from the acquisitions of UK-based PC-Unix connectivity companies Visionware Ltd and IXI Ltd in 1993 and 1994 respectively.

Never enough

Mohan was clear where to the blame lies for the company's mediocre performance of the last few years: "It's not the market that's the problem, it's the things we did; we did not recruit resellers and ISVs." Windows NT can't and won't be blamed by Mohan for past failures either, "we screwed up and it hurt," he frankly admits. He reckons the US operation is close to resolving the issue, though Europe appears to have a long way to go. More specifically, just two years ago, shortly before Mohan moved up from COO to CEO, the company was actually cutting the number of resellers and ISVs it used. Soon after it decided "there's never enough." As a result of its Big E initiative to get OEMs to standardise on UnixWare and recruit ISVs, SCO's claiming a success rate of 66 out of 100 ISVs targeted. And as of about a month ago, SCO now hands over all of its leads straight to ISVs, and is in the process of handing over the ones generated before that back into the channel. The move to signing up as many partners as possible is motivated by SCO's desire to get a proper piece of the so-called enterprise pie with UnixWare and Gemini, to add to its small and medium business OpenServer cake. SCO wants to convince people that it's serious about winning the really big Unix customers and intends to use partners wherever necessary to help it achieve this, as well as moving its products to other Unix flavours. The number of different partners it's attracted means SCO now has many more people to please - and potentially a lot more it could upset. Mohan implied this is part of the reason it's been tight-lipped about who's doing what in its Summit 3DA Unix work with HP. Plus who wants to commit to dates and specs two years or more out? True maybe, but we know Mother HP also doesn't look too kindly on idle talk.

Comfortable

The turnaround in SCO's US model was wrought by going to the extent of mail drops with resellers, and the company now holds a quarterly business briefing in 26 US cities to help bring in more partners. And it seems Europe must now do the same to satisfy Mohan. Geoff Seabrook was appointed to run the European, Middle East and Africa regions for SCO last month (UX No 600) to add to his existing responsibilities for Asia/Pacific, all run from his Watford, Hertfordshire office. The company is still looking for a replacement for the Asia/Pacific post, but nothing's expected to happen in the short term, as SCO wants to get someone from within, as hasn't got anybody suitable at the moment, according to Seabrook. The French business is said by Seabrook to be doing very well, "SCO is Unix in France in many respects," he claimed, while the UK operation is being shaken up a bit, by Michele Fitzpatrick, who did the same in France. Seabrook assures us nothing is amiss in the UK; it was just getting a-bit too "comfortable," he said. Some \$106m of the \$199m total revenues came from the US last year, with about \$93m from Europe. Seabrook points to the client-integration division as another example of how SCO has changed. Overall, "I'm disappointed with SCO's performance with Visionware," he said. The company was used to selling operating

systems through a multi-tiered sales model, and tried that with Visionware and it didn't work. "We had to learn some new tricks," said Seabrook. But when it came to the FastStart internet bundle, SCO introduced a few months back - a so-called layered product - that includes Netscape Communications Corp's server and client software, together with OpenServer or UnixWare and various security and connectivity bits and pieces, Seabrook said the company has learned from its mistakes about how to sell the stuff. He added that when SCO's operating systems compete head-to-head with Windows NT, the company's "not losing that many" deals; the problem comes "when NT is mandated without Unix being an option," he added ominously.

Cheer

As for the buy-versus-build question, Mohan is open-minded for the future. If the company needs something that somebody else has got, "we're very open to buying technology and companies," said Mohan, "whatever it takes." It should perhaps be noted that SCO's research and development costs as a proportion of revenues have climbed steadily over the past few years. It was 16% at the end of the last fiscal, and was 19.6% in the quarter to June 30 this year. Sales and marketing costs fell during the same quarter, but Mohan got probably the loudest cheer of the week when he said marketing spend would increase, although he declined to put a figure on it. SCO is a cash-rich company relative to its size. It's got about \$15m net cash at the moment, according to Mohan, hence the buy-back plans announced recently (UX No 603). The shareholdings make for interesting reading. Apart from the 12% each held by CTO Doug Michels and his father Larry, who were the co-founders back in 1979, a venture capitalist holds around 6%. Microsoft Corp holds about 11%, having been diminished by the 17% Novell stake. The rest is spread around small shareholders and directors. Mohan left his second Forum pleased with his lot. "I would not change our strategy one darn bit," he said. And he means it this time.

BUSINESS OBJECTS SHIPS WEB TOOLS

As expected Business Objects SA has started shipping Web enabled versions of its BusinessObjects 4.0 OLAP and query and reporting tools (UX No 591, 593). The web enabled version enables BusinessObjects reports to be saved as HTML reports so that users can create report catalogues accessible from Web browsers. As the reports are saved, hyper-text links back to source documents are automatically created so that users can download the documents for slice-and-dice OLAP operations using off-line microcube tools. The Document Agent technology has been enhanced to schedule and post HTML reports to the net. It uses its relational repository to ensure security and access to underlying reports. The web tools come bundled with BusinessObjects for no additional charge. It's got a separate team looking at web-type solutions, it says. The company says it supports fat and thin clients over internet/intranets. Its Java plans might include the creation of front-end applets from analysis which could be sent to a browser or decision support applets worked into a browser front-end. Its been looking at web drilling but says it hasn't worked a way round the bandwidth problem. Meantime the Paris, France-based company is launching its Business Objects Rapid DataMart with the idea of introducing the concept and benefits of data warehousing to a wider market. It'll implement an initial production data mart costing £17,000 and taking ten man days to complete, addressing specific business needs. Its roped in the likes of Bull, GA Information Systems, ICL and Sequent to help implement the stuff.

NEON GETS CONNECTED WITH ENTERPRISE DIRECT

Already travelling the mainframe gateway road, Neon Systems Inc is set to climb aboard the federated database management route with a new Enterprise Direct middleware offering. Enterprise Direct, currently in beta, provides access to Oracle, Sybase, Informix and MVS databases. Residing on the server, Enterprise Direct is claimed to do away with the need for an intermediate database gateway or transaction system such as CICS to get at data. It's positioning Enterprise Direct as a universal connectivity solution for access from ODBC to any data, LAN-based or on mainframes. Neon will be shaping up against heavyweights Sybase, Information Builders and IBM but President and CEO F Joseph Backer claims its knockout solution punch is offering business rather than technology driven solutions. It'll win on product performance and sales support, claims Backer. Enterprise Direct shows up as an ODBC client on the desktop enabling it to host a variety of desktop tools including PowerBuilder. It's based on Neon's Shadow Direct mainframe gateway product enabling access to DB2. It'll be generally available in the third quarter, says the company. Prices are expected to go from \$15,000 per mainframe host and support Motif, Windows, NT and OS/2 clients. Meantime Sugarland, Texas-based Neon is currently in the process of merging with replication software outfit Peregrine Bridge Transfer (PBT) based in Austin, Texas in a stock swap. Neon gets PBT's FastLoad replication software and seventeen staff. Both companies have VC funding from JMI Equity. Neon is also readying a ubiquitous web offering called Shadow Web Server. Its a mainframe-based web server solution for accessing CICS and IMS applications and DB2 databases. Neon admits its had a number of takeover offers but says its got its eyes on an IPO in a year or so. "We're looking for a 10-1 rather than a 2-1 return," says Backer. Neon was founded by Peter Schaffer, who founded MVS Software until it was sold to Gold Systems for \$28m which in turn got swallowed by Computer Associates. Its got 33 employees, with a US sales force of seven and a UK sales force of four.

CHORUS TOUTS NEW ORB FEATURES, READIES JAVA SUPPORT

French microkernel house Chorus Systemes SA has revved its lightweight Chorus Cool object request broker (ORB) designed for embedded systems developers to support Windows 3.1, 95, Linux and AIX. By comparison, Chorus claims Cool is three or four times faster and much smaller than the Iona Technologies Ltd Orbix ORB which it reckons is the de facto industry standard. It points to a 50% decrease in memory footprint and improved service invocation but can't actually back its performance claims publicly because competitive benchmarks are still being completed by a prospective US customer. Its other major win is France Telecom, which helped Chorus develop Cool in conjunction with SEPT and the European Union's Esprit Projects Commandos, ISA and Ouverture. The majority of Cool users are existing Chorus customers. The reason it is pitching Cool against Orbix is that real-time rivals such as Wind River Systems Inc and ISI currently offer cut-down versions of Orbix for use with their real-time development systems. Cool doesn't offer some of the bolt-on services which impair performance, Chorus says. Chorus is currently validating its Corba 2 IIOP implementation to work with other vendors' Corba 2 ORBs. Work is currently underway to port Java to Chorus' Componentized OS embedded kernels, the project could complete shortly, it says. The idea is to have JavaOS up on Chorus kernels running on switches and other real-time devices. Chorus doesn't see SunSoft Inc's forthcoming release of an Embedded Solaris kernel as a threat, indeed it claims it's doing work with SunSoft to support it. Where the Chorus kernel runs from 10Kb to 2Mb depending on configuration, Embedded Solaris will take up much more than 2Mb in its skinniest form, the company says; "embedded Solaris is big and is not light," is its opinion. Furthermore at the forthcoming embedded systems show it will introduce the Classix kernel for SparcStation 5s. Chorus, which does not yet have a piece of network computer (NC) action and didn't get a look in on supposed system software partner Santa Cruz Operation Inc's chopped-down NC/OS Unix says it is going to start making noise about some of the stuff that's buried in its kernel such as the ability to reconfigure software on the fly. It's now got JVC using the kernel in karaoke-on-demand systems. Cool is already up on Sun and other Chorus kernels - HP-UX and UnixWare ports, plus IDL-to-C mapping and Java integration will follow. Cool development systems are priced at from \$1,000 to \$4,500 depending on configuration. Runtimes range from \$5 to \$100 depending on quantity.

SUN TO SHIP JAVA WORKSHOP THIS WEEK

Sun Microsystems Inc will finally ship its Java WorkShop 1.0 development environment on August 26th at the promotional price of \$100 until the end of the year, hoping to make up ground on rival products such as Borland Latte, Symantec Cafe, Microsoft J++ and Rogue Wave JFactory. Available initially for Sparc and x86 Solaris, Windows 95 and NT and then on Macintosh around year-end, the Java Workshop will supposedly cost \$300 in 1997. As well as its usual channels, Sun's also putting the software through software retailer Egghead Software, apparently Sun's first retail venture. Java WorkShop 1.0 is a Java development environment, written in Java, and aimed at professional developers to design, test and deploy Java applications. It's an integrated development toolset as opposed to the Java Developer Kit which contains the core Java toolkit. Java Workshop has been in beta since March when SunSoft first revealed details of its Internet Workshop environment which will eventually house all of the company's Java, C, C++ and Neo development tools. Internet Workshop is now due in January, a quarter or so later than originally planned. Only tools for developing applications on the NeXTStep-derived OpenStep users environment won't be included in Internet Workshop. Sun says the production version of Java Workshop runs more than twice as fast as the beta. Like other Java development products, the Java Workshop includes a graphical user interface builder that Sun calls Visual GUI, which is OEMed from Mountain View, California start-up Active Software Inc. Sun has no plans to incorporate other GUI builders at this time. Sun uses Imperial Software Technology Ltd tools for C and C++ GUI development. Some features originally penned for Java Workshop, including the TwinPeaks C++-to-Java bridge Ilog SA is creating from its Ilog Talk interface software, will now ship as part of the Internet Workshop next year. Other tools will be added to support the Java Beans API set which is now slated for the fourth quarter, plus the Joe Java object request broker. Rolling Java Workshop releases will keep the environment in synch with Sun's C++ Neo Workshop toolset. Other enhancements will include support for native Solaris threads in the next release. Features Sun claims Java Workshop has that rivals don't include full internet enablement and an applet portfolio and publishing system. Sun claims time constraints forced it to leave out other features such as a syntax highlighter which will go into the next release. Sun doesn't plan to include the first cut JavaScript in the Workshop and although it will use a second generation version now under development it says that work is taking far longer than anticipated. It says the Advanced Windowing Toolkit also needs attention.

NCR TOP END TRANSFORMS FROM TP MONITOR TO NET MIDDLEWARE

NCR began talking up its Top End transaction request broker software as an Internet technology a few months ago (UX No 593) - it used to be termed a plain old transaction processing monitor. last week it introduced enhancements it claimed would offer developers "virtually instant programming over networks." The company has added an ActiveX client that, along with its existing Java client, will allow links to be established between existing applications or business objects over the Internet, intranet or any other corporate network. Objects registered in the new Service Interface Repository (SIR) can be clicked on so that they connect the object to a Java or ActiveX application, such as Microsoft Excel, making it possible for applications written in Java or ActiveX to have requests securely brokered to business objects over the Internet. There are also two new interfaces for tools vendors to help with integration. Java and Common Gateway Interface (CGI) capability, and certification of Top End clients and servers running across the Internet, were introduced to Top End back in June. It's a technology that will be particularly applicable to electronic commerce, transaction processing applications and scalable data warehouses, thinks NCR. Top End still lags behind NCR former parent AT&T Co's Tuxedo TP monitor in terms of market share, but at SCO Forum, a plot was hatched to boost shipments by about 50,000 over the next year. NCR said it would be supplying a copy with every unit of SCO's next release of the UnixWare operating system sold, including it on SCO's ToolWare CD from November onwards. NCR has been working with Bridgewater, New Jersey-based EnterSoft Systems Corp on the UnixWare version, along with ports to other platforms and says it should be completed by October. And a trial kit, including business objects for banking, hotel, inventory and ordering, database access and horizontal application access, will be available free for download from the Web, also from October.

SUNSOFT OFFERS OPENSTEP FROM SEPTEMBER

As part of the Object World festivities last week SunSoft Inc announced that a 2.0 release of its Neo object-oriented environment due next January will include the Corba 2 IIOP-enabled Neo object request broker now in beta, the Joe request broker which allows Java client applets to access server-based ~~Neo applications, Internet WorkShop development tools, Solstice Neo~~ administration tools plus the Solaris Neo deployment environment (UX No 603). SunSoft is now finally offering the OpenStep implementation of Next Software Inc's NeXtStep object interface and deployment environment as OpenStep for Solaris, plus developer tools as WorkShop OpenStep. The toolset allows developers to create object applications which use the NeXtStep-derived interface. OpenStep applications are supported on Neo's back-end infrastructure and services. OpenStep and WorkShop OpenStep are available free of charge for non-commercial use; commercial licences cost \$300 and \$6,000 respectively from next month.

SEER REPLACES CEO WITH FORMER LIVEWORKS CHIEF

After reporting three consecutive quarters of losses, Seer Technologies Inc has appointed Thomas Wilson, formerly CEO of Xerox Corp subsidiary LiveWorks Inc, as president and CEO to boost its sales and marketing efforts. Wilson replaces Gene Bedell, who founded Seer six years ago and who will remain on the board as a director. The Cary, North Carolina, company said Bedell realized that his entrepreneurial skills were no longer required and that a seasoned software executive was needed to create a more market-driven firm and improve channel partnerships. Before LiveWorks, Wilson was CEO at Viewstar Corp and VP of OEM and strategic partnerships at Oracle Corp's federal systems division. Seer is expected to release new kit next month, including its Internet/intranet product, codenamed Voyager, and its NetEssential standalone middleware.

QUALCOMM CHOOSES SOFTWARE.COM TO HELP WITH MESSAGING SERVERS

San Diego, California-based Qualcomm Inc has selected Software.com Inc to provide it with the technology it needs to develop a family of electronic messaging server products. Under the terms of the duo's partnership and technology licensing agreement, Qualcomm will take Software.com's Post.Office technology as the basis for the new server product, which will be integrated with Qualcomm's Eudora messaging system. Post.Office already runs under Windows NT and on all major Unix systems, and Qualcomm plans to bring its forthcoming server product to all of these. Standards supported by Post.Office include the Simple Message Transfer Protocol, Multipurpose Internet Mail Extensions, and POP3. The first products resulting from the agreement are expected to ship next quarter, and the company says it will release specific product features and pricing nearer the time.

MKS ADDS SOURCE INTEGRITY UPGRADE

Canadian Unix utilities and porting company Mortice Kern Systems (MKS) has released Source Integrity 7.2, the latest version of its change management tool, now with support for Unix. The company claims the tool automates the change process in files and documents, and gives developers all of the point-and-click graphical features found in the PC version. Automating change is said to reduce or even eliminate bottlenecks in the development process. The company also claims Source Integrity to be the first change management tool with Web access. By integrating with MKS Integrity Engine - a server-based product which provides version control on a Web server - the company claims Source Integrity enables Intranet version control and distributed development over the web. MKS and Netscape Communications recently signed an agreement to incorporate MKS Integrity Engine into Netscape Enterprise Server software (UX No 580). Other features in the new version include around thirty event triggers, which automate an action outside of the application - like e-mailing the project manager when a certain stage is reached in the development process. MKS's Source Integrity already supported Windows, Windows 95 and Windows NT. It now also supports most major Unix platforms. Price: £375, or £129 as an upgrade to the previous version

J D EDWARDS NIX TO UNIX, OUI TO NT

J D Edwards & Co Inc knows it needs to diversify from a declining AS/400 base with its accounting and manufacturing applications, and the Denver company has resolutely turned its back on Unix, believing that Windows NT has more potential. And it has decided to kick off with its OneWorld financial, manufacturing and distribution and logistics applications on Digital Equipment Corp's Alpha systems running NT. The firm charges from \$400,000 for 500 AS/400 users.

NOVELL LAYS OUT INTRANET OFFERINGS

Novell Inc has made its bid for a slice of the Intranet market, by bundling a suite of its existing products in a package dubbed - no prizes for guessing this one - IntranetWare. Specifically, IntranetWare bundles the forthcoming Green River release of NetWare - including the Web Server 2.5 that comes ~~as standard with Green River - with Netscape Navigator, the IP/MPX gateway~~ that the company licenses from Quarterdeck Corp; and the company's Multi-protocol Router for wide area and Internet connections. IntranetWare will ship at the same time as Green River in November. Pricing has yet to be fixed. More significantly, Novell has also been demonstrating a pilot version of its NetWare Directory Services (NDS) running on Microsoft Windows NT: getting NDS onto NT is seen as a very important plank in Novell's Net2000 strategy of establishing it as a cross-platform de facto industry standard for directory services. As yet, Microsoft has no comparable directory services of its own for NT - these are due to ship with the Cairo release next year - and it is seen as crucial that Novell gets NDS on NT into the market before Microsoft catches up. As things stand, Novell is only saying that it hopes for a commercial release around the end of this year.

OLSEN CONTINUES TO HELP IBM WOO AWAY DEC'S USERS

Nothing has been heard of the original since it was announced last year, but IBM Corp is ploughing on with its 7596 Cross-Platform Server, a multiprocessor machine primarily designed to enable it to mop up VAX users that have had enough of Digital Equipment Corp and can't face a move to Alpha. What is striking about the product is that DEC founder Ken Olsen is actually helping IBM to plunder his former charge's customer base: IBM gets the 7596 from Advanced Modular Solutions Inc, of Acton, Massachusetts, and Ken Olsen is in the driving seat at Advanced Modular. The 7596 is composed of prebuilt linkages between VAX-, RS/6000- and Pentium boards in a single chassis, enabling data to be maintained at a single source. Via a Distributed Resource Broker, the 7596 enables older VAX/VMS-, AIX and Windows-based client-server applications to co-exist in a preconfigured, preintegrated environment. It costs \$39,150.

SCO TO TARGET VERTICALS

Santa Cruz Operation Inc has appointed Jeff Ait to head up a new volume products unit focusing on selling into vertical markets to small- to medium-sized businesses. Ait's currently the company's Internet VP, but there's no word on how long before a successor is found, and he'll juggle both balls for now. Ait was down as volume products VP on a chart CEO Alok Mohan showed to analysts last Monday. But it had no space for a separate Internet unit, so he may not be succeeded. He was appointed to that post back in February (UX No 575). The unit will bundle OpenServer 2.1 with third party products and aim the bundles at vertical markets. SCO has a long history of involvement in the retail market, and other probable targets are finance, government and health. SCO is likely to add some of its own stuff as well as the operating system, but there's no details yet. SCO apparently wants to remind people that although it's "focused on the enterprise" it still cares about those businesses which until just over a year ago were it's lifeblood.

DG ADDS THIRD PENTIUM PRO AViiON AS AV 3600

AViiON means Pentium Pro processors in the Data General Corp world these days, and the company has followed up its original AV 4900 office and AV 5900 rack-mount Pentium Pro servers with the AV 3600, which has up to four 200MHz Pentium Pros, each with 512Kb cache, and up to 4Gb memory. It is offered with Windows NT Server, DG/UX, NetWare 4.1 and UnixWare 2.1. It has a dual channel PCI subsystem with 15 slots. The estimated street price is under \$12,000, with volume ships next month. The AV 4900 and 5900, using Intel Corp Standard High Volume motherboards, have fully redundant power and cooling and automated recovery from failures.

JYACC DEBUTS VERSION 2.0 OF JAM/WEB TOOL

New York City-based JYACC Inc has introduced Jam/Web 2.0, a tool for Web-based transactional database applications. JYACC claims version 2.0 is as easy to use as tools from Hot Software and Spider Technologies Inc but with the scalability and performance of more complex products from Forte Software Inc and Dynasty Technologies Inc. New features in Jam/Web include JavaScript support, SSL security encryption and authentication and the ability to create data in formatted reports. Jam/Web 1.0 shipped in April. Jam/Web 2.0 will ship later this month on Windows NT and SunOS 4.x. Support for Sun Solaris, HP/UX, IBM AIX, SCO OpenServer, SGI and DEC

@HOME FINDS PARTNERS, SEEKS BUSINESS MODEL

By William Fellows

@Home Corp, the highly-leveraged and highly-fancied start-up backed by cable operators Tele-Communications Inc, Comcast Corp and Cox Communications has won the support of a raft of content providers that'll use its internet-based network infrastructure to deliver internet services into homes, workplaces (@Work) and schools via high-speed cable modem connections. Mountain View, California-based @Home believes the modems, to be supplied by its three cable partners, will eventually allow customers to attach multiple client devices to its network, including PCs, television set-tops, network computers and even gaming devices such as Sony PlayStations. The likes of the Wall Street Journal, CNet, CUC International, Knight-Ridder, New York Times, Discovery Channel Online, The Weather Channel and USA Today last week pledged to deliver services over the @Home network, though ominously missing are big names in the cable and internet content industries such as CNN, Microsoft and Time Warner and Viacom. What's not clear is who is paying whom for the privilege of joining @Home's media development program, which now boasts some 60-odd flag wavers. It's indicative of a wider set of questions marks that hang over the company, a joint venture of the three cable operators plus venture capitalist Kleiner Perkins Caufield & Byers, like how it will make money? And what exactly is @Home anyway?

Model mania

Answering the first question, Kleiner Perkins Caufield & Byers partner Will Hearst, also @Home's founding CEO and now vice chairman, admitted that it's "model mania" out there. Talking up @Home's prospects to the Kagen interactive services conference in New York last week he said the company hasn't yet found a model to bring home the bacon; "there's no one way of figuring out how to make money in this market," he added. @Home says the cable providers that actually sell the \$35 to \$45 per month service into homes and workplaces may pay royalties to it based upon customers' network and content usage or it may collect revenue directly from the cable companies, its internet service provider and content partners, or a combination of all of them. Although data transfer rates of 10Mbps into the home and 128Kb or greater back to the network over co-axial cable will allow content providers to change significantly the kinds of internet services they must currently deliver over low-bandwidth, login-oriented dial-up or dedicated telephone connections, even @Home says it doesn't know what these services will eventually look like. Presumably they might one day also include voice transmission, given @Home's three cable backers are also partners in Sprint Corp's Sprint Spectrum LP venture to deliver local telephony services over cable networks. For comparison, 10Mbps, or ten million bits per second is 50 times faster than ISDN; T1 connections operate at 1.5Mbps. However for the near-term @Home has identified some positively mediocre objectives, including provision of stock ticker feeds, instantaneous viewing of movie clips, walk-through travel guides, up-to-date sports information, video chats with celebrities, unhindered access to popular sites during peak access periods and personalised content delivery. But with most of that's already available on today's internet aren't we just talking about high-speed access here? No, "we're not just a big pipe," claims @Home VP business development Charles Moldow, "we're an intelligent network." He says research shows that if @Home's touted its services purely on the basis of improved internet access speed its business would be doomed from the start. Only a small percentage of internet users would be encouraged to subscribe, or switch from other services, on that basis he says.

Real money

Well should we understand @Home as a go-faster America Online or Compuserve then? After all subscribers will have to use @Home's customised version of the Netscape Navigator browser, an @Home email package, @Home TCP/IP stack and search and query tools. "No. We're not a closed community," Moldow says "plus we are not a content provider." Moldow claims @Home has had discussions with AOL and other "closed" internet communities, but we don't know what those talks have been about. In essence @Home's asking customers to buy high-speed internet access from its cable partners for \$35 to \$45 a month, after which they'll have to pay for at least some of the services that are currently available for free on the internet. But if the model works, it might finally provide a means for content providers to make some real money from the web. However, because the services of the future and @Home's supposed bandwidth and network technology advantages are still intangible to all except the handful of trial sites across the US, perhaps it's easier to describe what the @Home network says it isn't. It says it's not going to deliver television to PCs, indeed it's not in the television distribution business, period. And video on demand is just one option it'll provide. @Home also doesn't claim to know what the end-user metaphor of the future will be, even though its first

paying customers will go live in the fall with browser-oriented interfaces. "The long-term future of the browser is unclear," says Moldow, who believes services will move outside the browser and the browser itself become componentised. Although @Home has partnered with Netscape for web serving and its client-side browser, and despite president and CEO Tom Jermoluk's reported antipathy towards Redmond, it says it hopes to work with Microsoft in future

@Work

If there's little @Home can say about the types of content it'll deliver long-term, there's also little that it'll say about its technology partners until September 11th when it plans to reveal the plumbing details at a press conference in Mountain View. What we do know is that @Home's private ATM-based backbone will connect to the global internet at multiple locations; in other words through all of its Internet service provider partners, of which there are said to be many. The backbone will connect information and content providers to regional data centers via a switched data system. The regional data centers will be connected to local hubs, or cable headends, which in turn transport data to end users. @Home has already chosen Silicon Graphics Inc's WebForce Challenge servers combined with Netscape's Proxy software - what SGI calls its WebForce Proxy servers - for the caching servers at the cable headends. Downstream data into the home is carried over a broadband channel, the low bandwidth return path carries commands and responses upstream through the same cable. Initially the only connection requirement will be a PC or Macintosh with an Ethernet connection plus the @Home browser, email software and TCP/IP stack. A high speed modem will be installed by the cable operator. @Home's also created an @Work division to cater for intranets and business users, though it's plans in that area are more shadowy. It's focusing on the high-profile home/consumer users for maximum exposure.

SmartCache

For content and application providers in its media development program, @Home's offering access to a bunch of enabling technologies for delivering services over the @Home network. Its SmartCache crown jewels allows content providers to store information on local servers, giving users immediate access to data. It also allows content providers to update cached information, something currently not possible over conventional web/internet configurations where users must reload pages frequently. The cache also sends back information to content providers about exactly which data has been accessed. M-Cast is @Home's own flavour of Mbone multicasting across the internet - sending one message to lots of destinations rather than many versions of the same message to multiple destinations. On-Net is a content replication facility designed to avert bottlenecks. Knowledge API and Usage Data is claimed to provide demographic information about a web user to site operators without revealing an individual user's identity, allowing site operators to customise content for their visitors. An @Home Passport of unique identifiers will allow users to access multiple sites without having to enter a password every time. Direct Connect allows content providers to hook directly to users through the @Home network rather than going through the internet. Members of the media development program will supposedly get access to tools, technologies and proprietary research, network resources, developer conferences and web sites, newsletters and reports. They're also being offered membership of a technical consortium @Home's trying to establish, though the company wasn't able to say what the intended purpose of the consortium is or whether it yet has any members.

unigram·x

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Texas-based object software and development company **ObjectSpace Inc** has persuaded Blockbuster founder David Cook to invest \$5m in it. ObjectSpace has appointed Cook's partner at investment company **Arbimetrics Corp** John Pritchett as its CFO.

Silicon Graphics Inc CTO Forest Baskett confirmed the company bought out its Unix licence from **Novell Inc** around a year ago (UX No 603).

It wasn't only the tenth anniversary of SCO Forum, underway all last week in Santa Cruz, California, but it's also the first time that host **Santa Cruz Operation Inc** has actually owned the Unix technology it bases its business on. To celebrate, it announced that free Unix licences (initially for single user OpenServer, and shortly afterwards UnixWare) are once again available to students and anyone else who wants to use them for educational and non-commercial purposes, with SCO president and chief executive Alok Mohan adding optimistically that "the last time this happened, a \$60,000m business was born" - but that time, don't forget they also gave away the source.

Over in the NC Pavilion at SCO Forum last week, **Sun Microsystems Inc** was one of a baker's dozen of companies supposedly there to show off their fabled network computers. In fact almost none of the manufacturers set them up in the way they are meant to be used: that is as a thin client down loading applets from a server. It was something of an oxymoron: standalone network computers. One that did have a server, **Maxspeed's** product, was four years old and hadn't been changed at all, just re-badged as an NC. Naturally it had no Java virtual machine. Poor old Sun couldn't even get its server up and running; it just displayed a SparcStation 5 with a couple of dummy Java terminals sitting forlornly alongside.

SCO has now inked the deal with its fifth Non-Uniform Memory Access (NUMA) partner, **Fujitsu Ltd's HAL Computer Systems Ltd**, to integrate HAL's ccNUMA technology into UnixWare 2.1. SCO's also signed with Data General Corp, Sequent Computer Systems Inc, Dolphin Interconnect Solutions AS and Tandem Computers Inc (UX No 593).

Asked to sum up their feelings about the future at SCO Forum, five of the industry's top brains offered a few pearls of wisdom and unsettling warnings. **Netscape** director of technology Martin Haerberli had bad news for those of you struggling to adjust your lives and watches to internet time: "there's no danger of going too fast," he said and gave us a new internet synonym; externet, the opposite of intranet. **SunSoft's** Rob Gingell, after predicting a major computing disaster before the end of the century, left us with the prediction that "if you can become secure with uncertainty you'll probably become successful." Basically, everything you think you know about the future of the internet is probably wrong.

UniForum has apparently chosen former 88open and PowerOpen Association boss Tom Mace as its new executive director to replace the outgoing Richard Jaross.

Word is **Marimba Inc's** going to peddle a Java application builder and client.

Unisys Corp lost its VP client server marketing David McCann last week. He's going to manage a newly-created software business of a NASDAQ technology company that'll be based somewhere in California. It's supposed to put its head above the parapet in the third week of September and will trade on Unix and other platforms.

Kicking it when it's down, **Informix Software Inc** is trying to poach **Sybase Inc** customers by offering new trade-in and migration programmes.

Sun Microsystems Inc's Lighthouse Design Ltd has announced ObjectPlan object-oriented analysis and design tools for designing Java applications using SunSoft's NeXTStep-based OpenStep user environment. Betas are out now, ships begin next quarter.

Keen to get in on the action a bunch of VC companies have been knocking on **Sun Microsystems Inc's** door asking for Java references; Sun's xeroxed a list of Java hopefuls, new and old, that it's passing out. We hear there's quite a Java funding circuit developing. Meanwhile, Sun keeps asking how it's gonna make money out of Java.

Hewlett-Packard Co says new programmable wizards will offer for use with its HP ORB Plus 2.0 object request broker allow Visual C++ developers to create Corba 2.0 objects that can be deployed on NT and HP-UX. Currently ORB Plus only supports one-way mapping from OLE to Corba, allowing Visual Basic and Visual C++ programmers to access Corba components using native OLE interfaces. Later this year HP will add two-way OLE interoperability between OLE/COM and Corba to ORB Plus 2.0. The new version is due by year-end at from \$3,000.

Imperial Software Technology Ltd's now shipping version 4.5 of its X-Designer Motif and Windows GUI builder. 4.5 includes a bundled XD/Capture tool which captures Motif interfaces without requiring source code. IST expects XD/Capture to accelerate competition with products such as **Mercury's** XRunner X Windows testing tool which costs \$10,000. X-Designer 4.5 is \$3,500. IST will show late betas of its Java interface designer at Unix Expo (UX No 583).

Rawhide, **DEC's** AlphaServer 4100, can't handle the company's two-month-old 433MHz EV56 processor. It needs 467MHz.

Now with former **Kaleida Labs** boss Michael Braun at the helm as president and CEO, **Neuron Data Inc**, Mountain View, California, says it is now shipping version 2.0 of its Elements Environment 2.0 application development system announced back in March (UX No 579). The 10-year-old, \$25m company recently won \$6m funding from a group of investors lead by **Morgan Stanley** and moved its founders aside to make way for Braun. The company started life as an expert systems house and retrenched to distributed application development in C++ and now Java. It claims Forte and Dynasty are the main rivals to its \$9,600 per developer three-tier application development system. It says it has 25,000 installed developer seats; its prior capitalisation included \$275,000 of seed funding in 1988, \$3m VC money in 1990.

Object consultant **Genesis Development Corp**, West Chester, Pennsylvania, has reversed itself into Europe by acquiring system integration partner Bocom and opening as **Genesis AG** in Geneva. It's opened a branch office in Ivrea, Italy, which will be headed by Lo Giudice, former manager of large scale object technology projects at Ing C Olivetti & Co SpA.

Sun is reportedly offering \$5,000 bonuses for displacing **DEC TurboLasers** with UltraSparcs.

Iona Technologies Ltd's eponymous Orbix object request broker is being integrated with **Next Software Inc's** OpenStep and WebObjects, **Powersoft** PowerBuilder and **Ilog SA's** Ilog Broker 2.1 C++ object development environment.

Lexington, Massachusetts-based **Software Emancipation Technology Inc** says the Package/sw component of its Discover C and C++ group development environment can now use output from **Pure Software Inc's** Quantify runtime performance profiler to automate the repackaging of applications for different vertical markets. Quantify data shows which functions are called whilst an application is running and Package/sw creates partitions, clusters and documentation of the repackaged application. SET will debut its YK2 offering next month and has other NT and web and Java enhancements in the works. With 65 employees, SET company claims 200 customers, a funky licensing scheme, profitability, 10 US sales offices and is seeking further international outlets.

Netscape predicts it will ship 20 million client object request brokers in the next 12 months, expecting ORB-enabled Navigator clients to browse both content and objects. Over time it expects a new class of client to merge content with applications and that Corba IIOP will replace HTTP.

Spyglass Inc, Naperville, Illinois, is shipping a new version of its Web Server software development kit (SDK) for Unix, Windows NT and Windows 95. It claims the server is the first to offer complete compatibility with Microsoft Internet Information Server's ISAPI and PCT implementations on Windows NT and Unix platforms. The announcement follows last month's joint development agreement between Microsoft Corp and Spyglass. Pricing starts at \$25,000 for 100 licenses and one year's support and maintenance.

DEC is getting a new ad campaign together and, according to DEC watcher Terry Shannon, one of the anti-Sun prototypes portrayed Network, the Sun spokesperson, and exhorted customers to "buy an Alpha or we'll shoot the dog!" Believe me, if they were ever to run that one they'd find out what it's like when our hackles are up.

Whatever do you suppose this means? **Hewlett-Packard Co** has reportedly got a bunch of network engineers over at its Florham Park, New Jersey unit, folks it acquires from USL via **Novell Inc**, sitting on their hands doing nothing, having apparently cancelled whatever it was they were working on. Or so it was a few weeks ago before Mother HP told them to put a sock in it and not say anything to anybody.

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IBM SETS 128-WAY PHOENIX CLUSTERING FOR UNIX, NT, OS/2

The same day that Computer Associates International Inc revealed its plan to get into the multiplatform clustering software market in conjunction with Tandem Computers Inc, see page two, IBM Corp's RS/6000 division last week began talking-up a next-generation clustering technology of its own, code-named Phoenix. IBM says its new high-availability software will eventually allow up to 128 nodes to be clustered to work together as a single logical system, claiming it will "make availability scalable" and "transcend anything in the market today." Phoenix will begin life as a mechanism for tying up to 32 parallel RS/6000 SP or other AIX nodes together - up to 128 in 1997 - but has already been demonstrated running on OS/2 and Windows NT and will be ported to other vendors' Unix environments in addition. The company says it will disclose further details of its Phoenix porting and partnering plans in around three weeks' time. It's also currently evaluating how to extend the offering to all IBM server platforms, including S/390 mainframes from which some of the Phoenix technologies have been borrowed. In addition to providing traditional high-availability (HA) resources such as application failover to alternative systems in the event of node failure, IBM says Phoenix will allow managers to monitor operating system, middleware, communications, global storage resources, load balancing and other kinds of events it says current mechanisms do not address. Phoenix, a multi-year development of RS/6000 division's SP parallel systems group and IBM's research division, includes a new set of HA application programming interfaces which will extend then subsume and eventually supersede the current High Availability Cluster Multiprocessing for AIX (HACMP) software the company offers for clustering up to eight SP or RS/6000 nodes. Phoenix technologies will extend HACMP for AIX to support up to 32 nodes before the two technologies are combined later next year. HACMP interfaces will be supported in Phoenix and therefore allow customers to run existing HACMP applications unchanged.

Out-of-box

Elsewhere, as well as investigating Web-based clustering options IBM's also looking at how SP nodes can be opened-up to accommodate any RS/6000 model; how to allow external nodes attached to SP parallel switches to be viewed and managed from within an SP cluster using Phoenix; and how to get more data and user traffic flowing into SPs via multiple network connections. To accommodate the latter, which would allow users to create faster data warehousing or data mining environments, IBM will sell a router developed in conjunction with one of the major players, thought to be Cisco Systems Inc, called the High Performance Gateway Node. Attaching the network concentrator directly to the SP switch as is planned will allow multiple data streams to flow into an SP system without burning individual RS/6000 processors and AIX licences just to handle external I/O networking tasks. The router won't be integrated into SP's cabinetry but will be managed by existing management applications as if it were. Putting together a business plan to sell and support the third party device means ships aren't likely to begin for at least six months and maybe up to a year. What IBM refers to as other "out-of-box" SP options will eventually allow customers to attach any RS/6000 to the SP switch and have it act as an integrated node. That might extend to supporting non-AIX and indeed non-IBM environments too, though the company admits that depends in part on the extent of management software capabilities and development of SP switch and processor technology. Already planned are next-generation versions of the SP switch which will use the future RS/6000/AIX Mezzanine memory controller to attach memory directly to the switch rather through I/O connectors, overcoming MCA and PCI bandwidth limitations. Phoenix and the new switch will lead into other distributed memory and crossbar architectures (UX No 603); we've learnt of one called S-COMA.

SUNRIVER BETS BUSINESS ON BOUNDLESS NCs

SunRiver Corp's Austin, Texas-based SunRiver Data Systems has now completed the process of turning its Intel Corp 80960 RISC-based X-terminals into Network Computers, and thinks the switch calls for a change of name, so the company becomes the Boundless Technologies Inc subsidiary of SunRiver Corp. Boundless says using its Network Computers is pretty much like using a personal computer on a local network, and that the XL flagship model can be hung off MS-DOS, all Windows, the Internet and corporate Intranets, X Window Unix systems, and 3270 legacy systems, and runs Java applets. They use 25MHz or 33MHz chip and have 1Mb or 2Mb Video RAM, twisted pair 10Base-T Ethernet connection, one parallel port, a PS/2 mouse port, and a PS/2 keyboard port. The Windows suite includes the WinFrame Windows emulation package from Citrix Systems Inc; WinCenter Connect; and ntEasy, which causes the thing to boot as if it were a Windows NT workstation. The Java suite will be available next quarter. The XL and XLC run Boundless' Mach microkernel-based operating system - XL street price is estimated at \$800 to \$1,300; \$1,100 to \$1,700 for the XLC. They ship in Europe next month. Boundless parent SunRiver Corp - which has kicked off what promises to be an enthralling season of network computer introductions - also includes the TradeWave Corp subsidiary which sells virtual private internet security and electronic commerce software packages, but plans to change its corporate name to reflect the NC device in the new year. Boundless isn't interested in the consumer market but is aiming the NCs at firms which would normally buy PCs; the same market it targeted for its X terminals. SunRiver company claims an installed base of some five million terminals; it bought Applied Digital Data Systems' display, X terminal and Pick systems operation and added that it its own console business in 1994, and acquired Digital Equipment Corp's VT dumb terminal unit a year later. It sold 500,000 terminals in 1995.

FUJITSU HANDS OBJECTS TO COMPUTER ASSOCIATES

Fujitsu Ltd appears to have put its own object strategy firmly on the back burner in the US. A year ago the company's newly-created Open Systems Solutions Inc planned to build a business around its ODB-II object database and IntelligentPad development system (UX No 552). Well that didn't last long. Dan Fishman, the unit's VP and general manager, quit in February apparently following disagreements over the company's direction. Dennis Long, a former VP at Oracle Corp was appointed in June as SVP marketing, and he effectively runs the company, which changed its name at the same time to Fujitsu Software Corp. Its main priority now is the marketing of the TeamWare groupware, developed by ICL Plc, and the WorldsAway development environment for creating so-called virtual communities on the web using avatar technology. CompuServe uses it for its Dreamscape virtual community. All the object stuff has been effectively handed over to Computer Associates International Inc, which is calling the development shots, although there's no new relationship as such. CA's Jasmine object database has ODB-II at its heart, and adds CA's availability and database integrity technology. It's supposed to be available in December and will be sold by Fujitsu, but only in Japan; CA has dibs elsewhere. Long is in Japan at the moment discussing how Fujitsu is going to make money now its moved from the material to the ethereal.

SGI SPIDER SEEKING A NEST

Silicon Graphics Inc's says it's had working versions of its high-speed Spider SMP interconnect and network switch for two months now. Spider - for Scalable Pipelined Interconnect for Distributed Endpoint Routing - is being targeted for use in a large-scale SGI system arrangement previously identified as Lego, though SGI CTO Forest Baskett says we're not allowed to call it that any longer (UX No 579). SGI claims no software changes will be required to take advantage of Spider. Whether it'll be made available for tying together existing SGI Challenge server configurations apparently has yet to be decided. SGI claims Spider is an order of magnitude ahead of existing interconnect/switch technologies; Spider supposedly has a bandwidth of 800Mbps per device and a point-to-point latency of 330 nanoseconds. Although Spider is said to share functionality with SGI's other high-end interconnect, the T3E mechanism it picked up with the acquisition of Cray Research Inc, there doesn't appear to be a move to create a unified interconnect like it's doing with other items such as the Irix and Unicos operating systems.

OPENTV RUNS ON VXWORKS - OS-9 TO COME

Following the restructuring of Sun Microsystems Inc and Thomson Multimedia SA's Thomson Sun Interactive television alliance, their Thomson Sun Interactive LLC spin out is now offering an adaptation layer allowing its OpenTV object-oriented run-time environment to be hosted on set-top devices running Wind River Systems Inc's VxWorks real-time operating system. Hyundai Electronics America's requirement to implement OpenTV on the set-tops - receiver boxes and interactive television boxes - it is building using VxWorks spurred development of the adaptation layer. The companies say the code will be licensed to other vendors and will allow set-top developers to implement OpenTV on any processor architecture supported by VxWorks, including PowerPC, Sparc, 68k, i960, iAPX-86, Alpha, Mips and PA-RISC. Wind River believes the adaptation layer will provide valuable openings into new vertical markets, but like us, it can't understand why Sun and Thomson didn't just call the spin out OpenTV; so we asked. The company says it wanted to leverage the Sun and Thomson names in customer bids and not get tied to a single product name for its operation. OpenTV's already up on Integrated Systems Inc's pSOS embedded kernel; the company says it'll likely port to Microware Corp's OS-9 because of demand, even though Microware offers the rival David operating system for interactive television. It'll license Sun's forthcoming JavaOS and implement OpenTV on top, but expects Java's memory and processor requirements will preclude its use in set-tops. Boxes with TCP facilities would also be able to route cable-based internet services to PCs. The company's almost completed field tests in Italy and South Africa and will begin production ships of OpenTV following its announcement at the International Broadcast Conference in Netherlands in a month or so. Thomson Sun Interactive LLC is still based on Sun's Mountain View, California premises. The Thomson/Sun alliance was formed in November 1994 to develop an interactive television software environment. It has since been adopted by interactive television players in Europe and South Africa for trials, including France Telecom SA, which will get 2,000 decoders from the alliance with the environment embedded. It's run by CEO Elliot Broadwin, previously VP sales and marketing for US and Pacific Rim for the alliance. Other recent appointments include Ian Halifax as CFO, Vincent Dureau as VP engineering, and Eric Dentler is VP sales.

AT&T HAS INSTANT ANSWERS TO CALL CENTRE-WEB LINKS

AT&T Corp is preparing to begin trials of a new service, instant Answers (iA), that is designed to bridge the gap between call centre applications and companies' Web pages. Although the service brings little in the way of technological advances, it nevertheless looks like an interesting application: on iA-enabled Web sites, users wanting to speak to a company representative have the option of entering their phone number, which is then passed to the company's call centre, generating a phone call in response. Since the call centre operators will be aware of which page the user has just been looking at, the phone call request can be passed to somebody in the correct department, says AT&T, although it admits that one drawback with the service is that users accessing the Internet via a modem will need two phone lines - one line for the Web connection, and the other for the voice conversation. A second feature of the service then allows the call centre operator to "download" photos or diagrams to the user (for example to illustrate other available products), which automatically appear on the user's screen. The trial is due to begin in October, with a commercial service following next year. Although AT&T is using the trial to assess the correct tariffing for the service, it will nevertheless be charged on per-transaction basis.

IBM TO SELL NETWORKING CHIPS AS MERCHANT MICROPROCESSORS

IBM Corp is to sell its high performance networking chip technology on the open market - the first time the chips have been offered to outside customers. The Ethernet, Asynchronous Transfer Mode and Token Ring chips, along with associated ASIC application specific integrated circuit chips, and IBM's ATM switching technology, will all be marketed to networking hardware companies. Specifically, the chips on offer include the 10/100 Mbps Ethernet MAC Chip, ATM 25 Mbps Controller Module, and the Token Ring chipset, mostly for PCI and EISA buses. The High Performance Cell Switching chipset offers data, voice and video transmission at speeds up to 155 megabits per second (Mbps). IBM's current merchant CPU sales consist of PowerPC chips, Intel iAPX86 family products in partnership with Cyrix, advanced microcontrollers and high-performance memory. The networking chips are being sold through IBM's Microelectronics Division direct salesforce, based in East Fishkill, New York, as well as through distributors, available immediately. <http://www.chips.ibm.com/>

CA, TANDEM DEVELOP UNICENTER CLUSTERING

Computer Associates International has chosen Tandem Computers Inc as its first CA-Unicenter development partner and the two are building clustering software for use with CA's management suite that will eventually allow organisations to cluster up to 100 Windows NT or Unix nodes. Announced last week at CA World in New Orleans, CA said by year-end it expects to have a clustering option available for all Tandem platforms, half a dozen Unix flavours and Windows NT. The NT work is to be based on the WolfPack APIs Tandem has created in conjunction with Microsoft Corp and other firms (UX No 589). CA said the Unix work was developed entirely by itself and Tandem. The first phase will deliver CA-Unicenter additions in the areas of recovery and restart with support for about 50 clustered nodes. A second development phase will provide a single system image based on CA/Tandem technology unrelated to WolfPack, the company said. CA said the two firms will spend \$20m to develop software that provides high availability and fault tolerance. Although the unnamed clustering software looks set to go up against IBM Corp's planned Phoenix solution CA says it has no plan to offer the software for use with mainframes or DEC VAXes. Meantime, CA's TNG CA-Unicenter release with the 3D interface due out at the end of the year will be welded together with certain Tandem technologies, including the NonStop transaction manager's system object monitor, virtual home subsystem and network static extended technologies. Tandem CEO Roel Pieper said new databases will be required to take advantage of clustering over distributed systems and expects some of the Tandem technology to also be used in versions of CA's Ingres relational database which will provide a repository for the new CA-Unicenter releases and clustering additions. The agreement will also see Tandem bundle CA-Unicenter TNG with everything it sells.

CA EXTENDS SYSTEM MANAGEMENT INTEGRATION WITH INTEL

Expanding its long-standing relationship with Intel Corp, Computer Associates International says the forthcoming TNG release of its CA-Unicenter management software will take advantage of built-in board level hardware and software instrumentation in Intel Pentium Pro servers to make it easier to troubleshoot across enterprise systems. CA-Unicenter TNG, which ships at the end of the year, will be able to obtain the status of a system - such as temperature and voltage - by communicating with Intel servers through two ways: first, using desktop management interfaces (DMI) and simple network mail protocol (SNMP) based open instrumentation interfaces on Pentium systems; and second, by accessing server instrumentation through Intel's LANDesk server monitor module and LANDesk Pro server monitor products. CA, which made the announcement at CA World in New Orleans last week, says systems administrators will still be able to retrieve information from systems which crash by using the "Hobbes" card which keeps running when the system is down; the motherboard was codenamed "Calvin."

SAP'S PLANS TO HOLD ONTO ITS LEAD

At its user conference in Philadelphia, SAP AG unveiled a raft of strategies and partnerships to help it maintain its lead over competitors such as Oracle Corp and PeopleSoft Inc and to stave off continuing user laments about the expense and time-drain of implementing its R/3 enterprise applications suite. SAP has a hold of 32.1% of the enterprise application market, according to International Data Corp, followed by Oracle with 8.2% and PeopleSoft with 5.9%. To keep that lead, SAP is responding to complaints about its all-or-none R/3 applications offering by componentising the suite, so that users can buy only the modules they need, such as human resources or accounting. The first components will ship with R/3 version 3.1, due out at year end. SAP will ship R/3 release 4.0 during the third quarter of 1997. Version 4.0 will include new business processes for retail and public sector industries and supply chain financial enhancements. Separate components that will ship with R/3 4.0 include human resources, product data management and treasury management. SAP will also begin selling indirect for the first time in North America by allowing resellers to offer and support its R/3 software to customer firms with annual revenues under \$200m; SAP says it has about 2,000 sites that fall into that revenue category worldwide. SAP also announced a joint technology and marketing deal with Haht Software Inc, Raleigh, North Carolina, under which SAP customers will be able to use the Hahtsite Internet development environment to create Web-based applications that interface directly with their existing R/3 application logic; SAP will resell Hahtsite.

SUN AIMS TO PRESS SERVER ADVANTAGE WITH NEW TRADE-IN OPTIONS

Now armed with its 64-bit Ultra Enterprise Servers and new SparcStorage RAID arrays, Sun Microsystems Inc's revamped a year-old competitive trade-in and migration programme (UX No 554), this time offering users credits of up to 40% on Sun kit when they trade in HP T500 or IBM SP servers or EMC disk arrays, plus the usual migration assistance. It's a nice sales story but there's no evidence to suggest that this or previous offers materially impact sales in any way given Sun doesn't break out its numbers or offer indicators for judging performance. Sun-watchers at International Data Corp say that trade-in and migration programmes are not usually the things that turn a sale in any case. However what Sun does hope to capitalise on in addition to its shiny new Sunfires, is the fear uncertainty and doubt being created around the future for users of Hewlett-Packard Co's long-in-the-tooth T500 series servers. Sure, they'll get a 64-bit PA-RISC 8000 makeover later in the year, but HP's throwing both its architecture and operating system in the air with the forthcoming migration to Intel Corp's Merced processor and 3DA Unix. It's clear that no-one yet understands the migration issues, and a chip and OS change isn't likely to be an altogether smooth ride despite what any vendor might say. IBM has problems creating high-end Unix SMP servers and there's still a big question mark over its 64-bit plans, but customers that buy IBM tend to stick with it. And Sun's apparently targeting SP users for the trade-in programme - currently Big Blue's high flyer. Where's the sense there? Sun believes EMC, whose Symmetrix RAID is the largest third-party RAID storage deployed with its servers, has taken its eye off the ball and is vulnerable on performance, scaling and price when compared to the Sun SparcStorage array. Whilst Sun still leads the technical Unix market from whence it came, it's back in third place in the commercial Unix space according to IDC's 1995 numbers which show HP having 18% of the market with sales of \$3.5bn, IBM Corp with 17% and Sun with 10.5%. Given Sun's in its best shape for ages - new products and the competition facing upgrade, migration and design issues - if it pushes all the right buttons, IDC's Gene Lee believes the Mountain Viewer could improve its position to a 15% share of the market this year. Quoted elsewhere, Hancock Institutional Equity Services analyst CB Lee estimates Sun's June quarter Ultra Enterprise Server sales of 6,000 were "200% to 300% above plan; it's looking for 10,000 in the current quarter."

HP DONATES KIT TO UN INTERNET EFFORT

Hewlett-Packard Co is donating about \$1m of computer and communications equipment to the United Nations Development group's Sustainable Development Networking Program. It's the first phase of a scheme designed to help developing countries get hooked up to the Internet and benefit from information technology in general, and will obviously help HP get a foothold in those countries too. The first two countries to benefit are Mexico and China, with 14 more to be added by the end of next year. The next three include one in Eastern Europe and one each in Asia and Latin America, but HP isn't ready to announce them just yet. All the Unix servers, PCs, peripherals, networking equipment, service and support costs will be met by HP. The company said it's a mixture of business and philanthropy: HP heard about the UN scheme and saw it as a way of getting a foothold in these countries, and improving it's image as an Internet company, while simultaneously helping such countries advance their technology. The UN said it is open to similar offers, but won't look for a duplicate agreement with another company during the initial phase of this agreement, which runs until the end of 1997. Both HP and the UN are looking at extending it beyond that. Asked why Unix servers were being used rather than Windows NT servers, Nigel Ball, HP's marketing director of general systems division replied "this is the real world."

IBI TO BUILD WAREHOUSES WITH R/3 DATA

Information Builders Inc has released SNAPpack data warehouse for creating warehouses combining SAP R/3 data and non-R/3 data. SNAPpack includes IBI's Focus Fusion multidimensional database. The whole thing comprises warehouse loading, On-Line Analytical Processing (OLAP) servers, site analyser, data administration tools and reporting tools. These SNAPpack tools, Power Reporter, Open Reporter and Audit work with Data Migrator, which builds interfaces from legacy systems to R/3. The migrator is in beta now and will be available next quarter, costing from \$6,500 for Windows NT up to \$110,000 for MVS, with Unix pricing anywhere in between those numbers, with SCO Unix costing about the same as NT. The whole warehouse package costs \$48,320 for Unix for a 16-user licence and scales up from there. Focus Fusion is now available on its own.

DEC READIES SAN ANTONIO, A TWO-WAY RAWHIDE

DEC is expected to turn up with the box known as San Antonio probably in November, says our sister publication *ClieNT Server News*. Last week it was heard of simply called a two-processor Rawhide or Alpha-Server 4000. It was previously described as a two-way DemiSable upgraded to Rawhide electronics. It should use 300MHz or 400MHz chips and eight slots with a bunch of hot-swappable internal drives. DEC is also expected to field its high falutin' Turbo Laser, aka the AlphaServer 8400, with NT now that NT 4.0 and its improved scalability is becoming available. Look for it by the end of the year. However, the dual-processor Alpha workstation known as Tombstone, once due in April and then pushed out to summer looks like it's been pushed out again, another year reportedly, because there are no applications to take advantage of it. We think it was supposed to be called the AlphaStation 650.

PICK SYSTEMS TRANSFERS ALLEGIANCE FROM UNIX TO NT

Pick Systems Inc sees a Windows NT future. It's always been Pick-under Unix since the Irvine, California company left it's proprietary days behind it. Pick's D3 NT database will be launched next quarter and demonstrated at DB Expo in New York on December 1. Until now it's been available on AIX, DG-UX, SCO Unix and HP-UX. Chief information officer Denis Hill said "the NT product will be the flagship." It's a ground-up fully object-oriented re-write of the Pick database, and the company has extended Visual Basic to do string handling rather than use the Pick-written scripts as before, according to Hill. The reason for NT over Unix? A better file system according to Hill. He said the new features in the NT version will be "folded back" in to the Unix database starting next year. Hill dismissed rumours that the late Dick Pick's children were looking to sell the company to cover the costs of inheritance tax and make a little bit besides. He said it had been an issue, but was now resolved: "That's under control," he said. The company is always up for sale at the right price, he said, and has had approaches, but the family is not actively looking for a buyer.

ALR LOWERS PENTIUM PRO SERVER BOOM TO \$4,000

Advanced Logic Research Inc reckons it's lowering the price ceiling of server-class systems with its new dual processor Pentium Pro system, the ALR Revolution MP Pro - with prices starting at just under \$4,000 for the single processor version that can be upgraded later. The symmetrical multiprocessors come with one or two 200MHz Pentium Pros, 32Mb ECC RAM, expandable to 1Gb, and supports high-availability features such as redundant power supplies and server/hardware monitoring and alerting through ALR's Infor-Manager software. It will run Microsoft's Windows NT server 4.0, Novell NetWare, SCO OpenServer and Sun Solaris. There is a dual PCI-bus and seven PCI slots, and room for up to 12.9Gb of hot-swappable drive storage (24.9Gb once larger drives kick-in shortly). There's also an optional hot-swappable external storage unit for an additional 33.6Gb. It should be available by mid-October. ALR has already upgraded its Quad 6 series of four processor SMP systems to 200MHz Pentium Pros, and has a single processor Pentium Pro server, the Evolution 6.

AVS PROMISES 3D IMAGE MANIPULATION OVER THE WEB

Advanced Visual Systems Inc is readying an application that enables 3D VRML 2.0-compliant visualisations to be viewed over the Web by any user using a standard browser. Waltham, Massachusetts AVS's tool, AVS/Express Web takes visualisations created in AVS/Express and distributes them across the Web. It comprises a Data Publisher, Scene Publisher and Application publisher. Scene Publisher means that any 3D image, viewed through a VRML 2.0 browser, can be turned, viewed from any angle, walked through, and hyper-linked objects can enable users to drill down through the image. Application Server adds more rendering capabilities to Scene Publisher, as well as the ability to construct interfaces with Java user interface controls. Data and Scene publisher will be out at the year-end, with Application Publisher not due until the second half of next year. It'll all be up on Unix and Windows NT, no prices.

CA SHOWS "KINDER, GENTLER" SIDE TO PARTNERS

By Clare Haney

The transformation of Computer Associates International Inc continues apace. The company, formerly known and feared for its aggression, arrogance and bloodletting acquisitions, is trying to remake itself into a kinder, more caring entity. This was typified by head honcho Charles Wang's rather downbeat keynote speech at last week's CA-World 96 in New Orleans where he urged everyone to make this the "friendliest" conference ever. To this end, he announced that entrance to next year's show would be free to everyone attending this year's event- a gesture that could theoretically cost the company a cool \$9m, given the 18,000-strong attendees- as well as free copies of the software developer kits (SDKs) for those who attended courses on its object-oriented database Jasmine, jointly developed with Fujitsu and due out in the fall, and the latest version of CA's systems management software Unicenter TNG.

Billboards

These products represent the two areas where CA is currently focusing most of its attention. Wang already claims that Unicenter is "the de facto standard in the software industry for enterprise management." So he was obviously more than a little riled that rival Tivoli Systems Inc had plastered the town with billboards and advertisements singing the praises of its own products. "We did over \$650m in Unicenter revenues last year, while our alleged closest competitor did less than \$50m and they think their software is everywhere," he said. "We have more than 4,000 Unicenter sites on Unix alone. Sometimes software has to run on more than slide projectors, billboards and taxis." He made much of Tivoli's new parentage, declaring, "We have no hardware or operating systems bias." Interestingly, Wang and the rest of CA now lay claim to the title of "the world's largest independent software company" which presumably will come as news to Bill Gates and his company. Apparently, Microsoft doesn't count because it's tainted by selling operating systems. As Wang puts it, "We have never had a technology axe to grind."

Platinum parachutes

Elsewhere there was a good deal of self justification, CA-style, going on, with Wang talking about "marching to the beat of a different drum," while his second-in-command Sanjay Kumar told us the biggest fault the company had was in being "dead right." About what, we wondered? He singled out pricing and dealing with clients as examples of this. "If a customer has \$100 left in their budget and you charge them \$95, you're OK; but if you charge them \$105, you're the worst monster they've ever come across." He blamed the perception problems that still cloud the company's standing with some customers, such as the aforementioned aggression and arrogance, on former employees, whether they leave CA voluntarily or involuntarily. Actually, he reckons that those that leave voluntarily, with "platinum parachutes" upwards of \$1m as they walk out the door, are the worst offenders, badmouthing the company as a way of justifying their quitting. However, he did admit that CA needs to improve communications with its customers during the course of takeovers.

Distraction

Another area where CA believes it is "dead right" is in its promotion of a pure object-oriented database solution, namely Jasmine, instead of the hybrid object/relational offerings being posited by Oracle, Informix, and Sybase. "In the simplest terms, a relational database is just a gigantic spreadsheet where you address data in rows and columns," said Kumar. He compared the hybrid approach to running MS Excel on Windows and having one or two giant cells trying to cope with video and voice data and therefore seriously impeding the application's performance as a whole. He believes that the interest generated by Jasmine among customers may well give CA an opportunity to go and promote its OpenIngres relational database which it acquired from the ASK Group back in 1994. "Last year it was very hard convincing applications vendors to support Ingres. It's less difficult this year." He revealed that Sybase's fall from grace has helped Ingres into a couple of new business deals, but added that CA had no interest in acquiring another ailing database vendor, because it would be a "distraction" away from its current twin focuses, Jasmine and Unicenter. Although he added, "We have an obligation to look at everything. Sybase does have a great installed base and some nice tools."

Foundations

Returning to Ingres, we spoke with Yogesh Gupta, CA's senior vice president in charge of product strategy, who believes that marketplace for the product is "growing" and that CA is the only company that can offer a multi-platform database for NT. He insists that Ingres doesn't compete with Microsoft's SQL Server, because "I don't think they understand what 7 x 24 support means. We're talking enterprise support with a capital E. The next major release of OpenIngres, version 2.0, should be out in beta later this year and for the first time will include row-level locking. This is the technology that Sybase still singularly fails to supply with its System 11 database and now means that the

Emeryville, California-based company is the only relational database player without row level locking, since Microsoft claims it's fixed the problem by what it terms "dynamic locking". So how difficult is adding row level locking? "It's like redoing the foundations of a huge mansion," explained Gupta. "It's a lot of work." Other features due in OpenIngres 2.0 include support for native operating systems threads, 64-bit capabilities, support for variable page size, server-based replication, parallel load and backup and closer integration with Unicenter. The company hopes to raise OpenIngres' profile by plunging into TPC benchmarking, something the ASK Group never engaged in, because it was too expensive. CA is already carrying out internal OpenIngres benchmarking. On the horizon for future releases of OpenIngres are injections of yet more parallel technology, such as adding support for parallel queries, parallel updates, parallel index creation and parallel Fastload, along with improved self-manageability of the database.

Super-duper

Returning to Wang's keynote and the new caring CA, he stressed that the most important task going forward was to "heal the critical disconnect between people and computers." He has talked at length in the past about the disconnect existing between CEO's and CIO's, most notably in his book "Techno Vision," now it seems he wants the whole world, not just the business sector. "We need to find ways to make computing both more human and more humane," he stated. As the first plank in this initiative, the company unveiled a new product, Opal, at the conference. CA terms Opal "a social builder-cum-development tool" for OpenIngres/Desktop, the rebadged low-end relational database it licenses from Centura Software, formerly Gupta. Marc Sokol, vice president of advanced technology with CA, described Opal as "a super-duper multimedia screen scraper, set up to integrate with legacy character-based applications." Opal is currently in beta and should ship within the next month and a half. CA has built its internal sales system with the tool which is written in a mixture of C and C++ and supports Windows 95 and NT desktops. Sokol emphasised the importance of widening one's view of how to use technology. He related a recent visit he'd made to a human resources VP at a large US conglomerate, to discuss the creation of an Intranet application. The VP was keen to have the company's stock price accessible to users of the application and explained he wanted a button on screen that users could press to access the information. "That shows how we've been polluted by IS," fumed Sokol. "We've been conditioned to think that Windows 3.0 or Motif is the only way to visualise applications." He recommended the VP to have a ticker tape running across the bottom of the applications screen instead.

OPEN HORIZON BAGS A FURTHER \$6m FUNDING

Belmont, California-based middleware house Open Horizon Inc has garnered a further \$6m investment from US Venture Partners and PeopleSoft Inc in a third round of funding which brings the company's capitalisation to \$10m. Open Horizon's Connection middleware allows organisations to add support for network security services - including single sign-on, authentication and encryption - centralised directory services, transaction processing monitors and other tools across distributed computing environments. The company offers DCE security services, DCE and X.500 directory services, browser and Java connections to databases, plus support for CICS, Encina, Tuxedo, Top End, C, C++, Forte and Dynasty support. It claims to be able to tie applications, databases and security services together without changing customers existing applications. Connection is also integrated with CyberSafe Corp's Challenger Kerberos-based security system. IBM resells Connection and Open Horizon has other joint development and marketing deals with Apple Computer Inc and Hewlett-Packard Co. PeopleSoft sells Connection with its PeopleTools rapid application toolset. Open Horizon claims to have 2,000 customers and to have doubled in size since the beginning of the year. It says it'll use the money to broaden support for Connection and expand its Internet and intranet offerings.

COTELLIGENT WANTS TO BE ONE OF THE BIG BOYS

Cotelligent Group Inc - the band of six regional integrators that went public in February - claims it can enter the top tier of the service market by ~~offering something the national players can't: a corporate culture grounded~~ in the local communities. But why would national customers who need project management, outsourcing or technical staff augmentation choose a rag-tag team of locals over the likes of Electronic Data Systems, Anderson Consulting and Computer Sciences Corp? Cotelligent says it's because local, entrepreneur-run companies are better managed and more focused on customers needs than local branches of national service providers. In the past few years, locally-based providers have beaten out branches of national service providers for local contracts. But despite those victories the six small firms all discovered the same thing: they didn't have the cash or national resources to play in the national arena. "It was grow, sell out, or die," according to Cotelligent founder Jim Lavelle. To grow, the regional firms decided to combine themselves into a nationwide partnership of service providers. But instead of adopting one set of best-practice rules or trying to roll out a cookie cutter image of a single firm, Cotelligent's strategy has been for each company to operate as it always has, and for each firm to retain its president, but with the financial backing and bidding capability to compete together, nationally against the EDS's of the world. Well, not the world just yet. Cotelligent's first strategy is to gain a foothold in every metropolitan area in the US by spending about \$30m from its war chest to acquire other, regional service providers. It already has member firms in New Jersey, Massachusetts, California, Minnesota, and Texas. Along the way it hopes to acquire a few US providers which already have offices abroad to make its entry into Europe and other areas a bit easier, although that's realistically a couple of years away. Cotelligent's business consists of three main areas. It makes the most money from placing temporary, technical staff with customers, something the larger firms aren't as focused on and an area where Cotelligent could shine. It's fastest growing area is project management, which includes application development and maintenance. The third area is outsourcing. It's main vertical markets are telecommunications - making it well positioned to cash in on the changes wrought by the telecoms act - followed by technology and banking.

Status

Cotelligent's plans for greatness include adding 200 to 250 technical staff to its 1,000-strong work force, in addition to employees it'll inherit through acquisitions. It's formed a national sales force of its six member chiefs and two other employees, aggressively termed "the SWAT team," to go after national accounts for the first time and to partner and subcontract with larger service providers until it is able to compete on their level. Part of Cotelligent's strategy is to leverage existing contracts between its member firms and local offices of national companies. For example, a member firm might have a project management contract with a local bank branch, but now with the Cotelligent network of firms it could use that contract as a foot in the door to bid for a deal with the bank nationwide. It's also trying to increase its relationships with large vendors, such as Microsoft Corp, so that each member firm has the same reseller status to enable the group to bid nationally. But even those plans for Cotelligent, whose member firms' contracts usually range from \$200,000 to \$2m and occasionally \$3m, to break into the big league where the main players don't even bother with contracts under \$3m. The bottom line: the service industry has been an elite and cliquy club for a long time; Cotelligent is facing an uphill battle. Cotelligent's members include BFR Co Inc, Liberty Corner, New Jersey; Data Arts & Sciences Inc, Boston, Massachusetts; Chamberlain Associates Inc, San Mateo, California; ESP Software Services Inc, Minneapolis, Minnesota; FDSI Consulting, Bellevue, Washington; and Innova Solutions Inc, Dallas, Texas.

SNI REVEALS PC PLANS FOR RUSSIA

Siemens Nixdorf Informationssysteme AG has let it be known that it plans to be one of the major players in the Russian personal computer and server markets - and that it has the resources to make this happen. The company recently announced its strategy for developing its server business in Russia. The systems business at SNI, already active in Russia, has been supplemented with a mid-range team, responsible for developing a business through local partners. The team now has a "million Deutsche Mark" budget to help grow the businesses of those Russian distributors and integrators willing to commit to selling SNI products. "There will be no demands for minimum purchases but a scale of co-operation depending on how committed a partner is to selling SNI products," says Otto Neuer International Indirect Sales Director. "Commitment" means the degree to which a company is oriented towards selling SNI hardware and its willingness to promote SNI in Russia.

LOGIC WORKS AND RATIONAL LINK DATA, OBJECT MODELS...

Leading PC database modeling company Logic Works Inc, Princeton, New Jersey, and Santa Clara, California-based object-oriented software engineering specialist Rational Software Corp have jointly developed an integration link that allows their respective design tools to exchange metadata. The two claim that until now there's been no easy way to move between object and data models; until now solutions had to be hand coded. Their idea is that relational databases elements created using Logic Works' ERwin tools can be translated into object models that can be implemented in Rational Rose and vice versa. Specifically the link converts ERwin's ERX file format into Rational Rose PTF format which represents the model of a business process. The companies say developers will be able to use ERwin to reverse engineer existing relational databases for migration to Rational Rose object models for developing partitioned applications. Meantime, Rational Rose can generate data definition language files that can be captured by ERwin for object-relational database design for Microsoft SQL Server, Oracle and Informix. A first generation integration link is being given away from both companies' web sites. It allows Rose classes to be created from ERwin entities and classes and vice versa, but doesn't guarantee that information won't be lost on the round trip. A second generation link which will provide more seamless and robust migration will follow, though there's no timescale. Rational said it and Logic Works agreed to work together because they share a large number of customers. Logic Works had originally planned to create its own object model. Rational is to resell Logic Works tools in the US and Canada.

...CAYENNE SAYS ITS REPOSITORY-BASED SOLUTION WILL BE BETTER

Meantime, Cayenne Software Inc - the Massachusetts-based Bachman Information Systems Inc and Cadre Technologies Inc combine - says the LogicWorks-Rational solution lacks enterprise-level development features such as a repository which it will be happy to provide from next year. It's currently developing a repository which it will offer for use with both the Bachman GroundWorks relational database modeling tool and Cadre ObjectTeam group C++ development environment. It's based upon the current ObjectTeam repository. Currently there's one for each. Cayenne says the passing of models back and forth between ERwin and Rational Rose will inevitably lead to the loss of data. Cayenne says its combined developer product will be aimed at both technical and commercial users. It's all C++ now though ObjectTeam is currently being Java-enabled. ObjectTeam is based upon the Case tools inherited with the acquisition of Westmount Technology BV. Cayenne recently announced it'll give up a portion of its ObjectTeam installed base, those developing object applications using the Shlaer-Mellor Method, to Project Technology Inc, developer of the Shlaer-Mellor method and technology. All ObjectTeam for Shlaer-Mellor customers are to get tool support services from Project Technology which has also acquired rights to the ObjectTeam for Shlaer-Mellor technology and will develop a data migration tool called TeamPoint to migrate customers to its own BridgePoint Shlaer-Mellor Case tool. TeamPoint will be available in early 1997 free of charge to all ObjectTeam customers. Cayenne says that in the face of the forthcoming combined Universal Modeling Language (UML) for object-oriented analysis and design the Shlaer-Mellor product will be a non-growth market and it'll UML-enable ObjectTeam instead. Cayenne claims 2,000 ObjectTeam for Shlaer-Mellor customers. Cayenne reported fourth quarter net losses up at \$2.8m from \$477,000 last time on turnover down 16.7% at \$8.0m. Net losses for the year to June 30 were down at \$5.8m from \$10.3m before, on turnover that fell by 4.1% to \$32.0m.

NETSCAPE TO BREAK UP NAVIGATOR

In a sharp break with its existing business model, Netscape is to divide up Navigator and sell individual components to software vendors. Our sister publication *ClieNT Server News* reports that the project is part of the Netscape 4.0 'Galileo' project. Netscape 4.0 will initially appear in monolithic form, but a 'modularised' version will appear hard on its heels. Navigator product manager Dan Klaussen told the paper that native components would be available for each of the 16 platforms on which Navigator runs - a pretty mammoth redevelopment effort. He said the modules will be offered in ready-to-use form that drops into various development tools on the range of platforms. Moreover, the company is planning to make the modules native on each platform. So on the Macintosh, for example, Netscape has already committed itself to building an OpenDoc version. On Windows it will probably end up doing OLE-wrapped modules. The major pieces likely to emerge as components include the browser itself, mail, news and threaded discussions. There's no pricing or accurate timing information available yet. Netscape says that the monolithic 4.0 is on track to be delivered before year-end with the components following "soon after". The modularisation effort could also help ameliorate Netscape's perceived 'bloatware' problems.

IBM THROWS R&D ONTO THE WEB, JAVA FOR WIN 3.1 ARRIVES

The mysterious IBM Corp alphaWorks project turns out to be an audacious attempt by the company to accelerate the pace at which Internet technology, under development in the labs, is either turned into products, licensed or junked, reports our sister publication *Online Reporter*. IBMers from labs and individual skunk-works projects will submit their pet gizmos to a new Web site (www.alpha-works.ibm.com) for the world to download and evaluate. IBM is also hoping that it will improve sluggish communication within the company, bringing hot technologies to the notice of product managers within IBM. "We realised we had a dire need to figure out a better way to get these technologies out into the world," says alphaWorks manager, Andrew Morbitzer, "we want to get them out very early in the life cycle so we can quickly get the money behind the technologies". As part of the scheme, IBM has streamlined the intellectual property clearances that IBM researchers need to undertake before releasing technology. A Notes-based internal system has reduced the time for clearance (including name clearance, patent protection etc) to around three weeks in most cases, says Morbitzer - maybe six if there are complications. The site debuts with six technologies, including the long-awaited Java system for Windows 3.1 (now named 'applet development kit for Windows 3.1', to avoid Java trademark issues). The others include: Bamba, a real-time audio and video streaming, encoding and player package which IBM reckons out performs both RealAudio and VDO.Net. Another, Panoramix, sounds as if it should give Apple's Quicktime VR a run for its money. It is claimed to let Internet users construct panoramic views of landscape or rooms without the need for a special camera. Morbitzer says that he has around 40 technologies already queueing up to go on the site before the project has even been announced internally, around 6 new items will go up every Friday. AlphaWorks is the logical extension of the Web's 'post-a-beta-for-free' software development model. It is also an acceptance IBM has to act much more nimbly in an Internet market where early release of a technology demonstration (no matter how flaky) is a fundamental tool in creating developer support and growing 'mindshare'. Morbitzer claims that the project has achieved wide support within IBM itself, despite the risk involved in effectively inviting the competition in to look around the labs. "There will be a small number of occasions when we have something that is revolutionary" he says; but in the majority of cases IBM will be in competition with firms that are attempting to develop something similar "... and they will be getting it out there early - you have no choice but to take the risk," says Morbitzer, who adds: "this was a dream project, I really haven't had to battle anybody." Alphaworks was the brain-child of John Patrick, VP of Internet Technology who presented at last May's IBM senior management meeting and gained the approval of Lou Gerstner.

DEC TO FLOAT ALTAVISTA TO RAISE CASH NEEDED TO SUSTAIN IT

Every action of Digital Equipment Corp over the past two years has pointed to a company desperately short of cash, and the situation - which seems to have passed Wall Street by completely - has clearly not eased at all of late. Thus, rather than find the \$50m or so that its new Internet division is pressing to finance the development and marketing of its search engine and other products from the Maynard treasury, DEC has turned the division into a new subsidiary, AltaVista Internet Software Inc, and is sending the thing out to market to raise the money for itself. It's not even good timing - much of the froth has now blown off the Internet new issues market. Making it clear that it doesn't want to let any part of AltaVista go, the company is selling A shares that carry one vote but didn't say how many would be offered or at what price. It's hanging on to B shares that carry three votes each, so that it will own at least 80% of AltaVista after the flotation and can sell plenty more A shares to raise further cash without losing control. Lehman Brothers Inc, Cowen & Co and J P Morgan & Co will jointly manage the underwriting. The new subsidiary will include other software products for the Internet and intranet alongside the search engine, including security products, management software, electronic mail and workgroup collaboration software, *Reuters* was told. The new DEC subsidiary also announced two new additions to its AltaVista Security family last week, NT versions of its AltaVista Tunnel and AltaVista Firewall, which aid cyberworkers access business information from any location and also help protect private networks from the Internet. The company also announced that AltaVista Firewall has been certified as the first approved firewall on Windows NT by the National Computing Security Association (NCSA).

IBM READIES NEW PARALLEL FILE SYSTEM FOR SPs

IBM Corp says it had 1,515 SP systems installed at the beginning of August with a total of 16,000 nodes, 1,000 or more of them commercial systems, 500-plus technical units. There are a greater number of technical nodes installed - that's where the really CPU hungry users are found, including Cornell University's 512 processor beast - though IBM claims there is one commercial user at nearly 400 processors and many others at the 50-to-60 CPU level. By the end of 1996 IBM hopes to have doubled its 1995 SP installed base, which stood at 1,023, which means it's got 531 to go. Whilst critics suggest many SPs are deployed primarily as LANs-in-cans - as shared memory rather than shared nothing devices - SP supremo Dave Turek claims there are only "a handful of dozens" of users which don't use the interconnect, now at 113Mbps and 37 microsecond latency, all of them commercial installations. In these cases SPs are generally being used to consolidate large-scale server operations, he says. A new parallel file system implemented upon AIX due next year will make SPs even more attractive for file serving, Turek says. Meantime, the SP group's getting closer with BEA Systems Inc on a variety of Tuxedo/SP configurations, including a Tuxedo/Oracle solution strategy.

PURE ATRIA FORMED FROM ATRIA-PURE SOFTWARE UNION

Atria Software Inc and Pure Software Inc announced last week that shareholders of both companies have approved the merger of the two companies to create a new Automated Software Quality company to be known as Pure Atria Corp. The new company's stock will be traded on Nasdaq under the symbol PASW, and it expects to incur a one-time charge of about \$365m in the third quarter of 1996 for merger-related expenses. President and CEO of Pure Software, Reed Hastings will assume the same title in Pure Atria and Atria president and CEO, Chuck Bay will be chairman of the board of directors (UX No 593).

MITSUBISHI TAKES MOTOROLA MPC801 FOR DIAMONDWEB TV

Motorola Inc last week expanded its embedded PowerPC offerings with the MPC801, a general-purpose part designed for consumer markets - and Mitsubishi Electric Corp's Mitsubishi Consumer Electronics America Inc of Norcross, Georgia immediately stuck its head over the parapet to say that it will use the part in the DiamondWeb TV, which is conceived as an all-in-one consumer-friendly, network-centric television set. The MPC801 combines a PowerPC core with integrated peripherals to provide modem, video, audio and television monitor interfaces. The processor in the DiamondWeb TV will run Microware Systems Corp's OS-9-based David interactive television set-top box operating environment. Mitsubishi's television also uses the Motorola Scorpion graphics processor and a 68HC68 Vertical Blanking Interval slicer. The Scorpion encodes the digital data stream from the MPC801 so that it can be displayed. Motorola also sees the MPC801 being used in bar code scanners, cellular base stations, consumer information appliances, laser printers, plotters and set-top boxes. The 25MHz MPC801 will sample next month with volume in the fourth quarter at \$30 in 10,000-up quantities. A 40MHz version on the same time-scales will cost \$37.50 for 10,000-up. Mitsubishi Consumer did not give full details of the DiamondWeb, but said it would focus on large-screen models of up to 40". DiamondWeb will have access to the Web, a single remote control, strong graphic and audio features, and run Mitsubishi's WebView software. The Internet will feature as "just another channel to the user - switching to the Web will be as easy as changing channels," it says.

SOFTWAY ENHANCES UNIX-ON-NT UTILITIES

SoftWay Systems Inc has enhanced its OpenNT commands and utilities suite that brings Unix commands and utilities and Posix.2 compliance to Windows NT by adding support for the Unix KornShell and Posix command shells, a bunch of other Unix utilities and new documentation. OpenNT is priced at \$200 for a single processor licence. The San Francisco, California-based company is also now offering its promised \$100 software development kit for developing and porting Unix applications on to Windows NT. Meantime, OpenNT TelNet Server 1.0 allows multiple users to log on into an NT system and access OpenNT Posix/Unix shells or Windows NT command shell. It's priced from \$100. SoftWay is supposed to make NT fully compatible with X/Open Co Ltd's XPG4 brand by mid-1997, making NT Unix 95 brandable. The Intel Corp-based OpenNT is also now up on DEC Alpha machines running NT. SoftWay's building OpenNT under a long-standing agreement with Microsoft Corp.

NETSCAPE-WITH-NAVIO TARGETS MICROSOFT MONOPOLY

By Nick Patience

Netscape Communications Corp's decision to create a Navio Communications Inc affiliate is the first attempt by a major software player to address the changing shape of the software market, as it moves from one of boxes of disks and CD-ROMs sold off the shelf, to small applets downloaded from the internet. ~~The software industry is changing from a commodity industry to a service model. And the effect that will have on the whole industry: software and hardware servers and clients as well as networking will be profound.~~ As former Lotus Development Corp CTO and lately IBM Corp consultant John Landry put it, "don't get lost in the idea that it's an extension of the business computer model, it's not." He warned any software players that don't address this fast enough that their days could be numbered, citing the car industry as an example of what could follow. "It's like Detroit 25 year ago," he said, "we can't make money from small cars, then people stopped buying big cars and Detroit collapsed. It's a case of 'vu ja de': I've been there before and I didn't like it much that time either."

Uncertain place

Some of the big hardware players must be having a quiet chuckle to themselves at the impact Java has had on the software industry already, and what is to come. None more so of course than house-of-rising Java steam Sun Microsystems Inc. As Scott McNealy said at SCO Forum when reaching the top of his list of ten reasons why SCO would want him to talk to it's customers: "It's Java, stupid." Suddenly the desktop shrink-wrapped software market looks an uncertain place, even for it's overlord, Microsoft Corp. McNealy has a theory that whatever software is available in volume, will be available for 30% of the price somewhere on the internet. "You can't download a SparcStation for free out over the internet - cool," he says. Companies like Sun, IBM, Compaq should benefit from businesses requiring bigger and faster servers. And Unix will surely continue to be the operating system of choice for serious servers coping with the heavy demands placed on them by the internet. But there is another market waiting to be tapped. The home market is looming on the horizon, as service providers will require more power to supply users at home with their network computers. It seems inevitable that NCs are going to have some impact in the business computer market over the next few years, as companies realise it's easier and cheaper to maintain a lot of NCs from a central point than networked PCs. Even Bill Gates last week told the audience at CA World in New Orleans that "apart from the internet, our top priority is to understand and address the total cost of ownership." Even the most devout Microsoftie would admit that the latter has never really been a consideration in the past, and the company wasn't converted to the internet until last December. But even good friends of Oracle's Larry Ellison don't seem to believe that people are really going to have NCs in the home that are the same as the ones they may eventually have on the desk at work. And it would be such a waste of good technology if they did. The things are there already: games consoles, televisions, even refrigerators, but more of those later. And consumers are not about to ditch their multimedia PCs for NCs

Refrigerators

If the NC is going to become a reality they have got to be very cheap, easy to use and have access to sufficient bandwidth. Acorn founder and NC-enthusiast Herman Hauser reckons they will have the same impact that the PC had on the minicomputer in the early 1980s. Hauser is probably overstating it a bit, but he does have a vested interest with Acorn's Applied RISC Technologies Ltd ARM chip at the heart of the Oracle-designed NC, as well as service provider NetChannel Inc (UX No 601). Clearly PCs are not going to disappear completely for decades, if at all, and some sort of co-existence will develop. Hauser reckons, and he's probably right, that NCs must be half the price of the average PC at any given time. And the only way that can be achieved without some unforeseen technology leap, is by leaving out a monitor and using the television. Many of the early players are struggling to get anywhere near the right price, with IBM's offering looking at costing around \$700 without a monitor. Clearly nothing costing that much is going to succeed in the home. Sun declared from the outset that it was aiming at businesses only with it's Java terminal, and it's likely to cost more than \$1,000. But these companies cannot be expected to be any good at making consumer products. Which is why anybody writing software (in Java, naturally) had better start thinking about what kind of things would be suited to Nintendo, Sony, Sega machines, as well as what would be realistic applications for Nokia, Ericsson and Motorola cellular telephones. As Landry said, children and many adults are now used to a graphical interface that's not Windows, thanks to Sega, Nintendo, and latterly Sony. And "ActiveX won't run on PlayStations, Java will," predicted Landry. So, there will be PCs, NCs, Java-powered telephones, and according to Hauser, refrigerators. Speaking at SCO Forum recently he only half-jokingly suggested the fridge: "it's the "classic NC a few years out." Where now people put messages on their fridges with magnets, with a flat panel display built in, it could become the information fulcrum of the kitchen. At this point, a voice can usually be heard asking 'what about the bandwidth?' Hauser reckons Asynchronous Transfer Mode (ATM) will be possible in homes using Asymmetrical Digital Subscriber Loop (ADSL) and High bit-rate Digital Subscriber Loop (HDSL) technology, which should enable ATM to run over regular telephone lines, rather than just cable, which is the best option if it were deployed more widely.

Modular

Navio's mission is to produce internet software for the consumer market - anything from cars to games consoles - aimed at non-PC users, but based on it's Navigator web browser software. The aim is to go "where the PC can't and is not likely to go," said Netscape co-founder Jim Clark, who is also chairman of both companies. And where the PC can't and won't go, Netscape's obviously hoping Microsoft can't and won't follow. Navio has partnered with IBM, Oracle, Nintendo, Sony, Sega and NEC. The last four are clearly masters at the consumer market place, while IBM and Oracle are not such obvious participants, other than that they were central to the NC Reference Profile effort (UX No 591). As to the type of products, details were sketchy last week, Navio insisting it was just a company announcement. None of the partners was even present. Navio chief executive Wei Yen identified three areas in which the products - due "some time next year" - will be used. The first is television-centric environments, such as game consoles, set-top boxes, and Digital Video Disk systems (DVD). Next is communications devices, including PDAs, cellular and other telephones. Yen said this category may subsume into one device before long. And lastly, the information terminal, by which Yen meant network computers, kiosks and other home appliances. He said the first batch of all three categories of products are likely to be released around the same time next year. The software will be based on Navigator technology and will run on things with embedded, real-time operating systems or no operating systems at all, and will support all the standards that Navigator supports. Navio software will be modular and dynamically downloadable. The Navio browsers, as it's still calling them, will reformat the input for televisions and devices such as phones that only have space for a few lines of text. The Navigator team will provide the knowledge as far as Java, security and objects go. The software will be extensible via plug-ins.

Fistfuls

Clark chose his old SG friend Yen to be the president and chief executive. Yen left his post as SGI's senior VP products and technologies in March this year. The make-up of the new company, based a few blocks down the street from Netscape in Sunnyvale, California, was not disclosed, other than that Netscape has a "major equity position." There will be six other investors besides Netscape, but nobody was saying whether any of these initial partners have or will have a stake. Marc Andreessen, Netscape's co-founder and chief technology officer reckons the market for the Navio software is at least 500m users in five years time. If all the PCs - about 240m at the moment - phones, consoles, pagers, cars, televisions and practically everything else that moves and everything that doesn't are included, then that number is clearly conservative, and pretty meaningless. But Netscape is fast out of the blocks in signing up all the games console companies that matter, together with IBM and Oracle, as well as some others that it declined to talk about. Though the deals are not thought to be exclusive. Yen grandly claimed the "the internet will be as important as electricity to consumer devices in the next century." Andreessen said because of the extra advertising opportunities, the potential for giving consumer internet devices away for free was even greater than with cellular phones, which are already given away in many markets, and are also ideal internet devices. Navio is set up in such a way "to have no impact on Netscape's bottom line," according to Clark, which presumably means the parent will not split out the numbers. Clark said having his name at the top of the company usually meant a public offering at some point in the future, before adding that "employees like to have that to look forward to." Netscape is a very young company to have to be looking for another market to replace its core browser market so soon. Ironically, Netscape now charges for Navigator, while Microsoft, the ultimate software-as-a-commodity company gives Internet Explorer away, as it grabs fistfuls of Netscape dominant, but declining PC browser market share. But Netscape could afford to lose much - and probably will - of the commercial browser market, as long as its servers continue their march forward and Navio gets a big share of the home market. It remains to be seen whether this move will enable Netscape/Navio to create a large enough market on the non-PC front fast enough to balance the Microsoft browser threat. But, together with Netscape's continuing good showing on the web server front, it might just be enough. If the Microsoft desktop software monopoly is not broken in the next couple of years, then never would so much venture capital be wasted on just one software and one hardware concept: Java and network computers.

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Bell Labs finally got its Inferno documentation up on the Web (www.lucent.com/inferno). Now it's working on code that will prevent particular countries from downloading the operating system once the beta goes on-line. It can't get government approval to put it on the Web till that's accomplished.

Digital Equipment Corp will be hoping that AltaVista Internet Software Inc will be seen as rather more than simply a search engine company: Lycos Inc opened the week valued at \$85.3m, Infoseek Corp at \$63m and Excite Inc at \$70.9m, whereas Yahoo! Corp, more of a brand than a search engine company as it actually uses the AltaVista engine these days, is, at \$19.75, still valued at about \$508m; it floated at \$13, and the shares soared to \$33 in first day trading.

Digital Equipment Corp's first fiscal quarter is off to a slow start, and the probability of a loss has increased, **Morgan Stanley & Co** analyst Steve Milunovich said in a note to clients. He says that when he visited DEC senior management on Monday, it indicated that orders have been below plan through last week and Europe continues to be soft, with the US and Far East a bit slower. Milunovich also said that strength in servers is offset by weakness in personal computers, in workstations and in networking.

At **National Semiconductor Corp** they call it reshaping, at **Tandem Computers Inc** it's reducing duplication or focused reduction; **AT&T Corp** calls it a force management program and its **Bell Laboratories** unit bluntly calls it involuntary separation from payroll, at **Digital Equipment Corp** it's involuntary severance and at **Pacific Bell Inc** it's elimination of the employment security policy. The examples were collected by William Lutz for his book "*The New Doublespeak*" but whichever way you say it, it doesn't alter the fact that you're fired.

Digital Equipment Corp is planning to establish AltaVista Web sites for northern Europe and Australia and New Zealand in October, to provide users with quicker responses to Internet searches. The first two affiliates of the AltaVista Worldwide Network - Sweden's **Telia AB** and Australia's **Telstra/Yellow Pages Ltd** - will establish the Web sites at <http://www.internet.telia.com> and <http://www.altavista.yellowpages.com.au>

Sun Microsystems Inc opened a new UK manufacturing plant in Greencroft, County Durham last week for its **Integrated Micro Products** business unit, formed from its acquisition of fault-tolerant systems manufacturer Integrated Micro Products Plc last April (UX No 582): the new 33,000 square foot plant will supplement the output of the original 12,000 square foot home in Consett, which is no longer adequate to contain the company's 100% plus growth in revenues last year, and the addition of 50 employees with recruitment continuing - and it sees huge potential for growth in Europe, given that 90% of current ft-Sparc sales go to the US with the other 10% going to Japan; the plant was under construction with the help of a regional grant before Sun moved in and bought the firm.

The TNG release of CA-Unicenter due at the year-end is to be integrated with **Microsoft's** Internet Explorer 3.0 web browser and use those recently-created web-management protocols (UX No 599). What that means for CA's much-hyped 3D interface for TNG created using the Mill Valley, California-based **Sense8 Corp** WorldToolKit the company hasn't been able to tell us.

Now **Motorola Inc's** Menlo Park Design Center, the former **FirePower Systems Inc** is supposed to be putting AIX up on its Powered PowerPC boxes. It hasn't done so previously because AIX is too expensive. Presumably it'll use the AIX Motorola has up on its PowerStacks.

Just as **IBM Corp** told us at the time, **Data General Corp's** claim that **Daewoo Telecom Ltd** would stop distributing RS/6000s in South Korea following its deal to sell DG's NUMA systems into government markets turns out to have been pure puff (UX No 598). Daewoo Telecom Ltd, a unit of \$55bn South Korean Daewoo Group last week expanded its agreement with IBM Corp so that it can now sell the entire RS/6000 range, and sell them outside of South Korea if it wishes. Daewoo's been deploying RS/6000s as the DTC-4000 in the South Korean market since 1993.

Dynasty Technologies Inc says it's had plenty of proposals from suitors that would like to take it public in the wake of **Forte Software Inc's** IPO, but says it's turned down all advances so far (UX No 599).

In comparison to **LogicWorks/Rational** and **Cayenne** - see page five - New York company **Popkin Software and Systems Inc** says its SA Object modeling tool can already do bi-directional translation between class models and relational data models. SA Object can create object data models from relational data models, and create logical data models from object-oriented designs which are converted to a physical data model from which multiple relational database schema can be generated. SA Object can also now generate OMG Corba IDL from class diagrams. The IDL can be compiled into source code to create object applications.

Intel Corp told the *Wall Street Journal* it's started a Microcomputer Labs unit to do its own long-term research into microprocessor design rather than just improving on approaches already laid out by mini, mainframe and supercomputer designers. It's headed by Richard Birt, has 70 staff and a reported budget of a few millions, compared to the \$2bn Intel spends on manufacturing and chip design every year. Meantime the Hillsborough, Oregon-based Intel Architecture Labs has refocused on system hardware and software.

As **IBM** and **DEC** begin to offer message-oriented middleware for their respective object request brokers (ORB) for asynchronous object message passing, San Diego, California-based ORB house **Expersoft Corp** says it'll integrate its PowerBroker ORB with Houston, Texas-based **Modulus Technologies Inc's** InterAgent Toolkit transport mechanism and communication services.

Amdahl Corp's hired Sal Alini to be its new VP and general manager of the enterprise server division. Amdahl says Alini will also be responsible for its third party relationships and corporate alliances with **Intel** and **Microsoft**. Alini was formerly VP of **Tandem Computers Inc's** OLTP division, which of course is now heavily into Wintel. Amdahl last week unveiled five new Intel/NT EnVista servers and added its two penn'th to the slew of clustering announcements with a high-availability Unix bundle, the Fail-Safe Datacenter Solution combining two Sun Ultra Enterprise servers, Amdahl A+FailSafe Multi Server Failover software and LVS 4500 logical volume storage system. We understand there are still a bunch of organisational issues outstanding at the Sunnyvaler.

Computer Associates has announced the first of its anticipated independent business units as NetHaven, which will house its Internet content hosting, management and commerce efforts.

Tandem Computers Inc's first ServerNet-based NonStop Himalaya servers are supposed to be unveiled in October.

Informix Corp SVP and chief financial officer Howard Graham is to leave the company at the end of this year. He joins the long list of Silicon Valley executives leaving to seek smaller environments in which to work, but said he has nothing lined up yet.

DEC's reportedly got an AlphaServer 8x00 follow-on it's working on called Wildfire. It's said to implement a new crossbar switch architecture. It'll be a while before it's out.

Santa Ana, California-based **Select Software Tools Inc** is integrating **Iona Technologies Ltd's** Orbix object request broker into its Enterprise object-oriented application analysis and design tools, claiming the bundle will allow developers to model, generate and deploy applications across distributed environments without having to implement a discrete distribution mechanism.

St Paul, Minnesota-based **Object/FX Inc** has implemented its SpatialWorks toolset for organising, viewing and analysing enterprise-wide data upon **Versant Object Technology Corp's** object database. It will sell the bundle on Unix, OS/2 and Microsoft from \$12,000 for 10 users. Versant is one of that shrinking band of companies that still describes itself as an object database vendor. **Electronic Data Systems** said it is using the Versant object database for its Media Vault multimedia management system, an initial implementation of which is being used by Sprint in its Drums project.

"To solve these problems" (he was talking about computer design), "it's best to keep them in as few minds as possible - preferably one," Dr Gene Amdahl once advised us: Anatoly Karpov took 32 moves to beat the collective minds of chess fans logged onto the site where his moves were transferred from a chess board in Helsinki. Internet users were given seven minutes to key in their suggested move and a computer calculated the most popular one.

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IBM AIMS TO GET NETWORK STATION USERS SURFING

IBM Corp duly launched its thin client computers last week, calling them Network Stations (UX No 603). Costing \$700, they run off a PowerPC 403 processor with a small boot PROM that downloads an operating system from the server and come with 8Mb RAM. Jim Gant, VP integrated workstation solutions at the IBM server group appeared confused as to the identity of the operating system, saying it was both an IBM product and not an IBM product in consecutive interviews. But it turns out to be the same operating system Network Computing Devices Inc uses in its Explora terminals, according to NCD a kernel very loosely based on an old Berkeley System Design cut. NCD will manufacture the Network Stations which will be available at the end of the year (UX No 597). They can connect to multiple IBM AS/400, RS/6000 and S/390 servers - but only IBM servers - running Unix, Windows NT and OS/2 simultaneously and come with either an ethernet or token ring connection. The next versions will have twin-axial and co-axial support within nine months, according to Gant. Other enhancements due by then include SLIP support for dial-up capabilities and double-byte character support to handle Japanese, Chinese and Korean script. Apart from 3270 and 5250 emulation software, users will also be able to download a version of Netscape Navigator, which is being slimmed down by Netscape's Navio Communications Inc, though Navio was unwilling to be specific as to what it was doing. A Java virtual machine will also be available, as will Lotus Notes, with a Domino web applications server. The device is 10" by 1.25" and looks like a very thin laptop standing on its side. When turned on it downloads the operating system and displays whatever icons on the screen the user is set up to receive. There is a small no-charge software package for each of the servers which has a client software boot manager and a program to set up the users' files on the server. It also has a user manager function that puts the icons on the desktop, which also handles things like adding bookmarks when using Navigator. Given that the Network Stations only come with 8Mb RAM it would seem to mean that these are more green screen replacements than web terminals, although it remains to be seen what Netscape/Navio does with Navigator to get it small enough to run fast enough on devices like these. The AS/400 division wanted to emphasise that NCD will be the sole manufacturer of the Network Stations, with other manufacturers being brought in for specific software and hardware components as necessary. Meantime, the Personal Computer Co network computer effort, the Inter-Personal Computer will be iAPX-86-based and is basically a diskless personal computer, with operating system-specific versions planned. They'll be announced next quarter.

DEC CREATES CHEAPER RAWHIDE MODELS

DEC's creating lower-priced versions of its mid-range AlphaServers by removing some expandability options from the existing 4100 Rawhide configuration. The 4000 5/300 and 5/400 models support one or two 300MHz or 400MHz Alpha 21164 processors rather than Rawhide's four, and up to 4Gb RAM rather than 8Gb on the 4100s. The Unix, NT or OpenVMS servers are aimed at data mart, OLTP, enterprise email and PC LAN networking applications and use the same system drawer 'building block' cabinetry as the 4100s. They've have been previously described as versions of the two-way DemiSable servers upgraded to higher bandwidth Rawhide electronics. The 4000s support up to 2Gb RAM initially and 4Gb by November - enough to run the VLM database-in-RAM option - by which time the 4100s will support 8Gb RAM. A uniprocessor 5/300 starts at \$40,000 with 128Mb RAM and 4.3Gb disk running Unix or \$34,500 with Windows NT; the 400MHz unit is priced at \$44,500. Upgrades to the 4100 from 4000s start at \$22,500 - 4000 5/300 and 4100 5/300 upgrades to 400MHz processors start at \$10,000. The 4000 models also support DEC's clustering solutions. Meantime, DEC says it will offer a 4Gb RAM option for its high-end one-to-12 way Unix and OpenVMS TurboLasers - the 8400 and 8200 models - at just under \$100 per Mb in January. It's also reduced pricing on its two-way Alpha 21164A upgrade modules for the 8000 series; 440MHz boards are \$65,000, 300MHz versions are \$40,000 each. DEC's claiming a 12-way 8400 5/440 running Digital Unix and Oracle 7 achieves the highest single-system TPC-D rating with a 100Gb database configuration. There's still no word on NT for the TurboLasers.

POWERSOFT MAKEOVER OF SYBASE CONTINUES

The Powersoftisation of Sybase Inc is almost complete with the resignation of enterprise products group president Dennis McEvoy who's gone to text retrieval company and Sybase partner Verity Inc, where he will oversee research and development, support and consulting groups as executive VP. David Litwack, former president of Sybase's Powersoft business group gets McEvoy's reports in his new role as executive VP products, now responsible for both the Powersoft application development and Sybase database (enterprise) products. Like the Powersoft group, the latter unit will now be decomposed into around eight different product offerings, none of them a core flagship product. McEvoy's resignation follows the recent appointment of Powersoft founder and CEO Mitchell Kertzman to the Sybase helm as president and CEO, replacing Sybase co-founder Mark Hoffman (UX No 599). The blood-letting comes after two quarters of losses which Sybase seems unable to reverse. Kertzman was given many of former COO and executive VP David Peterschmidt's responsibilities back in April when he was elevated to executive VP sales (UX No 584).

SUN TO USE CITRIX FOR ACCESS TO WINDOWS APPS

Redmond foe Sun Microsystems Inc is negotiating a licence to Citrix Systems Inc's eponymous ICA protocol which allows users of windowing terminals and other skinny clients to access Windows applications running on Windows NT servers. As the companies have only signed a letter of intent details are sketchy but Sun's understood to want ICA for use with JavaOS, Solaris and its forthcoming network computer offering. The inability of network computers and other terminals to run Windows locally has sent vendors scurrying to Citrix and its solutions partners such as Insignia for ICA licences as the client component requires only 200Kb to 300Kb RAM. Current licencees include Microsoft itself, Wyse, Boundless, Tektronix and NCD (IBM's network computer partner). What Citrix doesn't yet have, and what it told us it doesn't expect to develop itself, is a Java version of the ICA client, which would provide any Java-based system with access to Windows applications. In its current form ICA, effectively a multi-user extension to Windows NT, requires clients to feed from Windows NT Server running Citrix's WinFrame server component. However there's supposedly no reason why it couldn't be made to run elsewhere with a year or so's work, say on a Sparc server, allowing terminals and other devices to access Sparc programs.

UNISYS READIES 200MHz PENTIUM PRO NODES FOR OPUS PARALLEL SYSTEM

Unisys Corp says it will begin offering its Opus massively parallel processing system with 200MHz Pentium Pro nodes around the beginning of the second quarter of next year. Opus is based upon Intel Corp's SPP scalable parallel processor hardware and runs its own Unix SVR4.2 operating system atop the Chorus Systemes SA's microkernel. Unisys says it will continue to develop the Opus Unix even though it's turning its other Unix platforms over to UnixWare. The company says there's no truth to talk of Opus' demise, attributing speculation to the disbanding of a discreet Opus division; the parallel processor now resides in the computer group formed in the company's most recent reorganisation into three business units (UX No 562). Unisys says the ccNUMA servers it'll build with Data General Corp clustering technology are being designed as general purpose data centers, Opus remains the platform for high-end database and decision support applications. It claims 20 Opus customers at 16 nodes each. Opus was launched in May 1995 (UX No 536), making good an August 1993 pact between the two firms (UX No 448). Unisys' initial expectation was that Opus would net it \$100m business in 1995 and a 30% market share by 2000.

SYMANTEC: THIS ISN'T YOUR FATHER'S SEARCH ENGINE

Does the world need another Internet search engine? You gotta be kidding. But does the world need a better way to search the Web? Always. Software utilities giant Symantec Corp thinks so too, and is hoping users will shell out \$50 apiece to be able to trawl seven web search engines simultaneously and take the hassle out of decompressing files, FTP and other downloads. Cupertino, California-based Symantec's new Internet FastFind engine will be available September 9 from its home page and will hit stores soon after. The software runs under Netscape Navigator or Microsoft Internet Explorer on Windows 95 and Windows NT 4.0 - it doesn't have a Macintosh story at present - and requires 8Mb disk space. Internet FastFind consists of seven elements which users link to via an oval-shaped menu window reminiscent of the new breed of automobile dashboard control units. The software's main function, WebFind, simultaneously searches seven engines - Alta Vista, InfoSeek, Lycos, WebCrawler, Yahoo!, Magellan and Excite - and lets users specify which engines to search, the maximum number of matches to retrieve, how many seconds to search and whether to discard invalid links. WebFind will narrow the search to sites only or pages only, and means users won't have to memorise different engines' query syntax. To use it, click on one of the two buttons it adds to a browser's directory bar. NetFileFind lets users search for specific FTP sites using Archie, but without the usual jargon, and download the files by dragging and dropping. The Notify feature tracks favourite sites and alerts users to changes. PatchConnect analyses a PC's other software and, working with Notify, tells users when updates are available. WebLaunch bookmarks favourites to be launched from the Windows taskbar. EasyFTP makes FTP files appear like regular Windows folders that users can drag and drop onto their system. EasyZIP automatically zips and unzips compressed files, but the extension is a separate Symantec product and will only be bundled with Internet FastFind for a limited time.

First foray

The whole shebang is Symantec's first foray into the world of Internet-only products and is positioned so that users will be well accustomed to its use before Microsoft launches its browser-based Nashville interface for Windows which is expected to include some similar functions like the notifier. Symantec lost \$39.8m on revenue up just 3.3% at \$445.4m last year and though it plans to milk FastFind for whatever it can it doesn't expect the software to become a significant revenue earner. It just wants to get people using its net software, presumably in anticipation of web versions of its other utilities and management tools. It doesn't rate the competition, saying Quarterdeck Corp's WebCompass multiple search engine is geared toward intranets, and that other internet utilities don't have as wide a range of integrated features. Symantec will tout Internet FastFind's mass market appeal - it's targeting users who surf the web more than five hours a week and is advertising the software in USA Today and on Netscape's home page. Expect bundling deals with modem manufacturers and Internet service providers to follow.

C-CUBE COMPLETES \$143m BUY OF DIVICOM, WRITES \$133m OFF

C-Cube Microsystems Inc, Milpitas, California has now wrapped up its acquisition of DiviCom Inc for \$143m in cash and shares. Buying its neighbour looks a whole lot better deal now that DiviCom has wrapped up the contract to supply the MPEG decoding software for the 3m digital television set-top boxes being made for the Americast consortium by Zenith Electronics Corp under that monster \$1,000m contract. It is believed, but still not confirmed, that the boxes will run Microware Corp's David on some variant of the Advanced RISC Machines Ltd ARM RISC. Downside of the deal is that tangible assets at DiviCom are worth so little that C-Cube is going to have to take a monster \$133m charge against the current quarter's figures to account for the acquisition. C-Cube paid \$65.7m in cash and issued 2.291m new shares valued at \$30.36 a share to buy the privately-held DiviCom.

JERRE STEAD TAKES REINS AT INGRAM MICRO

Jerre Stead, the CEO whose administration NCR Corp is still trying to recover from, is now going to join distributor Ingram Micro as chairman and CEO. Stead left NCR after 19 months in the job and went to Legent Corp which he sold in short order to Computer Associates International Inc for a princely sum. Our sister publication *Client Server News* reports that after Stead left, NCR was forced to severely downsize its workforce and pare its operations in the face of hefty losses. Stead, who likes to style himself as "head coach," had removed many of NCR's traditional business disciplines like accountability during his tenure. Ingram Micro expects to go public soon. It better hurry.

CONCURRENT COMPUTER OUTLINES PLANS WITH HARRIS ON BOARD

Concurrent Computer Corp, which last week reported fourth quarter net losses of \$34.1m, and a net loss for the year to June 30 of \$39.7m on revenues down 32% to \$95.8m, says the loss for the fourth quarter, including a \$29m charge for restructuring and inventory write-down "was not unexpected," due to the prolonged nature of the merger with Harris Computer Systems Corp's real-time systems business. The two began jostling for positions way back in March 1995, achieving a measure of agreement in November, though the definitive agreement had to wait until June 26 this year. The company is now working on merging its two product lines, and says it expects the integration to be largely completed by September 30. The combined product concept, which favours Harris' Night Hawk PowerPC systems over Concurrent's own MIPS R4400-based Maxion range, was presented to the sales force back in July in Fort Lauderdale, Florida. Concurrent says the telecommunications market and interactive real-time applications such as video-on-demand, wagering and gaming, give it "real opportunities for growth," aside from its solid core real-time business. Meanwhile CyberGuard Corp, the trusted systems division of Harris that did not go to Concurrent, and which is also based in Fort Lauderdale, has sold a total of 8m Concurrent shares, and will use the money to pay off short-term borrowings and establish additional working capital. The move reduces its holdings from 22% to less than 5%. CyberGuard says it doesn't intend to be a long-term holder of Concurrent shares - it received 10m common and 2.5m preferred in the transaction. Concurrent Computer Corp reported fourth quarter net losses of \$34.1m, after a \$29m restructuring charge, against a profit last time of \$265,000 on turnover down 38.7% at \$18.7m. Net losses for the year to June 30 were \$39.7m, up from \$2.0m last time, on turnover down 31.6% to \$95.8m.

SAS INSTITUTE SET TO ENTER THE FINANCIAL CONSOLIDATION SOFTWARE MARKET, UP AGAINST HYPERION

The SAS Institute Inc, Cary, North Carolina is lining itself up to give the likes of Hyperion Software Corp a run for its money in the financial consolidation market. The company's SAS Business Solution for Financial Consolidation & Reporting is in its final developer testing stages, and is due to be launched next month, SAS says. The product consolidates data from disparate, often multi-vendor accounts ledgers, and provides multi-dimensional analytical processing tools to enable complex analysis of accounts data. It has an integrated financial data warehouse and on-line analytical processing software, which enables the financial executive to slice and dice financial data to look at the consolidated figures in whichever way is required, as well as 'what if' analysis to look at the financial implications of proposed management changes. The reporting facility caters for both pre-defined and ad hoc reports, as well as on-screen multidimensional views of data. The system can be used independently, or integrated with any other SAS Institute products, such as the executive information system. The Financial Consolidation & Reporting system can be used by companies using more than one brand of transactional ledger system, or those with a single brand that are dissatisfied with their current financial analysis and reporting capabilities, SAS says. Although the company is claiming its system will be the only one that both consolidates financial data and enables multi-dimensional analysis of the data, Hyperion vehemently disputes this claim. Hyperion, formerly IMRS Inc, which claims 85% share of the consolidation market, says it has had multi-dimensional analysis tools for some time. Last December, it licensed the rights to the TMI Software Corp - formerly Sinper Corp - TMI analytical processing engine, and built a custom-made financial package on top of it, which does not use pre-calculations like many systems, but performs real time dynamic calculations. Judith Rothrock, Hyperion's VP marketing said she was not surprised at SAS entering the consolidation market. She was only surprised it had taken so long for others to begin to compete with Hyperion. However Hyperion is now on release 4.0 of its Enterprise financial management software, and Rothrock said she was not afraid of the competition. Industry analysts at Morgan Stanley & Co said they did not expect "SAS to match Hyperion's functionality," but they "wouldn't be surprised if SAS shakes up the consolidation market a bit."

- **Transarc Corp's** the latest to partner with India's Tata Consultancy Services Pte Ltd, the big Bombay-based software and services arm of conglomerate J R Tata Sons & Co which will resell the Encina OLTP monitor.

- **Suite Software Inc,** Anaheim, California, is offering version 3.3 of its Dome distributed object management environment, including an ORB, GUI-based management, Kerberos security and a shell scripting language at from \$3,000 on Unix.

SUN EXPECTED TO UNVEIL DOLPHIN-BASED CLUSTERING

Sun Microsystems Inc is expected to unveil clustering for UltraSparc systems in October using the Scalable Coherent Interface adapters being provided to it under its December 1995 agreement with Dolphin Interconnect Solutions A/S, rather than alternatives such as FibreChannel (UX No 568). The Dolphin technology is being used by Data General Corp and others as the basis of ccNUMA distributed shared memory systems. We're not sure what becomes of the other clustering mechanisms Sun has in hand including the S3.MP serial link (UX No 552), the ATM GlobalWorks parallel software Thinking Machines Corp has fitted to Ultra Sparc servers and FibreChannel. Sun also holds patents on Cache Only Memory Architecture (COMA) techniques from now-defunct Kendall Square Research Corp. COMA uses local memory as a cache of a greater shared virtual memory.

ICL CREATES ITS OWN NUMA SYSTEMS AROUND DATA GENERAL TECHNOLOGY

ICL Plc says the Award systems it's creating around Data General Corp's ccNUMA technology won't simply be re-badged AViiONs, but like the servers Unisys Corp is developing using the same technology - the back-plane design and software plus Scalable Coherent Interface boards to link Intel's four-way SHV cards and the DG ccNUMA-enabled UnixWare - will be a joint design effort. Meantime ICL's loss-making PC and low-end server business which has been turned over to a new Fujitsu ICL Computers Ltd volume products group owned 80%-20% respectively by the two companies says its one-to-four way 200MHz PentiumPro SuperServers running UnixWare will be out of the door shortly along with the 142MHz HyperSparc quads running ICL's own NXV7 Unix SVR4.2 MP implementation (UX No 590).

ROUNDUP

Progress Software Corp has announced the availability of Progress Version 8.0B for Unix and NT which allows developers to create a single application in the company's Windows-based application development environment that can be deployed on both Windows graphical client/server and Unix host-based character terminals. Underneath are Progress' SmartObjects components, which let the NT and Unix applications share common code.

Carnegie Mellon University's **Andrew Consortium** is offering a C++ version of its Andrew user interface. The 7.4 release includes a suite of compound document applications for creating documents containing text, images, graphics, figures and spreadsheets. The free of charge binaries are available for IBM, Sun and HP Unixes, Linux and DEC Pmax.

GemStone Systems Inc's got Proforma Corp's ProVision Workbench 2.0 modeling tool up on its object application server. ProVision models can be implemented as three-tier applications on GemStone. Prices start at \$1,600.

Visual Numerics Inc, Houston, Texas, has won a significant fillip from Hewlett-Packard Co for its PV-Wave data visualisation software which is used to develop and analyse test system data. HP is to market PV-Wave as an add-on option for the HP Visual Engineering Environment, which will allow programmers to create two-, three- and four-dimensional plots, surfaces and projections. PV-Wave and VEE can be called from C and C++ programs; programs written using either environment can call C, C++, Visual Basic and Fortran applications. VEE 3.2 is \$2,000 on Sun and HP workstations; the PV-Wave option is \$5,600.

The plan to spin out **NCR** during the fourth quarter, is still on track - it's conditional on a successful turnaround. Supposedly it's ahead of its plan after losing \$37m in the first quarter and recording an operating profit of \$11m in the second quarter. Its plan for break-even is based on no revenue growth, taking out 25%, or \$600 million, in expenses, and getting margins up a few points. NCR says that in the first half it delivered exactly on that plan, cutting \$330m in expenses, whilst gross margins have increased more than five points.

Expersoft Corp, San Diego, California, has integrated its PowerBroker CorbaPlus ORB with Boston, Massachusetts-based Ptech Inc's FrameWork 4.0 business process modeling and code generation tool.

Sapiens International BV's putting its ObjectPool object application development environment up on Unix, NT and AS/400.

SGI LOSES ANOTHER EXEC, THIS TIME TO MACROMEDIA

Silicon Graphics Inc has lost another top dog, this time to San Francisco, California-based multimedia tools house Macromedia Inc, which has decided to go with a two-headed management approach. Rob Burgess, who formerly ran SGI's Alias/Wavefront subsidiary, has been named president of Macromedia in charge of day to day operations, while Macromedia chief Bud Colligan will remain chairman and oversee the big picture, including strategy and acquisitions. Macromedia won't have a CEO; the firm says this illustrates Burgess' and Colligan's roles as joint chiefs. Burgess met Colligan when Macromedia was porting some of its software to SGI's platform. Meanwhile, the exodus at SGI has included the defection of its COO Tom Jermoluk to the top job at @Home Corp (UX No 601), and the loss of its products and technologies VP, Wei Yen, who's now CEO at Netscape Communications Corp subsidiary, Navio Communications Inc (UX No 605). SGI is replacing all of the executives through internal promotions. Asked why executives keep jumping ship, the 11,000 person company cited its managers yearned to be big fish in small ponds.

DE BENEDETTI OUT AS OLIVETTI SHARES SUSPENDED AFTER DISPUTE OVER HALF-YEAR FIGURES

There was turmoil over at Ing C Olivetti & Co SpA last week. First chairman Carlo de Benedetti resigned after a woeful set of first half figures which showed a pre-tax loss of \$290m after a full-year consolidated loss of \$1,055m in 1995. Consolidated net sales for the half fell 10.8% to \$2,788m. Then Renzo Francesconi - director general of the holding group, who resigned after less than two months in the post - said he did not agree with some of the company's half year results. Olivetti took his remarks as a stain on its honour and reached for its lawyer, insisting that all is in order with the accounts. However Consob, the Milan stock exchange regulator, took Francesconi's remarks more seriously, and it called him in for a meeting with Olivetti's legal representative and management - and suspended trading in the shares last Thursday until it had had clarification. The figures show that Olivetti's systems business, 53% of the total, is now primarily systems integration and services with very little original hardware; hardware is now largely confined to personal computers, typewriters, facsimile machines and copiers. Managing director Caio said the loss-making personal computer company would not now reach break-even in 1996. He declined to be drawn on any figures or conclusion - the market wants him to sell or close it. Instead, Caio stressed strategic rather than operational issues, although he highlighted that two of Olivetti's five companies made profits in the first half of 1996 - the systems and services division, now 65% of group sales, made an operating profit of \$32m, and office equipment maker Lexikon made a \$26m operating profit. The 41.3%-owned Omnitel Pronto Italia SpA cellular phone consortium, widely seen as Olivetti's best hope for the future increased the number of subscribers to its network to 500,000 by the end of August. Caio warned that the planned partial flotation of Lexikon will not be possible for 1996 and would be put back to next year. Olivetti has been majority-owned by non-Italian shareholders since a rights issue last December, and its share price has fallen by more than 40% this year.

VXTREME PREMIERES WEB VIDEO PRODUCTS

One-year-old start-up Vxtreme Inc claims it has the only products that can transmit video over the Internet or intranets using low bandwidths while retaining high quality presentation (UX No 583). With technology it licensed exclusively from Stanford University, Vxtreme is selling a family of products called Web Theater. It consists of server software for streaming video and synchronized content; a 1Mb browser plug-in for Netscape Navigator and Microsoft Internet Explorer with VCR-like controls; and production tools to capture and integrate video, all starting at \$2,000. Vxtreme has positioned Web Theater to run in the 28.8Kb to 256Kb per second bandwidth sweet spot, claiming that's the only way for products to be useful for businesses today. The Palo Alto, California-based firm says users will be able to integrate video with their existing Java or HTML-based content and is signing up systems integrators and VARs to develop applications using Web Theater in areas such as employee training and customer service. Web Theater's key technology is a new compression method, which allows users to view 20 frames per second of 160x120 resolution video using only 28.8Kb per second. The firm supports LiveScreen now and will support conversion of MPEG-1 and QuickTime files to its streaming mechanism in future. Web Theater requires a minimum 133 MHz Pentium machine to encode video and an 80486-class PC to decode. It has 30 beta sites including Sun Microsystems, site developer US Web and CNNfn Online. The plug-in is available for download September 16 and Web Theater ships in October.

CRAY ELECTRONICS SELLS ITS U.S. END TO OSICOM FOR \$17m CASH AND PAPER...

One thing that Cray Electronics Plc - soon to be Anite Group Plc - didn't tell anybody last week when it denied that it wanted out of hardware, was that it ~~is selling its U.S. end - primarily the Rixon Inc data communications equipment business~~ picked up by Case Group Plc some 15 or so years ago. The buyer is Santa Monica, California-based Osicom Technologies Inc, which is paying \$14m in cash and \$3m in preferred stock for Cray Communications Inc, which it says is currently profitable, and is expected to add about \$28m to Osicom's annual revenues.

...ADMITS THAT CHANGE OF NAME WAS A THEM-OR-US BIND WITH CRAY RESEARCH THAT IT WAS BOUND TO LOSE

The London markets appeared unperplexed by last Tuesday's announcement that Cray Electronics Plc would change its name to Anite Group Plc on October 1. Shares crept up half a point to 36 pence. The group may have had what it described as a "disappointing and totally unsatisfactory year," but chairman and chief executive of Cray Systems division Mike Shone claimed this was unrelated to the group's imminent change of image. According to Shone, the confusion that arises between Cray Electronics and Silicon Graphics' Cray Research Inc has been escalating for some time. Both sides have taken legal advice, but the general consensus was that Cray Research would probably win the rights to the name in the US, Cray Electronics would win in Europe, and both would get about 50% of the remainder of the world. As the smaller of the two companies, Shone said it had little choice but to concede. A provision of £400,000 was made in last year's accounts to bare the brunt of the cost, and Cray Research contributed £100,000 this year - a paltry sum when you consider it will cost about £400,000 to change the name, but Shone said it was impossible to get anything more. About 30,000 new signs are ready and waiting to go up on October 1, assuming shareholders give their approval. Shone's vision of the year 2010 is for Anite Systems, formerly Cray Systems, to be one of the top three suppliers in six or seven markets - telecommunications, space and environment, travel reservations, manufacturing and distribution and publishing, with finance and transport as possibles. And if Anite managed to succeed in just four or five of those, Shone said he'd die a happy man.

VERISIGN AND JAVASOFT JEEVES REFUGEES FORM START-UP

The brain-drain at JavaSoft continues. Recently, members of its Jeeves server project defected to launch their own Internet startup company, innovatively code-named Internet Startup, according to our sister publication, *Online Reporter*. The company has over \$1 million in VC money behind it, thanks to Menlo Park's Bessemer Venture Partners. David Cowan, a general partner with Bessemer will be the new company's CEO. Cowan also happens to sit on the board of digital authentication company, VeriSign Inc. The week-old startup is not yet ready to announce products, but according to its VP of Marketing, Chris Zuleeg, Bessemer identified what will become an obvious and compelling customer need six months down the line and recruited the ex-JavaSoft employees to develop a solution. VeriSign is best known for providing authentication technology like SET compliant digital certificates and Jeeves is Sun's Java-powered Internet server, so it seems likely that Internet Startup will be providing some kind of server side authentication software, though Zuleeg says that the final product will include both client and server software. The product, he adds, will make it easier for networked applications to become ubiquitous. Sun's Jeeves technology, which is currently available free of charge at www.sun.com, makes use of servlets - server side applets - to write cross platform database plug-ins in Java. Whatever Internet Startup ends up shipping, it is expected to be in beta 9 months from now. Internet Startup expects to be giving away its software at first, and charging once it has market share. And yes, they will change the name soon.

- **NEC Corp** wants to exploit India's low-cost programming skills and has done deals with Pertech Computers Ltd in New Delhi and Square D Software Ltd down in Madras. It wants their help in the development of software for on-line banking and corporate network management systems, and says it looks to the arrangements to cut development costs by one-half to one-third compared with the cost of doing it in Japan.

- **Siemens Nixdorf Informationssysteme AG's** TransView network and systems management software is now up on its Pyramid Technology Corp's sibling's Reliant RM1000 parallel system and Nile SMP servers.

ALLIANCE TO STANDARDISE SYSTEM CHIP COMPONENTS

A new "open consortium" of 36 electronics companies was formed last week to push standards for the system-chip industry, to foster a greater level of ~~mix and match components from multiple vendors~~, in the form of system-level macros, cores or megacells. The **Virtual Socket Interface Alliance** includes semiconductor vendors, systems companies, ASIC providers and electronic design companies, and the aim is to make it easier to integrate "IP" - intellectual property - blocks of functionality germane to a particular company into core system chip designs. Initiated by Cadence Design Systems Inc, other members include Advanced RISC Machines, Cirrus Logic Corp, Fujitsu Ltd, Hitachi, Mentor Graphics, Silicon Graphics Inc, Sun Microsystems Inc, Sony Corp, Texas Instruments, Toshiba Corp and VLSI. The alliance was also endorsed by RAPID - the Reusable Application-specific Intellectual Property Developers association, formed back in June by a group of Intellectual Property developers. The baseline VSI standards proposals, to be hammered out by multiple working groups and then submitted to a core standards team, should provide common interface standards for component designers and builders to work to, so that IP in standardised "virtual component" forms can be rapidly mixed and matched into systems chips. Common interface standards will allow virtual components to be fitted quickly into "virtual sockets" at both the functional level (interface protocols) and the physical level (clock, test and power structures). Within a few years, says the alliance, systems chip designers will be able to access a web-based network to identify component sources, evaluate alternatives and purchase design-in data. As part of its activity the group will examine ways of combining logic, peripherals and memory on a single chip, something that still eludes designers. According to Dataquest analyst Gary Smith, the system-on-a-chip business is being held back from the volume market by the lack of standards. IPs from four different sources might be required to support a system chip design for a set-top box, for instance. Others are not so sure of the alliance's value. LSI Logic, the most obvious omission from the membership list, says it is still considering its position: it has done extensive work building up its own set of libraries. Details are promised on the Web from www.ip.net.org.

NHL BROUGHT IN FROM THE COLD AS IT GOES DIGITAL WITH IBM

After 79 years of using paper and pens to help explain a complicated game getting more complicated by the season, the National Hockey League's scoring system is going digital. The NHL and IBM Corp have formed a joint venture company called NHL Interactive Cyber Enterprises, or NHL-ICE. It will provide a real-time scoring system for scorers to record hits, face-offs, goals, shots and the like, and plot their exact location on the ice and who did what to whom on their IBM laptops linked to the game clock. The New York City-based company will also set up a digital library of photographs, articles, audio and video clips and enhance league's web site next month to include more live "cybercasts" of games, and later on, merchandising and access to the information collected by the scoring system, once it's up and running. Finally, coaches and players will be able to use data mining techniques to query the data compiled by the scoring system, which is built on software licensed from Brockville, Ontario-based SQRA Corp, starting from the forthcoming season. League commissioner Gary Bettman claimed hockey was "the most global game in the world," but another NHL official said less than 20% of the hits on its web site, www.nhl.com came from outside the US and Canada. The NHL is obviously hoping IBM's scoring system works better in the cold of an ice rink than the results system did in the heat of Atlanta.

SUN DEBUTS DRAFT JAVA BEANS SPEC

Sun Microsystems Inc's JavaSoft unit has posted the first public draft of its Java Beans API specification and will accept comments on it until September 25. The goal of the Java Beans APIs is to define a software component model for Java, so ISVs can create Java components which can be glued together into applications. The APIs are designed to provide developers with the ability to write components once and run them anywhere. Java Beans is also designed to support Live Objects (OpenDoc) and Microsoft's ActiveX/Common Object Model (OLE) compound document architectures, plus HTML and LiveConnect, which means developers should be able to write Java applets from reusable components that can transfer functionality not only to other Java applets but also to non-Java applications. Java Beans will support three distributed network computing mechanisms: JavaSoft's own remote method invocation scheme; the JDBC Java database protocols; and Java IDL, which will allow Java Beans clients connect to servers using Object Management Group's Corba Interface Definition Language.

RED HOT PEOPLESOFT EATS RED PEPPER

After seemingly mastering the human resource software market, PeopleSoft Inc has its eyes on the manufacturing software market, and last week announced the acquisition of Red Pepper Software Inc for about \$225m in 2,975,000 newly-issued PeopleSoft shares. Three-year old ~~Red Pepper's revenues are around \$10m at the last count and is yet to~~ make a profit. PeopleSoft will take a fourth quarter hit of about \$3m for merger-related expenses. The pair got together first in June last year, and early this year Pleasanton, California-based PeopleSoft announced enterprise resource planning software that incorporated Red Pepper's ResponseAgent technology, called PeopleSoft Manufacturing, which is said to enable real-time planning and optimization of manufacturing operations. The next PeopleSoft Manufacturing cut is due for release this fall, and with PeopleSoft's agreement with Red Pepper due to end next month. Red Pepper's stuff apparently still offered things the combined software would not. So the buy was a logical move, after 18 months of sizing up the company. The price cannot be considered cheap, but a public Red Pepper would have been a whole lot more expensive. Red Pepper will remain as a separate business within the greater PeopleSoft, mainly because it has deals with the parent's competitors SAP AG, Oracle Corp, as well as Baan Co NV, who it will be going head-to-head with in the manufacturing software arena. All 100 employees will be retained at the San Mateo, California headquarters, as well as the other offices around the US and in London. Red Pepper counts among its customers such names as Sun Microsystems Inc, Hewlett-Packard Co, 3Com Inc and Coors Brewing. Red Pepper was formed by ex-NASA scientists who developed scheduling software to manage repairs to the Space Shuttle. This led to application in more mundane forms of manufacturing, but the space-age approach appears to have found a niche as the software apparently optimises and re-optimises manufacturing processes to cope with changing demands, including external forces such as distributors. It is also said to be backwards-compatible with legacy manufacturing system set up in the 1970s, unlike PeopleSoft's initial efforts, so another gap is filled there. PeopleSoft enjoys a sizable lead over the likes of Oracle, SAP, Dun & Bradstreet, Cyborg Systems Inc and IBM Corp's CGI Informatique SA unit in the human resources market. The acquisition will be earnings dilutive for PeopleSoft from the fourth quarter this year and for the next three. Morgan Stanley analyst Chuck Phillips adjusted his estimates for PeopleSoft down to \$0.90 per share for fiscal 1996 and to \$1.35 for next year.

CA CHOOSES EXCALIBUR RETRIEVALWARE FOR JASMINE

Computer Associates International Inc has chosen Excalibur Technologies Corp's RetrievalWare text and image search and retrieval engine to integrate into its forthcoming Jasmine object database. Excalibur's been quietly winning over some major players with its technology. Vienna, Virginia-based Excalibur's software is in Informix Corp's Universal Server when that arrives at the year-end, the same time Jasmine is due (UX No 575). Excalibur's also got an OEM agreement with IBM Corp whereby RetrievalWare EFS is integrated with IBM's ImagePlus VisualInfo, as well as older ones with DB2 and SearchManager (UX No 586). RetrievalWare works using both pattern recognition and semantic network searching. It was recently trumpeting its Visual RetrievalWare SDK for companies building their own engines (UX No 602).

DATAMIND LANDS A FURTHER \$7.1m

DataMind Corp, the Redwood City, California-based start-up company that touts data mining software to Mine Your Own Business has raised \$7.1m from three of its original investors, plus Sequoia Capital, in a second round of funding which brings its capitalisation to \$11.8m. It says it will use the money to grow its sales force and complete ports of its software to other platforms, including Silicon Graphics Inc Irix and IBM Corp AIX, as well as other engineering tasks. It currently has 36 employees, eight of them in sales. The company claims up to 20 sites currently piloting its software and expects real revenue ships to begin in its second quarter, calendar fourth. It's not rushing to get its technology on to the web, claiming users are only now getting used to the idea of data mining. It believes the internet is unsuitable for moving around huge lumps of sensitive corporate data. It's only now beginning to formulate a web strategy and says its special interest is in the visualisation of "mined" data over the net and development of virtual store technology. The company expects the \$7.1m to be its final tranche of venture capital needed to take it to self-funding and says it would likely go to the market if it needs to raise additional capital. DataMind said it took just 15 days to raise the money because of the number of venture capital companies seeking to make data mining investments.

HP ENHANCES PRAESIDIUM SECURITY LINE

Hewlett-Packard Co will announce Tuesday additions to its Praesidium security line. Security Service is based around HP's Authorisation Server (UX No 588). The server enables firms to set up profiles for groups of individuals to manage access, time and money spent. All that appears to ~~be new here is consultancy offered with the systems. And Virtual Vault~~ is a web server running on top of a hardened B1-secure HP-UX. It's based on software HP got from the acquisition of SecureWare Inc in April (UX No 578), and controls all transactions through CGI applications. Next month HP will unveil smart card technology developed with Gemplus SA and Informix Inc. In addition to giving access to networks, the card will also enable data encryption using HP's Internet Cryptography Framework software.

SUN SKIP FOR SOLARIS PROMISES WATER-TIGHT NET SECURITY

Sun Microsystems Inc's internet commerce group has finally launched its Simple Key management for IP (SKIP) for Solaris software. SKIP for Solaris, a part of the Sunscreen family of security products is said to enable secure transactions over the internet, without modification to existing applications, claimed the company. The protocol the software is based on is a network-layer one supporting multicast and unicast IPv4 and IPv6 packet protocols; automatic certificate discovery; encryption algorithm discovery and Perfect Forward Secrecy (PFS), which provides security for old network traffic, even if keys are stolen or compromised. SKIP changes the encryption keys every 30 seconds or 500Kb by default to minimise the amount of stuff encrypted with a single key. SKIP for Solaris is available now in three versions: a 512-bit version worldwide; a 1024-bit version for financial institutions and foreign subsidiaries of US corporations and a 2048-bit version for use in the US. They go from \$100 per single user to \$10 a copy in 5,000 to 10,000 quantities. SKIP for PC for Windows 3.x, 95 and NT will be out later this year.

OVERTAKEN BY WEB WORK, UNIFY PUSHES BACK APPMAN CUT

Unify Corp was supposed to have version 2.0 of its AppMan systems management software that dealt with centralised event management, software distribution and performance monitoring available about now. The second cut was to have added security and asset management features. But the company was "overtaken by the web," according to product marketing director Tony Lacy-Thompson, and having "poured everything into Java and the web," means it won't now be available until sometime in the first half of next year. It'll still focus on security but will "have a distinct web element," according to Lacy-Thompson, who declined to be more specific. But, the company has got its VisionWeb product out into beta in about one month from now. The 3.0 cut of its VisionGL development environment shipped last week. This had originally been due to include VisionWeb, but that's about a month off still.

PURE ATRIA DELIVERS SOFTWARE PROCESS MANAGEMENT

First fruit from the merged Pure Atria Corp is version 3.0 of the ClearCase software configuration technology which hails from the Atria side of the house plus an all-new software process management module for use with it called ClearGuide 3.0. The company claims the combination provides the industry's most integrated environment for managing the software development processes. Until now ClearCase users have had to build their own "trigger" mechanisms for incorporating process management tasks such as defining development activities and their dependencies, and automating changes to activities and procedures. Pure Atria claims ClearGuide provides features other vendors currently provide as discreet products, such as Xsoft, Filenet and Flowmark workflow tools; LBMS and Process Weaver process design tools; Continuous, Harvest and PCMS process-oriented tools and MS project and AutoPlan project planning tools. ClearCase 3.0 includes new interface applets for event, property, log and VOB administration browsing, plus simplified administration and enhanced performance. It also supports GNUmake for Unix. ClearGuide 3.0 requires ClearCase 3.0 and is out in the first quarter of next year on Sun, HP and SGI Unix with NT to follow. It costs from \$2,700 per user or \$7,000 per user bundled with ClearCase. ClearCase 3.0 will ship next quarter at from \$4,000 per user on most Unixes and NT - new platforms supported are NCR MP-RAS and SNI Sinix. The company says it's seeing increased use of its software in Java program design and in hardware design processes. ClearCase, which includes a repository for source code, is being integrated with Novadigm's Enterprise Desktop Manager Adapter for ClearCase which'll enable code built using the ClearCase tools and repository to be stored and deployed from Novadigm's repository for executables.

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Mortice Kern Systems Inc has reported first quarter net profits equivalent to \$119,520 against a loss last time of \$338,527, on turnover up 49.6% at \$3.1m. Net earnings per share were 0.73 cents. Conversion is at \$0.7287 to the Canadian dollar. Although profit from operations were down on the same quarter last year, expenditure on sales and marketing has almost doubled compared with the same period.

Hewlett-Packard Co says its HP-UX 10.20 release supports its 64-bit PA-8000 systems, files up to 128Gb, hierarchical and journaled file systems (JFS) and logical volume manager, two billion user and group IDs, X11R6 graphics, a data management API for hierarchical storage management in on-line JFS. It can address up to 3.75Gb RAM.

At least someone appears to have got the measure of **DEC's** financial woes despite the \$2,000m it shows in its balance sheet - what horrors we don't know about is it saving up cash for? - commenting in the *New York Times* on the proposed AltaVista Internet Software Inc flotation, Laurence Zuckerman says caustically "Dear Investor: Digital Equipment Corp cordially invites you to finance its latest marketing campaign; in exchange, you get to share some of the company's future losses."

Motorola Inc's Platform Software Division unveiled Memos, described as an open software operating environment for the wireless industry: all components of Memos are designed and targeted for personalised mobile messaging, though why you need an operating system for enhanced paging is not yet clear to

Progress Software last week announced the immediate availability of Progress Version 8.0B for Unix and NT which allows developers to create a single application in the company's Windows-based application development environment that can be deployed on both Windows graphical client/server and Unix host-based character terminals. Underneath are Progress' SmartObjects components, which let the NT and Unix apps share common code.

Don't look for **Hewlett-Packard Co** to enter the \$500 network computer market - unless it takes off like a rocket of course: speaking in Mexico City, chief executive Lewis Platt averred that "We won't enter the low-end market because its margins are slim, and we believe it won't last more than three years as consumers will begin to search for higher-capability products;" *Dow Jones & Co* quotes him saying HP "will only watch this market from the sidelines - since it will be easy to enter, a variety of companies will come in," and ease of entry means that Hewlett can always change its mind if necessary.

World Wide Web advertising revenue soared 83% in the first half of the year, and the Internet is on track to become a \$5,000m-a-year commercial medium by the year 2000, **Jupiter Communications Corp** reckons: it says ad spending totalled \$71.7m in the first half of the year, and will shoot to \$312m for the year.

According to *InfoWorld*, Larry Ellison says the European phone company that wants a lot of **Oracle**-designed network computers is neither **France Telecom** or **Deutsche Telekom**. Oracle couldn't confirm this as we went to press.

Santa Cruz Operation Inc's UnixWare will be phased out a lot quicker than OpenServer once the best bits from both are combined in next year's Gemini release (UX No 577). The majority of the device drivers in Gemini will be from UnixWare, said SCO CTO Doug Michels, apparently they're a lot "cleaner" in SVR4 than the OpenServer ones, and therefore there's more work to be done in converting OpenServer users to Gemini. UnixWare will not be actively promoted by SCO after Gemini, just supported. As each dot release of OpenServer comes out, the new features will be added to Gemini, Michels said, and support for OpenServer users will have to continue for some time after Gemini emerges in mid-1997.

Despite reports out of **Sybase Inc's** European operation that Adaptive Server, its object-relational answer to **Oracle8** and **Informix's** Universal Server, will be out ahead of schedule at the year-end - the same time Universal Server's due - Jacob Stein, Sybase's director of strategic planning for objects insists "I don't think we would try to do that." He also doesn't reckon Informix will make its Christmas slot either. Stein said Adaptive Server is still slated for mid-1997 while Oracle8 is due in the first half.

The word from **Next Software Inc** on the flotation rumours is no word. John Landwehr, product manager for the company's WebObjects business said "I wish we would. But I don't know if the market's right to do it, and I don't know if we're in the position to do it." He did say however, that Next has been invited to Microsoft's object hoop-la now scheduled for late this month in New York. He didn't know whether Next will attend.

Oracle Corp has added a charting capability to its forthcoming Web-enabled Express Server On-line Analytical Processing (OLAP) software. It's gone to San Mateo, California-based **Infospace Inc** to get the WebCharts application to work with Express Server 6.0, enabling users to represent data in two- and three-dimensional formats. Express Server 6.0 is out for Windows NT this month and for Unix in the fall for \$4,000 per user (UX No 587). Infospace will sell WebCharts for Oracle Express for \$800.

Next Software Inc's WebObjects 3.0 web application tool, which includes the WebObjects Builder for building entire web applications, rather than just interfaces, will be out in October. Next apparently hasn't decided whether this cut will enable users to write entire applications and business logic in Java, but if this one doesn't, then the next one will, and that's due before the year-end. Landwehr envisages Java being a "significant portion of our business," while also maintaining that OpenStep will be the choice for Windows applications.

Computer Associates International Inc has announced its Opel tool for adding a multimedia front-end to legacy applications including 3270, VT100 and 5250 terminal emulation, as well as integration with Ingres desktop for single user applications. The need for Opel apparently occurred to CA while showing users early version of its Jasmine database. Opel is available in a month.

Something's up at Toronto, Canada-based X server company **X Inside Inc** from where president Gary Anderson has just departed.

IBM has dumped Michael Coleman, general manager of its PC Server operation, shunting him over to worry about packaging hardware, software and services for large accounts and replacing him with William Colter, who's been VP, product development at the company's RS/6000 Division for the last few months. IBM has been getting its tail kicked in servers.

Sequent Computer Systems Inc CEO Casey Powell says Sequent and a bunch of folk like **NCR**, **Unisys**, **DG** and **ICL** have been talking to Intel about what to do between now and when Merced arrives lest the RISC purveyors breath too heavily down their necks. Apparently Intel regaled them with some interim steps. The bunch is also worried about the availability of software considering 64-bit Unix is in the hands of **SCO** and **HP**.

Our sister publication *Client Server News* hears there are five separate committees working on what could become - depending on how it's presented publicly - a sweeping alliance between **HP** and **Microsoft**. One of the things HP reportedly wants to insure is that a 64-bit version of NT is riding on the PA-RISC half of Merced. Microsoft, it's said, is caught between its lust to own everything and the cost of such development.

Netscape Communications Corp has licensed **Macromedia Inc's** Shockwave multimedia graphics and animation plug-in for its Navigator browser just two months after **Microsoft Corp** struck the same deal with the company for use in Internet Explorer browser. Netscape has also licensed Fireworks, Macromedia's Java-based API for use with the Netscape ONE development environment. Macromedia claims nine million users have downloaded its Shockwave player. Shockwave and Fireworks will feature in the Galileo release of Navigator due at the end of the year.

Middleware company **Open Horizon Inc** says that whilst **PeopleSoft Inc** does not actually resell its Connection product, the connectivity software has been integrated with PeopleTools development software (UX No 605). The funding PeopleSoft has provided to Open Horizon as part of the Belmont, California company's third round of financing is its first investment in another company and the companies are now doing joint research. While Connection now supports a variety of security engines and is no longer tied to Distributed Computing Environment Open Horizon says it's still strategic for its high-end customers. It says that for some customers, secure single sign-on is their core objective and the implementation (the security infrastructure) is immaterial. It's got Java stuff just around the corner.

By Terry Shannon's reckoning the 2,000th TurboLaser **DEC** delivered to **Netscape Communications Corp** last week means it's done \$1bn worth of business on the AlphaServer 8000s in 14 months - all of it Unix.

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MIPS VENDORS BUILD TOWER AND BRIDGE TO 3DA UNIX

NEC Corp and its Mips ABI Group partners in the Golden Gate project to create a Mips RISC reference port of the Intel Corp-oriented HP/SCO 64-bit 3DA Unix will deliver code in two phased releases. With the notion that Golden Gate will bridge vendors' existing Mips ABI-based Unixes to 3DA the group, which in addition to Mips foundry NEC includes Siemens Nixdorf Informationssysteme AG, Sony Corp and Dansk Data Elektronik A/S, will deliver a port of Unix SVR4.2MP - almost equivalent in functionality to UnixWare - to run on 64-bit Mips hardware, called Tower. 3DA of course is being constructed upon a foundation of UnixWare. Memory addressing, other system parameters and the creation of a 32-bit compatibility mode are said to be key to it. Design work for Tower was completed in July, and the team now has the 32-bit mode working. A first beta is expected early 1997 though Oracle Corp is already working with an early drop. The second phase is Bridge, a port of HP-SCO's modular 3DA architecture to Mips. NEC has received 3DA specifications from HP (UX No 601), and porting will begin in January. The 22-strong Golden Gate team is based at NEC's Systems Laboratories Division in San Jose, California. It has four engineers from NEC in Tokyo, two from Dansk Data and other Sony staffers joining this month. It's headed by VP and chief architect Steve Stone and director of development Larry Hemstreet who both report to Shawn Toshiro president of NEC Systems Labs. Mips parent Silicon Graphics is contributing compiler technology to Golden Gate but does not plan to offer Tower or Bridge for its systems. It already offers a 64-bit operating system called Irix, and in any case bought its Unix licence out from Novell Inc some time ago. NEC executive VP Masao Toka who heads up the company's computer business is apparently pleased there's a Japanese flavour to this particular Unix initiative; most Unix development projects have been driven from US companies. "Of course we have the ability to develop a new operating system if we wanted to," said Toka, "but we learnt from our experience in the mainframe world - I believe our mainframe ACOS system was technically at least as good as IBM's, but what the customers wanted was SAS, or Nastran, in other words third party applications, and a consistent platform to run them on." He says NEC accepted leadership of the Mips group because "there needs to be a de facto standard used by at least 60-70% of the market."

HP DEBUTS 64-BIT COMMERCIAL UNIX IRON

Hewlett-Packard Co this week puts its PA-8000 RISC into play as a commercial Unix server engine, firing the 64-bit processor up in symmetric multiprocessing D-, K- and T-Class servers which leaves only IBM Corp among the top five commercial Unix suppliers without a 64-bit hardware option. The full-blown 64-bit HP-UX 11.0 operating system doesn't ship until mid-1997 and only after that date is the use of 64-bit applications on PA-8000 expected to accelerate. The new servers are claimed to deliver twice the performance of preceding 32-bit models, the PA-7200-based D and K machines and PA-7150-based T520 line. None of these systems are being taken off the price list though board-level upgrades to PA-8000 are available for each. At the high-end HP will offer a T600 enterprise server with up to 12 180MHz processors, 4Gb RAM, 30Tb disk and 112 slots. HP says system cooling issues prevent the T600 scaling to 14 CPUs like the existing T520. The T600 starts at \$100,000 as a uniprocessor from early next year. The company's claiming T600 will offer over 15,000 transactions per minute, and over 35,000 tpm when four T600s are clustered into parallel arrangements using its 250Mbps Enterprise Parallel Server 21 (EPS) fibre-channel links. The 1Gbps version of HP's switch is due in the first quarter of next year. For the first time HP's flagship Unix data centre engines can accommodate the 160Mbps High Speed Connection (HSC) I/O bus; up to 12 HSC channels can be configured in one T600 system. T5x0 users that are stuck with the 32Mbps Precision Bus (PB) can upgrade to HSC by swapping out I/O adapter cards. HP's also reducing prices on T520 by up to 25%. In the mid-range, HP has effectively stripped the graphics options from its first PA-8000 systems, the K-Class deskside technical engines launched back in June (UX No 593), and re-fashioned them for commercial operations. The K260 is a 180MHz quad with from 128Mb to 2Gb RAM, one HSC and four PB I/O channels. It is priced from \$61,000. The 160MHz Model 250 equivalent starts at \$52,200. The 180MHz K460 comes with from 128Mb to 4Gb RAM, five HSC and eight PB channels and costs from \$77,200. The 160MHz version costs from \$68,200. A loaded K460 does 12,231 tpm-C at \$186 per tpm-C. The entry-level D-Class server Models D270- and D370 come with one or two 160MHz parts and from 128Mb to 1.5Gb RAM with five and eight slots respectively. They use HSC and EISA I/O. Prices start at \$22,260. HP claims the D370 will achieve 5,700 tpm-C.

Merced details in six months

HP admits it still lags DEC's AlphaServer performance by 10% to 20%, but claims it has the Maynard beat on price at all points. HP's EPS21 clustering configurations can accommodate up to 16 four-way K- or T-Class SMP servers; EPS31 up to 16 12-ways. The switch will be cascaded through next year to go to 32 then 64 nodes. EPS21 is available this quarter, EPS31 from the beginning of next year from \$130,000. All D-, K- and T-Class servers can use the MC/ServiceGuard-based Enterprise Clustering. There are no upgrades for the older E-Class server and the G, H and I systems will be taken off the price list towards the end of next year. HP's new servers run HP-UX 10.20 now - the full-blown 64-bit release, HP-UX 11.0, is due mid-1997. HP has 8200 - due mid-October - and 8500 cuts of PA-8000 in hand to upgrade its server and workstations lines before the Intel Corp Merced processor arrives. HP says it's still investigating upgrade paths and will go public with Merced system and upgrade details in six to nine months. Merced will run the 64-bit HP-UX; HP's still promising binary compatibility with applications running on the PA-RISC-based HP-UX. It's expected to deliver two sets of ABIs, for PA-RISC and for Merced, on the HP-UX CD-ROM.

SUN TO OFFER SCI CLUSTERING PIECEMEAL

We've made a little more sense of Sun Microsystems Inc's future clustering plans and understand the company is readying several solutions based upon the Dolphin Interconnect Solutions A/S Scalable Coherent Interface technologies it licensed last December which it will deliver in stages beginning probably as soon as next month (UX Nos 553, 568, 570, 606). It's definitely not going the cache coherent route a la Data General Corp's NUMA implementation but will address what it believes is the sweet spot of the market; linking SMP servers with a low-latency interconnect and using message-passing software to linking applications distributed across nodes. There'll be several flavours of switch allowing up to 16 SunFires - Ultra Enterprise servers - to be connected with latencies of below 10 microseconds and high bandwidths. Configurations that large - 480 CPUs - will be strictly for the classic scientific and engineering crowd. Smaller solutions of two or four nodes will be packaged for commercial types. The Cray Research Inc SuperSparc-based SuperServers that Sun now owns and UltraSparc makeovers of them will be treated as just another node. Sun will use Message Passing Interface (MPI) and Parallel Virtual Machines (PVM) for messaging and deliver system-wide batch processing and load balancing functions. Sun's not giving the illusion there won't be a change in the programming model, MPI will necessitate that, but it's far less keen on vogueish cache coherent, massively parallel and single system image arrangements on which it reckons the jury is still deliberating. It'll collect all of its clustering software on a single CD-ROM that'll go far beyond its current Ethernet-based SparcClustering capabilities. Further out it expects to accommodate workstations, High Performance Fortran parallelising tools and possibly the Thinking Machines' GlobalWorks parallelising software. It's still using FibreChannel for I/O.

TANDEM CLAIMS SWATHE OF SERVERNET PARTNERS

Tandem Computers Inc claims it's working with two or three of the "more pure Unix" players about getting its ServerNet interconnect into the Unix space according to Andreas Schreyer, director of product marketing for ServerNet and ServerWare. We couldn't find anyone willing to admit to working with it beyond those already known, but Tandem swears they will be announced within 60 days. Schreyer also claimed Tandem's got about a dozen other promises to use its ServerNet interconnect technology OEM apart from Compaq Computer Corp and NEC Corp, but isn't ready to name names just yet. They are all PC companies, though some play outside the Wintel world as well, he said. It's not clear whether the two or three Unix companies are included in the twelve. The plan for ServerNet is to support NetWare eventually, as well as Unix and NT, as many partners are PC companies that have a multi-OS strategy, said Schreyer. *More details on page three.*

THINKING MACHINES GLOBALWORKS 2 OUT NEXT MONTH, SP2 SUPPORT IN A YEAR

The second version of Thinking Machines Corp's GlobalWorks software for linking Sun UltraSparc and HyperSparc servers and workstations for **parallel application processing is out of beta next month, and the third release due early next year will link heterogeneous Sun environments with Silicon Graphics Inc machines running Irix.** And this time next year the company hopes to have added IBM SP2 support and a fully-parallel file system, though the SP2 work hasn't started yet. Globalworks 1.0, which is out now has basic Message Passing Interface (MPI) technology and a new Parallel Virtual Machine (PVM). The second release, which was originally slated for June features beefed-up message passing and data parallel programming tools (UX No 597). There is another new PVM, a new Subset High-Performance Fortran compiler, and a new version of C*, TMC's data parallel version of C. Also new this time is Data Fabric, a way of message-passing programmers to code in a data parallel style. Josh Symons, chief technical lead for GlobalWorks described the message-passing programming as "almost assembly language" level in that the coder must take care of moving the data around. But with Data Fabric, he claims, parallel objects can be created that span the entire cluster, with the data flow controlled automatically. Other new stuff in Release 2 includes load balancing to recognise the difference between a Hyper and Ultra Sparcs and SMP cluster support, as well as an increased MPI I/O subset. Release 3 will move all this to the SGI platform and add some low-level software to decrease latency between nodes in the GlobalWorks server - racks of UltraSparcs. Symons reckoned the latency time will be less than 100 micro seconds. Release 3 will go into beta around the end of the first quarter of next year, with general availability about six weeks later. With the fourth release supporting SP2, slated for a year from now, TMC is going after commercial markets, rather than just its strengths in government and petroleum arenas at present. Meantime, TMC announced that its Darwin data mining tool will be available in the fourth quarter on IBM RS/6000 SP running AIX and Digital Equipment Corp AlphaServers running Unix or Windows NT.

NETSCAPE BRIBES DEVELOPERS WITH SCADS OF FREEMWARE

Doing its damndest to prevent Microsoft Corp from walking away with the browser market that is currently Netscape's own, Netscape Communications Corp last week moved to keep its developers loyal by giving away dozens of its business applications and development tools to corporate software developers working on intranets. Called AppFoundry, the program includes free access to fora by consulting firms such as Andersen Consulting and Deloitte & Touche, and an on-line gripe space called Netscape AppFoundry Online. Netscape has enlisted a host of software companies to provide their applications free for the program, including Acclaim Technology Inc, Red Oak Software Inc, Informix Corp and Sage Solutions Inc. Firms that will be making their development tools available for the AppFoundry program include Borland International Inc NetObjects Inc and NeXT Software Inc.

COREL PLANS \$500 JAVA HANDHELD

Corel Corp, Ottawa, Canada says it's in final negotiations with an unnamed hardware vendor to build a Java applet-running handheld device, which will cost about \$500. Corel says it realizes that's a pretty penny, but expects early adopters will pay it and the rest of the industry will ooh and ah appropriately. Corel is keen to link its name with Java after betting the farm by rewriting its WordPerfect suite in the caffeinated language. The Canadian company is designing the device, which will have a high-performance RISC processor, connect via external modem to the Internet and be similar in size to US Robotic's tiny Pilot PDA. About 10 Corel employees are working on the PDA, which should be ready in mid-1997. Corel will release a developers' kit for it before the end of the year. Applets will include an address book, to do list, email and a memo writer.

DESCHUTES SEEN AS INTEL'S BID FOR THE ENTERPRISE

InfoWorld believes Intel Corp's late-1997 shrink of Pentium Pro previously identified as the 0.25 micron Deschutes (UX No 600), will feature a new bus interface allowing manufacturers to build systems with as many as 32 processors up from the four-way Pentium Pro packages currently offered to vendors as the Standard High Volume board. As such it's seen as Intel's first real challenge to RISC's enterprise scaling claims. The paper says Deschutes will include a Pentium Pro core with separate components such as secondary cache, CPU-to-cache bus and add-on daughter card. Deschutes is expected to clock between 266MHz and 333MHz.

DEC TO ACQUIRE NIHON UNISYS' MEGATEK FOR 3D GRAPHICS

Digital Equipment Corp is in the process of acquiring graphics accelerator company Megatek Corp, the US subsidiary of Nihon Unisys Ltd for an undisclosed sum. The deal, subject to final terms and conditions, involves the 3D graphics engineering team and rights and patents to Megatek products, and Digital will take over the company's San Diego base. Founded in 1992, Megatek went through a series of acquisitions until it was bought by Nihon Unisys in 1992 for around \$4m - it had revenues at the time of \$20m. Digital set up an informal relationship with the company two years ago, just as its partnership with Kubota Corp was falling apart, but so far no products using Megatek hardware or software have been shipped. As well as integrating the Megatek technology, consisting of graphics algorithms and proprietary ASIC hardware, DEC will continue to work with Nihon Unisys to develop products for customers in Japan: sales are currently aimed at automotive customers such as Toyota and Honda with the Megatek products running on Sun workstations, though DEC would obviously prefer that to change. DEC spokesperson Linn Thorson-Jensen claimed the Megatek technology, particularly strong in high-performance rendering areas such as anti-aliasing, would not overlap with other DEC graphics initiatives, such as the Powerstorm 4DT series 3D graphics accelerators announced in August (UX No 579), or the very high-end Evans and Sutherland collaboration.

TERISA TO IMPLEMENT MASTERCARD AND VISA'S SECURITY PROTOCOL

Internet transaction security tiptoed another step forward last week after Visa and Mastercard - the two largest credit card providers - chose Terisa Systems Inc to implement their Secure Electronic Transactions (SET) protocol reference implementation. Currently the vast majority of transactions use channel security, which means that the encryption ends when the session ends. Document level security allows digital signing of documents so that both ends can verify who they're dealing with, a method proponents claim will be necessary for more sophisticated transactions such as on-line banking and stock trading. Visa International Inc and Mastercard International Inc are expected to publish the SET specifications on their Web sites next month. Los Altos, California-based Terisa Systems, which sells the SecureWeb Toolkit, will offer a commercial grade SET implementation to the kit in the fourth quarter of this year. Terisa is using the attention to promote two new initiatives. First, it's getting into the Web transaction applications building business and says a signed document application will be its first offering. It's also aiming to become a one stop shop by offering tools, applications and certification authorisation. Terisa is in talks with a number of firms which offer certification and expects to announce a deal in the next few weeks. Terisa says it's interested in speaking with IBM Corp after Big Blue's announcement that it's signed up 15 banks for a new Internet banking transaction service (*see page 6*). IBM is expected to adopt the SET standards, after all, it was on the board which hammered them out, but so far has only said it's "evaluating" the protocol.

BUFFALO SCIENTISTS CLAIM 1000x CD STORAGE IMPROVEMENT

Scientists playing with polymers and new dye materials at the University of Buffalo reckon they have perfected a technique for creating multi-layer compact disks that would be able to store 1,000 times more data than today's disks - that means 650Gb, or enough capacity for 69 full length movies on one disk. When the infra-red laser reaches the end of the top track, it refocuses on the next one down, and so on through the disk. The technology, called two-photon absorption, uses the fact that a molecule can absorb two photons of light simultaneously if the light beam has enough intensity. The team developed dyes with strong two-photon absorption and the ability to fluoresce intensely and laid them on transparent plastic films - the layers are just one micron thick, so that a 550-layer disk need be no more than 1mm thick. The absorption of light causes the material at the focal point to change properties, such as its colour or fluorescence emission - providing the two states needed for binary storage. And to find a new layer, the focal point simply needs to be changed, because two-photon absorption occurs only at the focal point. By using lasers of different intensities, the disks can be write-once or rewritable.

OPEN GROUP FINALLY LANDS A CEO - BARCLAYS IT CHIEF DE FEO

As we hinted it might a couple of weeks ago, open systems standards and technology development organisation The Open Group (TOG) has gone outside of the industry and recruited Barclays Group IT supremo Joe De Feo to be its new president and CEO (UX No 603). De Feo's near-term goals include integration and alliances with other industry consortia to reduce multiple membership dues companies currently have to fork over, and the more active participation of Microsoft Corp. De Feo, a highly influential supporter of open systems strategies who currently represents end users on TOG's board, will replace interim CEO Jim Bell in October. Bell is director of open systems alliances at Hewlett-Packard Co and has been on extended loan to TOG while it sought a permanent chief executive, a process that went through a couple of false starts to begin with. UK standards organisation X/Open Co Ltd and Cambridge, Massachusetts-based technology development organisation the Open Software Foundation were merged under the Open Group umbrella organisation in February this year in an attempt to streamline their respective specification and technology development processes. It's been clear for sometime there would be little change in either's activities - apart from consolidation of their respective user and marketing operations - until a new chief brings his will to bear on the proceedings. De Feo, Barclays' high profile IT chief of the last seven years, expects to delineate a broader strategy for the organisation by the end of the year. As for his immediate concerns, the notion of reducing members' costs by further consolidation of assorted vendor, user and technology consortia brings to mind that 'SUPERconsortium' idea mooted about last year (UX No 547), though he declined to identify the groups TOG is negotiating with apart from one in his own backyard; SWIFT, the Society for Worldwide Interbank Financial Telecommunications. The increasingly influential Object Management Group doesn't appear to be on De Feo's horizon - OMG's not been contacted by him - and quoted recently in a UK trade weekly De Feo argued that "standards are diluted by too many groups... the solution is to disband fringe groups like the OMG... they don't serve any useful purpose." Where Redmond's participation is concerned, all De Feo will say is that TOG is discussing other levels of membership for Microsoft above the basic card it currently carries.

Connections

Both tasks feed De Feo's idea that through its technology development and standards specification processes TOG should become a catalyst for the convergence of future technologies on the supply side to meet users' requirements. His model is the creation, standardisation and adoption of web and internet technologies. Although TOG doesn't currently count Netscape, WC3, internet service providers or most of the telecoms industry as paid-up supporters, De Feo is regarded by TOG members as having the right connections and influence to bring consumer electronics, retail, entertainment and telecoms types into the organisation. TOG's OSF arm was responsible for creating the OSF/1 Unix variant used to greater or lesser degrees by IBM, HP and DEC, the Motif graphical interface and Distributed Computing Environment middleware. It's currently working on "clean room" and other Java implementations. X/Open has defined standards for application portability, connectivity, security and is currently keeper of the Unix trademark and Spec 1170 application programming interfaces.

SUN AIMS TO CAPITALISE ON HP, IBM "STRATEGIC" WEAKNESSES

Sun Microsystems Inc turned out its first team last week trying to send Hewlett-Packard Co's PA-8000 new commercial servers for an early bath - see front page. VP Anil Gadre believes HP's pre-Merced "late in life kickers" still fall far short of Sun's reliability, availability and serviceability offerings. Gadre is hoping Sun will capitalise on what he believes are weaknesses in HP and IBM Corp's long-term roadmaps and processor strategies. He thinks customers are starting to understand that HP will have the same kind of issues transitioning from HP-UX on PA-RISC to HP-UX on Merced as the pain Sun went through moving from Solaris 1 to Solaris 2 and up to UltraSparc. Gadre expects Sun to gain market share at IBM and DEC's expense this year - but interestingly not against HP, which leads IBM and Sun in the commercial Unix server market. Of the 250MHz UltraSparc II makeover of the Ultra Enterprise server line which was promised for this Autumn (UX No 557), Sun's indicated processor concerns are late-year early 1997 concerns. Gadre says most Ultra Enterprise 6000 Series customers are buying 10-way configurations and above.

NEW ILLUSTRATE DEAL CONFIRMS NT NIXES UNIX AT TANDEM

In case anyone was in any doubt Tandem Computers Inc last week confirmed that Unix is now subordinate to Windows NT in its non-proprietary world. The deal struck 14 months ago with Illustra Technologies Inc before it was bought by Informix Corp to pull the Illustra object/relational technology Unix development under the hood of its Unix and NT ServerNet-based machines never got off the ground. It's now been recast as a non-Unix deal to integrate the DataBlade APIs into ServerWare SQL version of the NonStop SQL database that'll run on its NonStop Kernel (NSK) and NT machines, built around the ServerNet interconnect (UX No 547). There's also a reseller deal for the Informix Universal Server and the Illustra database and the Universal Server combination of Illustra object and Informix relational databases on its forthcoming NT servers. Unix has been sidelined to the telecommunications market. Tandem CEO Roel Pieper said "commercial client-server direction is all about NSK and NT," not Unix. Tandem will demonstrate NonStop ServerWare SQL in December and ship the product this time next year. Pieper said the plan is to provide a consistent set of DataBlade APIs across its ServerNet-based NT and Himalaya systems. Numerous ISVs - as well as Informix and Tandem - are writing DataBlade modules that will enable audio, video, spatial and time data to be stored as real usable objects within existing databases. Universal Server software developers' kits are supposed to ship in two weeks. Unix accounted for about 20% of its systems business last year, with the rest coming from NSK (UX No 573). In May Tandem signed a deal whereby Microsoft Corp gave Tandem \$30m to help it convert ServerWare and ServerNet technologies to NT (UX No 589).

TANDEM'S FOUR-WAY SERVERNET UNIX SLIPS BEHIND SCHEDULE

Meantime Tandem Computers Inc's four-way ServerNet-based S4000 Unix box appears to have slipped a full half year; it's only now about to go into beta and will ship early next year. It was promised earlier this summer (UX No 573). Tandem will go with a conventional closely-coupled shared SMP arrangement up to four-way and beyond use ServerNet in loosely-coupled configurations. S4000 use the Mips R4400 processor now and will go to R10000, but Schreyer couldn't say when. He said ServerNet is currently operating at 50Mbsec and with parallel technology and full duplex it can reach 900Mbsec. That's obviously the raw bit rate, and running over 10Base-T you'd only get 10Mbsec. So realistically, Tandem's hoping for transfer rates of 20-25Mbsec. Schreyer said the hardware's ready for that right now, just the software isn't. So that's up to some of Tandem's mystery partners to come up with the goods.

- Meanwhile, Tandem's NSK-based Himalaya S7 machine, codenamed Whitney, is in pre-beta testing at two customer sites, and depending how that goes it will be released within "the next six months," according to Alan Goodman, global Himalaya marketing manager. It'd been slated for beta this quarter, with the roll-out in the first quarter of next year. Goodman said the pre-beta is "looking quite encouraging." Goodman said the Himalaya market is growing for Tandem, but not as fast as it would like.

PLANNING SCIENCES MAPS OUT SUMATRA WEB STRATEGY

Denying it's just another quick and dirty Internet must-have, UK multi-dimensional database and OLAP outfit Planning Sciences International Ltd (PSI) is talking up its Web-based OLAP strategy. Codenamed Sumatra, it'll be delivered in two phases based on Version 3.0 of its Gentia client/server EIS development and decision support environment including the GentiaDB multidimensional and OLAP database engine (UX No 594). Phase one, Gentia Web Server, due to be delivered in the first quarter of next year will enable standard web browsers to access Gentia's analysis and development environment. PSI claim this work is essentially an extension of Gentia's core development, comprising two classes of object, those with core Gentia functionality and those governing the native client interface. It's these objects only which vary between the different graphical interfaces, says PSI. Gentia currently supports most Unix, Windows 95 and Macintosh. It'll integrate Java applets to improve local performance, aiding the management of network traffic, and enhance HTML. Java applets will be stored and created in the Gentia object store. Phase two, due later in the year will extend text integration by introducing a series of software agents to intelligently search for and link HTML documents relating to data in GentiaDB and SQL databases. The company admits it's been forced to hack out a web strategy by prospective customers insisting on one. It's got \$30m from its May IPO and expects to announce a couple of partnerships soon.

BREGMAN FINDS MESS AT IBM'S RS/6000 DIVISION

By Joanne Wallen

The RS/6000 is a critical part of IBM Corp's business and no longer just a hobby, says IBM's RS/6000 division general manager Mark Bregman, whose job now is to put the Unix machines onto the worldwide sales map. Acknowledging that the RS/6000 range was perhaps not taken very seriously in the past by the boys in Rochester, Bregman is keen to have us understand that it is now a critical part of IBM's enterprise systems business. How? Well his tactic seems to be, if you can't sell a box, sell a business advantage. Bregman, who took up the RS/6000 post last December, says when the company launches its new server products in October, code-named Terlingua (UX No 604), it will be selling the business advantage rather than "feeds and speeds." Bregman's approach is to acknowledge all the accusations of his company's shortcomings, and then try to portray a sensible, evolutionary route to changing things. To this end, he admitted that in 1990, IBM reckoned it had a two-year lead with its RS/6000 technology over the iAPX-86 world, but the subsequent amount of investment in Pentium Pro has largely closed the gap. The differentiator, he insists, is that due to the low margins on iAPX-86 systems, resellers cannot afford to give the added value that lower volume higher margin Unix vendors can offer. The RS/6000 customer, he says, is one that views information technology as absolutely key to its corporate strategy, and is looking to its supplier to provide a long term partner. Of course, this is hardly new nor is it exclusive to RS/6000.

Identity

If long term partnering and showing customers how to gain competitive advantage through the use of information technology is not enough, perhaps the snappy new names IBM is going to give its servers will help. Out with the "motley array of letters and numbers" and in with a brand new identity, we were told last month (UX No 604). "Well perhaps not in time for the October launch" Bregman admitted, but he is all for snappier branding, and as quickly as possible. Bregman claims he is bringing focus to his division by creating a new worldwide marketing division, under a single marketing vice-president. He has also unified the development organisation, so that one division now deals with AIX, SP and hardware development. And there is a new business line management group, which defines which elements, hardware, operating systems, middleware, application software and services, are needed for each of the division's offerings. As far as the sales channel is concerned, Bergman's aim for next year is to have 60% to 70% of the division's sales through the indirect channel. To this end, IBM sales people now get commission if the sale is through the channel, and have a pre-defined quota for indirect sales. As is his style, Bregman admits that the RS/6000 division was "a bumbling mess" when he took over last year, with a lot of operational problems, including not meeting its shipping deadlines. He now says that 95% of orders are shipping on time, as compared with 40% at the end of last year. He is confident that the RS/6000 will become an increasingly important part of IBM's business. The company recently announced the installation of its 50,000th RS/6000 server. The future will depend no doubt on how many people buy into Mark Bregman's business advantage story.

NEW OLIVETTI CHIEF OUTLINES HIS PLANS FOR RAVAGED GROUP

A shell-shocked Ing C Olivetti & Co SpA finally emerged from its purdah last week, when its new chief executive, Francesco Caio, gave testimony on the company to the upper house of the Italian parliament. He told the Senate Industrial Committee that the company's future did indeed lie in telecommunications and services, and that it was looking for a partner for the loss-making personal computer company. He also confirmed that personal computers would lose money again this year, on sales of about \$1,300m. He said the Lexikon office equipment company "is profitable but it is exposed to risks which need action if we want to guarantee its development." It has sales of some \$1,350m "and is in a traditionally strong position, but which has to take into account increasingly fierce competition." The Ivrean also needs a simpler group structure and must rethink the role of the holding company - only put in place last year - Caio said. He confirmed that group economic and financial performance was still strongly negative but said Omnitel was ahead of plan.

OLE RESURFACES, PHOENIX-LIKE, TO SAVE REDMOND FROM STANDARDS DEBACLE

Microsoft Corp has resurrected OLE, the term everyone thought was supposed to disappear when ActiveX was conjured up. As executive VP Steve Ballmer confessed to our sister publication *Client Server News* recently, Microsoft has been carefully rethinking exactly what the word ActiveX means before it lets any independent standards body mess with one of its core technologies. Redmond's never defined the scope of ActiveX except in the broadest of terms, but it was crystal clear at the time ActiveX was unveiled that it was intended to supplant OLE. The rub, of course, is that when Microsoft offered to turn ActiveX over to an independent standards group, the impression it gave was that it would turn over its crown jewels. Now the story's changed, and some of the best stuff just ain't ActiveX any more, it's OLE once again - and Redmond didn't promise to turn OLE over to any standards board, mind. Details of Redmond's latest strategic shuffle have popped up practically under everyone's nose - on Microsoft's web site. A newly posted white paper says OLE is now "an umbrella term to refer to the set of interfaces that are built on the Component Object Model (COM)." A bit wishy-washy but the untitled white paper continues by saying OLE has evolved into "a powerful system-level object architecture that includes services for all-inclusive data access, remote distribution of software components across heterogeneous platforms, robust transaction processing and large-group development." So, folks, it turns out that data objects - particularly as defined in OLE DB as released last week, software component distribution, transaction processing and groupware aren't part of the open standards deal. Ditto for Redmond's new Index Server search mechanism, which was once part of the ActiveX Server Framework that Microsoft dreamed up less than two months ago and isn't anymore. A source in Redmond said lots of other bits and pieces are disappearing from under the ActiveX heading. As to what's left to offer, Redmond's not come up with a good definition of what ActiveX is these days, other than a statement that "ActiveX represents a language neutral interface based on the ActiveX component technology." As near as we can make out what we're talking about here is no more than the APIs that will let plug-in applications work with all the core functions that are back in the OLE lexicon. Meanwhile, the time and place of the ActiveX standardisation meeting still hasn't been revealed.

CRAY 1, NEC 0 IN SUPERCOMPUTER DUMPING DISPUTE

Cray Research Inc has won round one of its anti-dumping allegations against NEC Corp after the International Trade Commission ruled last week there are grounds for a full investigation. The Japan Electronic Development Association (JEDA) replied by claiming that Japan's supercomputer market is more open than in the US, an accusation Cray finds ridiculous. Cray's director of competitive analysis Earl Joseph said the Silicon Graphics Inc unit, which claims more than 75% of the supercomputer market worldwide, has only secured one of the last 12 Japanese government supercomputer contracts. "The Japanese market is totally closed to us," Joseph said. But across the Pacific, the JEDA claims no Japanese-built supercomputer has ever been sold to the US government. The next step in the investigation will come in early January, when the US Department of Commerce will make an initial decision about whether dumping occurred. In March the department will make a final decision and in late April the International Trade Commission will determine whether the US was injured by the alleged dumping. The commission would then issue a penalty, which could effectively lock NEC out of the US supercomputers market. The punishment is generally an extra duty on future products sold into the US commensurate with the amount a company undercharged; for example if the actual cost of the system was 400% more than NEC was found to have charged - as Cray claims - then it would be required to add \$100m to the price of a \$25m supercomputer, according to Cray. NEC did not return phone calls last week.

- **Insoft International Inc**, West Covina, California, is offering a version of its PMDF SMTP/MIME-based email messaging backbone for Solaris. Prices start at \$6,000.

- **Data General Corp** will incorporate **Emulex Corp's** LightPulse adapters in its Intel Corp-based NUMA systems as the Fibre Channel connectivity option. It'll also offer Fibre Channel-based Clariion RAID arrays.

HELPDESK MARKET STILL HOT, SAYS MORGAN STANLEY

Morgan Stanley & Co Inc was watching the Support Services conference in San Francisco recently and came away with the impression that Vantive Corp, Clarify Inc and Scopus Technology Inc are running over each other so much in the external help-desk market and that their products are so similar that even some customers and consultants have trouble telling them apart. And all the vendors in this market expect the financial and manufacturing software companies to enter the market soon, although they have already taken longer to do so than the vendors thought, but all-rounder Oracle Corp is expected to make the leap first. "The market still seems hot," according to Morgan Stanley's Chuck Phillips, despite the heavy discounting that of course everybody blames everybody else for. It's so hot in fact that Remedy Corp doesn't have enough time to respond to lengthy requests for proposals. Scopus is going for the telecommunications, retail and banking vertical markets, call centre applications and outsourcing. The products go into beta in a few weeks and it is re-writing its client software in Java at the moment. Clarify's focus is also the telecommunications market and field service applications. It is under the impression that Microsoft Corp will help sell its products to key accounts, which Phillips was suitably sceptical about. Meantime, Vantive is going for the brute force of volume and market share leadership. It's apparently stopped trumpeting its three-tier architecture as it's not that different anymore and tricky to implement, and instead is quoting references and boasting of market share. Computer Associates International Inc was also present and according to Phillips, CA is increasingly tying its Paradigm support product to CA-Unicenter, with two-thirds of recent deals said to be driven by Unicenter help desk integration requirements. Paradigm generated \$411m revenues last year for CA.

HITACHI UNVEILS THOR PARALLEL OBJECT DATABASE

Rumours that Hitachi Ltd was working on its own object database last year turn out to be true. At the Commercial Parallel Processing Conference in Chicago last week, Hitachi's Computer Products America division introduced and demonstrated Thor, a new object/relational database system aimed at the enterprise data warehousing market, and described by Hitachi as "the only true parallel object-relational system that is intrinsically object-oriented." Thor, which rather awkwardly stands for The Hitachi Object Relational database technology, is currently in beta and runs only on specially designed hardware: it's unlikely to emerge as a generally available product until the third quarter of next year. At its heart is the Thor ObjectManager, supporting such features as row-level concurrency control, user-defined data types and business rules, stored procedures and triggers, transaction logging and recovery, and database backup and recovery. It is fully object-oriented, says Hitachi, so that tables are classes and rows are instances of that class, although an optimising relational engine presenting a single, logical image of the database is also provided. Dataflow techniques within the software break down complex data queries and optimise them for efficient parallel processing.

Turnkey

ObjectManager itself could easily be ported to other platforms, says Hitachi, but at the moment the hardware component, called the Thor MPP Data Server, is a turnkey shared nothing system with up to 288 nodes using a PowerPC chip, PCI bus and SCSI II disk drives. It has a toroidal matrix of processor modules that's said to be more efficient than the switched architecture of Hitachi's SR4300, which is an IBM SP/2 re-badged. Hitachi says it was after a platform with a higher input/output bandwidth capability than the scientific- and engineering-biased systems out there today. The SR4300 is high on the list for future porting, however. ObjectManager is hosted on an embedded operating system, and accessed through an open gateway server such as an NT box, Sun workstation or IBM RS/6000 - anything that supports the Sybase Open Server, which Hitachi resells. There are also gateways to standard SQL and ODBC. The system is optimised for processing complex queries created by decision support applications on very large databases, typically characterised by high input/output activity and long searches with varying response times, and is scalable to handle data sizes from a few gigabytes to terabytes on hundreds of processors, says Hitachi. Thor was developed in the US under database guru Dr Robert Hartmann.

CROSSZ AIMS FOR DIRECT HIT ON DATA WAREHOUSING NOW IT'S GOT THE FUNDING

If you want to understand the need for data warehousing, think of a cruise missile. It has a nose cone that contains details of the terrain it must fly over to reach its target. The cone is not very big but the amount of data certainly can be. It was this requirement that led CrossZ Software Inc co-founders Mark Chroscielewski and Andre Szykier to develop algorithms to stuff terabytes of topological terrain data into a nose cone. From there to a credit card system that compressed 30m records into a 10MB file on a 80286 PC and the pair figured there was clearly something in this compression stuff. They called on their ancestral knowledge of Eastern Europe to set up development centres in Warsaw and Gdansk in Poland and Moscow as soon as the curtain went up and the result is QueryObjects desktop data warehousing software. Meanwhile Long Island, New York-based CrossZ last week won its first venture funding round with \$8.75m from Brentwood Associates and Wheatley Partners. The money will be used to recruit a senior management team to market the product. The company is eight years old and had its first product out three years ago, but has been self-funded until now. It has 75 employees. Chroscielewski claimed the approach was different from other data warehousing vendors in that instead of exploding the data it compresses it up to 1,000 times.

Trick

The trick is, according to Chroscielewski that QueryObjects stores equations rather than multi-dimensional arrays of information. The equations, which are generated on the fly from the enquiry, represent all possible answers in a 64-term polynomial form. From that equation anywhere between 10,000 and 50,000 answers can be generated and then honed further until the precise answer is reached using further equations. Chroscielewski also believes the array approach adopted by companies such as Arbor wastes space because 80%-90% of the answers stored are zeros, whereas QueryObjects stores just the equation. The company is looking for a VP marketing out of somewhere like Oracle Corp or IRI Software Inc and a VP engineering to free up Szykier so he can establish the Polish and Russian offices as research centres and move all development to the office in Alameda, California. The money will also be used to build a direct field service sales team as well as marketing. The QueryObjects server costs between \$250,000 and \$500,000 and an ODBC-compliant version is available so that other tools such as Brio's can be used. It's up on MVS, DEC OSF/1, Pyramid Unix and a Windows NT version is in development for release in early 1997.

IBM ESTABLISHES THREE TERAPLEX DATA WAREHOUSE DEMO CENTRES

IBM Corp is spending \$47m on hardware at two Teraplex Centres in the US to demonstrate its data warehousing capabilities. One is at Poughkeepsie, New York with S/390 and RS/6000 systems and the "largest AS/400 in the world," is based at Rochester, Minnesota. The S/390 centre contains four 10-way S/390 servers with coupling and more than 3TB Rmac 2 disk storage, running DB2 for MVS. The RS/6000 system contains 32 8-way nodes with 4Tb SSA disk storage running DB2/6000 and Informix, Oracle, Sybase, and Red Brick software among others. The AS/400 is a 32-way beast comprising eight four-ways with 4Tb of DASD storage running DB/400. Ben Barnes, IBM's general manager of worldwide decision support systems emphasised that although IBM was running TPC-D decision support software running they are not benchmarking centres, merely places to demonstrate and teach how to tune, manage and back-up data warehouses. IBM will use its datamining software, Intelligent Miner at the centres, which is now generally available. The Poughkeepsie centre is up and running now, and Rochester will follow within 40 days.

CAMBEX HAS FASTER, BIGGER CENTURION 2000 ARRAY BACKUP

Cambex Corp, Waltham, Massachusetts has unveiled the next generation of its Centurion Raid array backup systems. Centurion 2000 has slightly more capacity than its Centurion predecessor, up to 760Gb per cabinet, but with faster controllers and drives, and more cache. It supports Raid levels 0, 1, 3, 5, and 10 and IBM, Sun Microsystems, NCR, Sequent, Windows NT and Novell NetWare platforms. It has up to 2Gb of mirrored cache memory and three different host interfaces supporting data rates from 20Mb to 100Mb per second: fast/wide differential SCSI, Ultra SCSI and fibre channel, which is available next quarter. It supports up to 16 host connections. The disks are 4.3Gb capacity. Centurion 2000 is available from next month costing from \$90,000 for a basic small-cabinet 100Gb system with Raid 5 protection (UX No 537).

CAMBRIDGE DISPLAY TECHNOLOGY IS READY TO LIGHT UP THE WORLD WITH ITS POLYMERS

By Joanne Wallen

The difference between an interesting discovery and a revolutionary new technology could well be the speed with which the new technology is brought to market. UK company Cambridge Display Technologies Ltd is about to see its interesting discovery, light-emitting polymers, brought to the mass market in less than eight years from the initial research phase. The company has signed a licence deal with Philips Electronics NV under which Philips Components BV will start to incorporate the polymers into consumer products. Initially, as early as next year according to Cambridge Display, Philips will incorporate them into low technology devices such as mobile phones, but eventually it is predicted that they will replace both liquid crystals and light emitting diodes in devices such as Personal Digital Assistants, clocks, radios. Ultimately, Cambridge Display reckons light-emitting polymers will replace cathode ray tubes in televisions and computer monitors. Midwife Cambridge University and a seed venture capitalist applied for the patents to the technology in 1989, and Cambridge Display Technologies was established in 1992 to exploit the market potential. The company is a bold step for Cambridge University, and indeed for academic institutions generally in the UK. The university is one of the new company's largest shareholders, having invested its own funds in order to exploit the research commercially. In February this year, the company brought in a new chief executive, Danny Chapchal, from Siemens AG's pre-press company Integrierte Systeme Grafische Industrie, to turn the company around. Chapchal, who prior to Integrierte had turned Atex Publishing Systems Corp's \$26m loss into break-even within a year, was headhunted for his past abilities as a corporate doctor. However, as he put it, what was needed was "more a midwife than a doctor." The company did not need saving, the technology simply needed to be brought into the world, Chapchal asserted. The technology originated with the discovery by Richard Friend and Andrew Holmes of Cambridge University that light-emitting diodes could be made from polymers as opposed to traditional semiconductors. They discovered that the polymer p-phenylenevinylene emitted yellow-green light when sandwiched between a pair of electrodes, and by changing the chemical composition of the polymer, the pair was able to achieve light-emitting efficiency that was clearly comparable to that of conventional light-emitting diodes. The advantages of the polymer are that they have very fast response times, use low voltage, and exhibit large area patternability. Complex light emission patterns can be defined simply, any pixel shape and size is possible, and very high resolution can be achieved if required. They require no backlights or colour filters, and have a 180° viewing angle.

IBM REVEALS A FEW DETAILS OF ITS HANDHELD INTERNET SURFBOARD

IBM Corp has been promising a plethora of Network Computers of which the new Network Station is simply the first (UX No 606), and an IBM vice-president visiting the big personal computer trade show in Tokyo last week, Robert Stephenson, told *United Press International* about the portable one IBM has in the works. He described it as a portable telephone with a built-in personal computer capable of showing images and text from the internet. Images of electronic mail messages and web pages are projected optically onto a magnifying mirror built into the lower part of the phone. The device is also expected to include a 2.5" or 1.8" disk drive that will store 100Mb.

IBM ATTRACTS 15 BANKS TO ITS INTERNET COMMERCE VISION

IBM Corp has attracted 15 North American banks to support its vision of internet-based banking and electronic commerce services and has persuaded them to buy equal shares in a new company called Integrion Financial Network which will offer the services beginning early next year. IBM CEO Lou Gerstner and the bank chiefs tried argued the services will be as revolutionary as developments like the automated teller machine, the credit card and the check, but failed to list any services Integrion will offer that aren't already available from most existing telephone banking systems. Integrion hopes other banks which don't want to fork out to build their own online networks will join its ranks; what it really needs is to get one of the very big high-street banks to lend its support and most of those already have their own on-line services. Integrion will use the Big Blue's Global Network and the internet to deliver its services. Banks will be able to compete with each other by offering customized services based upon Integrion technology APIs IBM will publish in the near future. Together the banks have 60m customer households.

Beyond personal banking

An IBM source said the services may evolve beyond personal banking to include the ability to sell stocks over the Internet or find information about buying a car. Gerstner estimated electronic commerce - an area it's invested heavily in through its World Avenue shopping mall, its Net.Commerce technology and Lotus' Net.Apps - will generate \$700m for IBM this year. Users will be charged for transactions such as bill payment, the first application IBM is building. IBM's role will be to provide the network infrastructure and initial applications to Integrion. The company said its network is strictly a North American venture initially, but an IBM source revealed that it will send staff to the UK next month to drum up interest from banks there. Two years and millions of dollars in the making, privately-held Integrion is searching for a CEO and a home outside of IBM walls. We don't know how many employees it has. Asked if it'll adhere to MasterCard International and Visa International Inc's Secure Electronic Transactions (SET) specification, IBM said it's evaluating the issue.

Organic

Also, unlike liquid crystal or plasma displays that require thin film processing on two glass plates, light-emitting polymer can be fabricated on one sheet of glass or plastic. This not only simplifies processing and reduces costs, but also physically reduces the size of the display. Prior to Chapchal's arrival, the company had been fully researching the routes to market, including setting up its own manufacturing operation. It was also looking for corporate funding and considering a rights issue. However, Chapchal says the amount of corporate interest in the technology was "phenomenal," and he realised the original shareholdings could be protected, by entering into joint ventures and licensing agreements. This would also be the quickest way to bring its polymers to market, he said. As part of its investigations into manufacturing its own products, Cambridge got together with former IBM Corp storage manufacturer Xyratex Ltd, Havant to look at running a manufacturing pilot. This has now been put on hold, the company says, while it pursues the immediate opportunities in licensing. While others have been working on similar, organic electronic technology, one industry analyst said anyone wanting to work with light-emitting polymers would have to visit Cambridge first. Chapchal says the company's patent is extremely well written, and has most of the area covered. The company's newly formed partnership with the Bank of Tokyo-Mitsubishi Ltd has helped in opening doors in Japan. However, here again, Chapchal says the response has been staggering. The technology is really beginning to sell itself, and it looks as if a very wide variety of companies will want to buy into it. One reason for this is the broad spectrum of applications that it covers. Cambridge Display's director of marketing, Mark Gostick, says he has talked to companies interested in its potential for lighting. While it would not be as efficient as fluorescent, Gostick says it will easily match traditional tungsten lighting. He says it is one of the few technologies to cross such a broad spectrum. The company expects that the polymers will eventually be used in anything from graphic displays all the way through to ordinary electric lighting. It has certainly fired the imagination of a pretty disparate bunch of investors so far. In addition to Cambridge University and the venture capitalist, the rock group Genesis has a shareholding, as do computer industry luminaries the Sculley brothers, Acorn Computer Group Plc's founder Hermann Hauser, Steve Kahng, president of Power Computing Corp, and Esther Dyson, president of Edventure Holdings of New York.

Emitting light

In addition to bringing initial products to market, the Philips deal will also fund further development of this product and others, says Chapchal. The company is currently also looking to license polymer-based optical modulators which can be used in optical switching for telecommunications networks. Cambridge Display, which currently has a staff of 21, of whom 15 are researchers, will continue to develop the technology. Chapchal says the company will probably end up as a licensing and technology transfer company, concentrating on researching and developing leading edge technology. With the company about to make another major licensing announcement for light-emitting polymers just as soon as solicitors dot it's and cross t's, and several more in the pipeline, it looks like it won't be long before Cambridge's polymers are emitting light all over the world.

MOTOROLA LOSING FRIENDS AS IT WARNS OF LOWER Q3 EARNINGS

There's no company so friendless as an erstwhile high-flyer fallen on hard times, and a profits warning last week from Motorola Inc sent the share price sliding \$1.375 to \$49.25 on the day. The company said third-quarter earnings will be down sharply from the second quarter, and below projections, blaming weak prices in its semiconductor division, and price pressure in the cellular phone, paging and modem businesses. Internationally its orders and sales weakened. The shares had slipped further to \$47.75 by Thursday night, last week.

IBM TARGETS 20% GROWTH FOR REMOVABLE MEDIA UNIT

Now that it's been out of the shadow of the rest of IBM Corp's storage systems division for one year, IBM's removable media storage solutions unit launched new products last week, vowing to increase profits by 20% next year. Removable media - what most of us remember by its old fashioned name: tape and optical storage - was spun out in September of last year, when IBM split its storage business into four groups. Although its revenues are still significantly smaller than, say, its disk cousin's sales, IBM plans to reap significant rewards this year by expanding its tape automation subsystem, the Magstar Multi-Purpose, to Sun, HP and SGI Unices, NT and NetWare platforms this month. It currently works with RS/6000 and AS/400 systems. It's priced at about \$15,000 for a one drive library and \$23,000 for a two drive library due out in March of next year.

Magstar Virtual Tape server

Also announced last week was the Magstar Virtual Tape Server, a storage management system that uses volume stacking and virtual tape drives which IBM claims will result in an almost 60-to-one reduction in the number of cartridges a user must buy. The server ships for \$180,000 for use with the IBM 3494 Tape Library this month and the 3495 in November. IBM also announced an integrated bundle of its existing hardware and software products which supports about 30 operating systems, called the 3466 Network Storage Manager. The system can back up 40Tb of data across networks and enables users to back up and restore files through Internet browsers and private intranets. IBM will begin selling media for all its products so that users could get everything they need from Big Blue instead of 3M or other firms. Big Blue says the initiative is not just a loss exercise to please users but expects to turn a "decent profit" from selling media within two years. IBM estimates it has an installed base of 6,000 for its Magstar tape drives.

APPLE ENHANCES AIX UNIX SERVERS WITH 200MHZ CHIP

Apple Computer Inc has boosted the power of its high-end network server line by using the 200MHz PowerPC 604e chip - and demonstrated its first ever symmetrical processor with two 604e chips, at the Seybold Publishing conference in San Francisco last week. The new Apple Network Server 700/200 runs IBM Corp's AIX Unix and joins Apple's existing AIX-based network servers introduced back in February (UX No 579). Like those, it will be tailored for print and electronic publishing applications. Prices start at \$16,130 for a system with 1Mb Level 2 cache, 48Mb RAM (expandable to 512Mb), six PCI slots, and 9Gb Fast and Wide SCSI-2 drives, as well as 8mm Exabyte Corp tape drive and eight times speed CD-ROM. AIX, however, isn't included, and costs an extra \$1,500. Upgrade CPU boards will also be available.

Next year

While the 700/200 should be available from next month, the dual processor version will not emerge until early next year. It's expected to provide performance increases of up to 1.8 times running suitable, processor-intensive server applications. Apple already has a dual-processor desktop system, the PowerMac 9500/180 MP, but the Mac OS operating system it runs currently runs only in asymmetric mode. The 604e chip has also been used to upgrade the performance of Apple's 8550 Workgroup server running Mac OS, and Apple upgraded the peripheral options on its 7250/120 model.

ORACLE'S ALL-AMERICAN FIRST QUARTER GROWTH

Oracle Corp's predictably strong first quarter was driven mainly by growth in the Americas as the recent problems in Europe are still being ironed out. Net profits at the Redwood Shores, California database company were up 110% at \$112.8m, but were against a period that included a \$50.9m pre-tax hit for purchased research and development from the acquisition of Information Resources Inc last year. Without that charge net earnings would have risen by 28%. Revenues in the quarter were up 36% on last time at \$1,052.3m. Licence revenues were up 27% year on year, with database licences rising \$41% within that. Services were up 45% and represented 44% of total sales. Revenues in the Americas were up 43% in the quarter, but Oracle wouldn't split out the other regions. The European operation was something of a trouble spot recently and former AT&T Corp executive Pier Carlo Falotti was brought in to quell resentment after Loek Van den Boerg's VP Europe position was axed (UX No 602). The idea is to unify the European operations and reorganize them vertically. Currency conversion cost the company to the tune of 3% this time, with Asia-Pacific region being hit by a weaker yen. Oracle does not pay dividends. The EPS was a cent above Morgan Stanley's estimate. Oracle Corp has reported first quarter net income up 109.8% to \$112.8m, against a period including a \$50.9m pre-tax charge for purchased research and development, on revenues that rose 36.3% to \$1,052.3m. Net earnings per share rose 112.5% to \$0.17 in the quarter.

IBM READIES NET.MINE DATA WAREHOUSING OUTSOURCING SERVICE

As talk of the internet grinding to a halt escalates - although we've heard that one before - IBM Corp will announce next quarter its internet/intranet-based data mining outsourcing service, provisionally called Net.mine. The idea is that those who cannot afford or don't need complete data warehousing solutions would use IBM's hardware to churn out meaningful information from their morass of data by sending and would send the data to and from over the internet. However, Ben Barnes, IBM's general manager of worldwide decision support systems said that realistically large amounts of data would be sent on magnetic media not the net, but for the small and occasional data warehouse, some sort of network would be viable, either the IBM Global Network, an intranet, or even the internet. As you can probably guess, the precise implications of moving such data over the internet are still being worked out, as is what software will be available with which to mine the data. Companies such as DataMind Corp have said the internet is unsuitable for moving the data, but would be useful for visualising the data in some sort of meaningful way (UX No 606). And this is what IBM sounds like it's got in mind when Barnes said that conceivably a "little bitty entrepreneur could set up a store front on the internet and do data mining." Barnes said the service would be up and running either next quarter or the first quarter of next year.

IBM AND APPLE CREATE UNIT TO LICENCE TALIGENT/KALEIDA TECHNOLOGIES

Picking over the bones of their failed Taligent and Kaleida investments IBM Corp and Apple Computer Inc have created Cupertino, California-based Object Technology Licensing Corp to licence out whatever it can from what was developed up to Taligent's demise in February (UX No 570). It's got about 80 patents now, and a further 300 pending in the US and elsewhere. The company is jointly owned by Apple and IBM. Taligent's third investor, Hewlett-Packard Co, has retained its licence rights but doesn't have a share. The first technology, the CommonPoint object-oriented operating system environment and a couple of Kaleida's multimedia ideas will be offered up in a couple of months. OTLC has appointed Brian Naylor - ex-NCR Corp licensing honcho - to head the three-person operation that can also tap IBM and Apple's technical people as it needs to. There's a board meeting in early October to sort out what's to be offered. The patents are at www.taligent.com.

NEC SAYS SERVER SALES ARE BOOMING AT HOME

NEC Corp claims its home market for high-end servers is booming and that currently only Unix has the scalability, security and robustness to address it. That's why it began to sell Hewlett-Packard Co HP 9000 servers in Japan last year as the NX7000 series. Although it only shifted 30 in 1995 - and 57 this year up to August - it expects orders to rise significantly in the short-term. By comparison, it has shipped 112,850 Mips-based EWS 4800 workstations and 4,965 UP-4800 servers over a five year period. NEC's computer systems chief executive VP Masao Toka says that in comparison to prevailing attitudes in the US, where the battle between Windows NT and Unix is perceived as a "winner takes all" situation, Japanese vendors see co-existence as the key and expects Unix to continue to be "vital" for NEC's computer business for the mid-term, defined as five to ten years.

uni gramx

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BEA Systems home of Tuxedo, the middleware **Novell Inc** maybe should have kept and thrown NetWare to the wolves, is setting up a subsidiary in Japan, **BEA Systems Japan Ltd**, in Yokohama under general manager Ryoichi Kasai in support of its local distribution channels, **Fujitsu**, **Oki Electric**, **NEC** and **Unisys**. Tuxedo is always good for a rise out of NCR on behalf of Tuxedo's rival Top End. Last week it called BEA, a relatively small start-up, "two cats and a dog" and claimed BEA's backer **Warburg, Pincus** "can't throw enough money into" the company to make it competitive with Top End long-term. Tuxedo has a greater number of installations than Top End but they're not as profitable, according to NCR.

Apparently **DEC** is figuring its prospective 21264 Alpha chip, aka EV6, will be good for 30 SPECint, the EV67 shrink for 50 SPECint and the EV7 for 100 SPECint. It's also supposed to be working with LSI Logic on a chipset called Koala.

Intel Corp's Intel Inside logo is to get a new touch of colour - it plans a flash corner of orange, pink, yellow and green on the edge of the traditional grey plane with the blue circle for the MMX parts.

Englewood, New Jersey-based middleware company **Momentum Software Corp** is about to debut version of its X-IPC messaging software which competes with the likes of **IBM Corp** MQSeries and **Peer Logics Inc** Pipes. Version 3.0 is said to support the adding of clients and servers on the fly without crashing the network. It includes new message tracking, high-speed Queue-Burst queuing, data translation between platforms, enterprise-wide publish and subscribe messaging and the creation and manipulation of message chains which are treated as discrete messages. 3.0 is priced from \$900 to \$64,000.

Informix OnLine Extended Parallel Server 8.1 is now up on **HP's** Enterprise Parallel Server, **Pyramid's** Reliant RM1000 Parallel Server and **Sun's** parallel database clusters (UX No 598). The remaining four or so Unix flavours will be out next quarter, Informix promises.

HP has put prices on its Praesidium VirtualVault security package. It's out now at \$75,000 for a single licence; two to five licences go for \$65,000 each and \$45,000 is the price for six or more. Smart-card and international cryptography technologies are next in the Praesidium pipeline.

PeopleSoft Inc has announced the first stage of PeopleSoft 6, which is to be officially launched in London on November 21. The human resources software company has added Pension Administration and Time & Labor applications to the product line, and all the software modules will be available in December. There will be two more announcements, one in the financial arena. The reason for the piecemeal approach is to avoid us all being swamped by the enormity of the roll-out in November, apparently. It's being broadcast out of London to cities all around the world.

IBM Corp's Tivoli Systems Inc has released Tivoli/Plus modules for Axent Technologies Inc's OmniGuard, Vantive Corp's HelpDesk and CyberSafe Corp's CyberSafe Challenger. OmniGuard and Challenger versions cost \$9,000 per administrative domain while the Vantive one costs the same price per Vantive server.

SunSoft Inc's supposed to roll Solstice over to manage NT at Networld + InterOp this week.

SunSoft Inc's tweaked Solaris 2.5.1 for Web serving, claiming Netras running the cut installed at **Netscape** handle 18m hits a day at half a cent per hit compared with one cent per hit for DEC's TurboLasers on site at Netscape and two cents each for the IBM and HP boxes. The 2.5.1 Web rev is out next month. It provides go-faster service for Apache and other Web servers, not just Netscape. What it doesn't say is that it'll also run SunSoft's own Vishnu Web server software at a greater lick. SunSoft's understood to have been working on its own Web server software for some time and canned a planned release earlier this year because what it had at the time really didn't cut it.

Visigenic Software Inc has appointed Bob MacDonald as VP marketing and announced that Casey Eichler joined in July as chief financial officer. MacDonald joins fellow ex-Infomixers, president Mark Hanson and chairman Roger Sippl.

And **Network Computing Devices Inc** has appointed Cecil Dye as VP sales and marketing, coming from Wyse Technology Inc after 24 years at DEC.

The well- and not-so-well-dressed got together in New York City last week to launch a multimedia technology centre in the heart of city's fashion district. **Sun Microsystems Inc** is supplying the Ultra Enterprise 2 server and Sparcstation 5 workstation for the interactive kiosk, which is housed to an octagonal structure with "the world's largest button" stuck on top, at the end of a 31-foot long needle. Users can get services such as showroom reservations, industry event information and supplier information, or go to www.fashioncenter.com.

ICL Plc's ICL Inc and **Isocor Inc** are getting together to develop an integrated directory service product using the latter's N-Plex and Isoplex server software to stretch ICL's i500 Enterprise Directory Server across more platforms. ICL says the move will add SCO OpenServer and UnixWare and AIX to it's HP-UX, Solaris and Wintel stable. The software will appear mid-next quarter.

Information Builders Inc and **BMC Software Inc** have apparently inked a deal to develop a BMC Patrol management environment agent and server engine in a similar vein to the Tivoli one that's just about to be released (UX No 590). BMC's not talking about it yet though.

OMG's putting together a three-day Corba academy from January 21 next year that'll teach fundamentals and "extreme programming" for hard-core developers. Object World Corp owner Softbank is staging the thing at the San Francisco Convention Center close to the airport.

Most major RISC vendors have extended their instruction sets to support multimedia operations; and Intel is adding MMX instructions. The instructions generally require relatively few additional gates, and have a big payoff for applications like MPEG decoding. The PowerPC camp wants the world to know it hasn't dropped the ball and is tinkering with the architecture to add similar support.

Andries Bottma, VP product marketing at rising manufacturing software star **Baan Co NV** says that while Unix currently dominates the high end of the Enterprise Resource Planning (ERP) market for users which require support for 500 concurrent or up to 1,500 named users, most of those users are also evaluating Windows NT and BackOffice as a future direction. To that end Baan is currently integrating its ERP software with a range of **Microsoft Corp** products. He expects the integration of Baan applications with SQL Server to support 200 users in beta and early production releases but to rise thereafter.

Tivoli Systems Inc is apparently moving its Internet concerns up to **IBM Corp's** networking headquarters in Raleigh, North Carolina, while IBM's NetView network management operation moves down to Austin, Texas, into Tivoli boss and now IBM VP and general manager Frank Moss' network and systems management division.

We understand **IBM Corp** RS/6000 honcho Mark Bregman's notion of re-branding the AIX servers and workstations with more user-friendly name and numbering conventions has been stymied by the powers that be and that for the time being we'll have to live with something like the 43P Series for desktops as an interim.

Business Objects SA is integrating version 4.0 of its query, reporting, and online analytical processing (OLAP) tool with Oracle Corp's multidimensional OLAP database offering, Express; the interface is due next quarter.

Data General Corp's landed more business for its Clariion RAID storage systems: **Hewlett-Packard Co** is OEMing Clariion Series 1000 and 2000 disk arrays for use with its proprietary HP 3000 MPE/ix minicomputers. HP already offers Clariion storage for its HP 9000 Unix servers and workstations.

NCR Corp's appointed former **Electronic Data Systems Corp** VP Alice Lusk to run its professional services and information systems operations as senior VP. It's a new post and is also the first time the company has selected a woman as SVP. Professional services is reportedly the fastest growing part of NCR's business. Lusk will report to NCR chairman and CEO Lars Nyberg and is a member of the 16-strong senior management team.

Bidding to create the premier East coast show, and at the same time effectively admitting Unix alone is no longer enough for a trade show, **Blenheim Group USA Inc's** tossing its Unix + NT Expo, DB/Expo and I2 - Internet + Intranet Expo - into a single show from next year, billing the thing as IT Forum which will run between September 16 to 18 at New York's Jacob Javits Convention Center.

Meantime, the whispering classes suggest the event might become a *Softbank Comdex* show even before the current Unix Expo closes its doors next month. The unconfirmed suggestion is that acquisitive **Reed Elsevier NV** has been bidding for the UK's financially strapped **Blenheim Group** and that by the time of Comdex Fall will have snared its quarry, in which the first thing it would do would be to sell Blenheim's technical shows to Softbank. We already know that Softbank Comdex wouldn't mind buying both Unix Expo and PC Expo off of Blenheim (UX No 590). Blenheim didn't return our calls.

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MOMA SPURNS IBM MQSERIES OFFER, STILL SEEKING COMMON MESSAGING GROUND

We've been trying to figure out what's going on over at the Message-Oriented Middleware Association (MOMA), and its attempt to create some common messaging interfaces. IBM Corp MQSeries manager Steve Craggs' parting shot before he headed off to Candle Corp (UX No 603 and see back page), was the suggestion that MOMA roll over and throw its lot in with MQSeries interfaces. The MOMA board choked on that suggestion, but claims there's still wind in its sails. It says it's currently taking a fresh look at various options and MOMA president Bob Scher, also director of strategic alliances at PeerLogic Inc, is confident it'll have a position on some common messaging techniques by year-end that'll deliver some measure of interoperability or co-existence between products. At issue is whether MOMA pursues the goal of common or federated APIs or standardisation on a protocol at the wire level. Given that distributed object computing is expected to provide messaging with a leg-up into the market couldn't OMG's IIOP transport be used? MOMA members tell us it's fine for ORB-to-ORB communications but not much use to messaging though they suppose IIOP could eventually be implemented over a messaging API. MOMA counts 30 members now and promises a major conference and user meet next year. Its problem is that MQSeries is gobbling up the market and Microsoft Corp's own messaging system, Falcon, will soon be flying all over its ground. Craggs by the way doesn't see much of any future for any other products - see back page. Message oriented middleware supports the transmission of instructions rather than documents of files, which are executed on receipt by processes running on distributed systems. A process running on one system can instruct or address a process on another system over a network asynchronously, and unlike remote procedure calls which literally invoke remote procedures onto the local system, transmits multiple messages and handles responses when they arrive. The message can use a variety of formats 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 across networks using multiple connectivity protocols and operating systems environments.

CANDLE OFFERS NEW APPLICATION-SPECIFIC MANAGEMENT

Candle Corp will this week accelerate the expansion of its middleware, integration and service businesses, announcing new connectivity packages for Lotus, SAP and web-based applications using IBM MQSeries messaging, plus the acquisition of MQSeries porting shop Amsys North America. It's also opening up more of its Command Center management APIs to end-users and is hoping that Microsoft Corp will soon get over "its schizophrenic period with ActiveX" so it can begin to sell a bunch of new object and Internet management products it's got sitting on the shelf. Candle's majoring on the use of IBM's MQSeries messaging technology to develop future generations of management and connectivity products and will offer the same facilities over Microsoft's Falcon messaging system when that comes down. Candle CEO Bob LaBant has recently hired IBM MQSeries business manager Steve Craggs as his VP solution for network applications. Having recently gobbled down Across Data Systems Inc's MQ/Secure middleware and Lotus Notes and desktop management company CleverSoft Inc (UX No 601), Candle will this week announce it's buying 40-person MQSeries porting shop Amsys North America on undisclosed terms. The privately-held Boston, Massachusetts concern is currently porting MQSeries to Tandem Computers Inc's Himalaya MPP systems. It claims it has other ports under wraps. CEO Ian Hadfield will extend Amsys' reach to the UK, Europe and elsewhere as VP of a Candle messaging, middleware and services division. The new packaged products, initially Lotus Connect, followed by Web Connect and SAP Connect by year-end, will link organisations' applications in each of these areas to back-end mainframe and CICS environments managed by Command Center. The Connect bundles include MQSeries and Command Center management for it, MQ/Secure and IntelliWatch management and desktop tools plus integration services. Prices will range from \$50,000 to \$100,000. Meantime Candle says there's a ton of application management holes it's still got to fill by development or acquisition, including full end-to-end and drill down facilities, and the first of these came with the licensing of Tivoli Systems Inc's application development environment toolkits to integrate the TME 10 framework into Command Center products. Users will be able to share data between both companies' system frameworks and interface Candle solutions with Tivoli-based modules from ISVs. Craggs claimed about 85% of its mainframe customers have both Candle and Tivoli systems and about 20% to 30% of its client-server users do as well, so it's an obvious move. Candle says the first level of the agreement is bi-directional capability, so that an event monitored by a Tivoli product will also be passable to Command Center. By the first half of 1997 it'll have achieved framework to framework linkage so that any application in a Tivoli domain will be accessible for Command Center. This week the company will also open up console APIs in its Command Center management suite to accept messages created by users rather than just those pre-defined by Candle. (*ActiveX Schizophrenia see page 3*)

MICROSOFT TO WORK WITH HP'S OPENVIEW

Hewlett-Packard Company's inexorable lurch towards NT continues apace. This Monday, at Network + Interop in Atlanta, HP will demonstrate first fruits of a deal that it's chiselled out with Microsoft Corp to ship its OpenView network management with Microsoft's Systems Management Server (SMS). The project will integrate next version offerings of OpenView IT/Operations and OpenView IT/Administration - due in the spring of 1997 - with SMS enabling OpenView to recognise distributed systems managed by SMS as OpenView nodes. HP plans to deliver OpenView agents and templates for installation with SMS while Microsoft will ship the OpenView agents with the next release of SMS. HP gets responsibility for licensing and supporting technology. The two are expected to make much of the mixed Windows NT and Unix capabilities. HP's IT/Operations is, in effect, an expansion of the company's OpenView OperationsCenter systems management product, which has been combined with the HP OpenView Network Node Manager. The combined system is said to provide features including views of the entire computing environment (including network infrastructure); combined network- and systems-management tools; enhanced problem management; advanced allocation of operator responsibilities; simplified assignment of responsibilities in distributed environments and greater management of large heterogeneous environments. IT/Administration is a combination of the OpenView AdminCenter and the OpenView Network Node Manager. Meantime Microsoft has pledged its future 64-bit NT for Merced - the next generation Intel-HP line of 64-bit chips - due sometime in 1998.

PLATINUM LEADS OPEN OBJECT ALLIANCE TO OBJECT WATER

Platinum Technology Inc is heading a new group called the Open Object Alliance that intends to develop a model for object-oriented analysis, design and construction tools and some sort of sharing mechanism between the tools. It's a response to the OMG's request for object-oriented tools interoperability standards from its Analysis and Design special interest group, in particular the part about object-oriented analysis and design methodologies or notations (UX No 550). And its a reaction to Rational Software Corp's proposal of a Unified Modeling Language (UML). The submissions are due by the end of January and are expected to be ratified around June. The group's submission will include support for Rational's UML, which is on version 0.9 right now, as well as a bunch of standard object methods, including Booch, Martin/Odell and the like. Rational has been working on its spec for more than a year now, so it's difficult to see how much the new group can really add. (*continued on p2*)

SUN TAPS INTERACTIVE TRAINING VIDEO MARKET

Sun Microsystems Inc says it's getting in on the ground floor of the education and training interactive video services market - an emerging area it ~~claims is set to explode - but admitted revenues from the venture probably~~ won't be a significant part of the company for a number of years. Sun CEO Scott McNealy articulated Sun's commitment to providing its servers to the education and training video market last week as part of the unveiling of a joint company, The Business Channel LLC. Created by the Public Broadcasting Service and The Williams Companies Inc, the new firm will deliver on demand, interactive educational content to users' desktops via the Internet, satellite and The Williams Companies' fibre network using Sun's MediaCenter video servers, which first shipped in October. PBS' Business Channel has been on the air since 1989 and has about 6,000 businesses which subscribe to its linear - as opposed to interactive - seminars and videos. The firms are banking on the idea that businesses want staff to be able to re-train or improve skills in an individual manner, so that large groups of employees don't have to be pulled out of the office at the same time. Although Sun wouldn't attach a price to the deal, the servers will be deployed to more than 40 US subscriber markets over the next year. The MediaCenter 1000E starts at \$30,000 and delivers up to 12 MPEG-2 or 33 MPEG-1 concurrent video streams at a sustained rate of 50Mb per second. McNealy said the project would also improve Java's reputation: "Everybody accuses Java of just doing fun, animated things, but here you see Java doing something useful." The Business Channel will provide video content such as college classes and corporate training, but the "on demand" aspect of it won't be available until July 1997. Users will access it through a Web-like interface with cross-links to Internet sites and be able to purchase the services a la carte or in vertical market bundles. Sun wouldn't go so far as to say that education and training video delivery will be a big revenue garner within the next couple years, but predicted it would be "significant" income for the video server business unit, which is part of Sun Microsystems Computer Company's interactive services group.

HOSKYNS VANISHES AS CAP GEMINI IMPOSES ITS NAME

After more than 30 years, it's goodbye Hoskyns, bonjour Cap Gemini, as the French company asserts its branding on all its subsidiaries. In a bid to raise its stake of the worldwide computer consultancy and services market, the former Cap Gemini Sogeti SA believes it will present a more unified front by doing away with the individual company names. Last week Hoskyns Group Plc became Cap Gemini UK, Sweden's Cap Programator, Holland's Cap Volmac and all the information technology entities worldwide will take the Cap Gemini name. Only the management consultancy arm Gemini Consulting, will retain its name. The firm has also completed its capital restructuring. The Cap Gemini Group SA holding company is now 25% owned by Daimler-Benz, 25% by French group CGIP, Compagnie Generale d'Industrial et de Participations SA, 20% by founder Serge Kampf and his management team, and 30% trades on the Paris Bourse. As well as the name changes, the company, which has traditionally operated geographically, with each country being a profit center, has set up four vertical market sector operations. These are Telecommunications, Pharmaceuticals, Travel & Tourism, and Finance & Insurance. These will be operational from January 1 1997 - although they were foreshadowed as long ago as the beginning of 1993 with the Genesis program, which was also intended to see country operations run as part of the unified group, so the 18-month program will have taken four years. The group is also aiming for greater convergence between Gemini Consulting business and the Cap Gemini services side, as well as greater cross border cooperation. One challenge it has is to educate its profit center managers in a new way of doing business. The other, far greater, challenge, is to compensate for the loss of equity in the individual company names, by substantially increasing its market share. Hoskyns managing director Tony Robinson, who has been with the company since 1967, says he has some personal regrets about no longer working for Hoskyns, and admits there is a lot of equity in the name. However, he believes the unified group will find it far easier to compete when pitching to global customers. As for Hoskyns' founder, Sir John Hoskyns, Robinson says he is sad, but says it is a logical, sensible move. Sir John has apparently declined to change his own name.

ORACLE PUTS WIND RIVER VXWORKS ON NC

Oracle Corp has settled on Wind River Systems Inc's VXworks embedded operating system and development tools for machines to be offered by its new Network Computer Inc unit. Oracle also plans to upgrade Oracle Video Server to enable video and audio to be streamed on the Internet.

1.6GBPS SERVER-TO-SWITCH SPEEDS CLAIMED BY GIGALABS

While most of the attention at the NetWorld+Interop show in Atlanta has been centered on Gigabit Ethernet, a Sunnyvale, California-based company - ~~GigaLabs Inc - has announced a new technology claimed to provide 1.6Gbps~~ speeds between its new GigaStar switching platform and either PCI-based servers or SCSI storage devices. The technology is based around a simple premise: while PCI-based servers are capable of processing at least 1Gbps of information, the networking technologies that are currently in use are restricted to speeds around 100Mbps. GigaLabs has therefore tried to remove this limitation by interfacing directly between the PCI bus on the server, and the GigaStar's PCI bus. Not only does this eliminate the overheads of converting the raw data into Ethernet or IP packets (and the speed limitations of these technologies), says the company, but it also obviates the need for network interface cards between the server and the switch. GigaLabs terms the technology I/O switching, and has applied it both to the PCI-to-PCI link - dubbed the GigaPipe - and a PCI-to-SCSI connection, the GigaScuz. The same technology can be used to connect two of the company's GigaStar switches, the company adds. In terms of the physical connection used, I/O switching employs 100-pin 50 twisted-pair copper connections, which the company claims can be produced for little more than traditional two- or four-pair wiring, resulting in far greater capacity at little extra cost. What is currently unclear, however, is whether the approach limits I/O switching capacity to 50 concurrent users - one for each pair of copper connections. Nobody was available at press time to clarify the situation.

Backplane

GigaLabs has applied the technology to two switches, which are claimed to provide network switching at speeds up to 1.6Gbps per slot, at a price per switched port of under \$200, the company claims. The GigaStar 100 workgroup switch has a stackable five-slot chassis and 1Gbps backplane to support 40 switched full-duplex 10 Mbps Ethernet ports; a choice of Asynchronous Transfer Mode (ATM), Fast Ethernet, FDDI, or GigaScuz SCSI II or III uplinks; and the GigaPipe connection. A fully configured GigaStar 100 stack delivers dedicated 10Mbps bandwidth to 160 end-stations for under \$200 per port, and can act as a module to a larger GigaStar 2000 switch. The GigaStar 2000 is a protocol transparent local network switch that delivers 1.6Gbps two-way bandwidth through each of its nine slots, for a total of 14.4Gbps on a non-blocking backplane. Each 1.6Gbps slot can link to a server, peripheral or another GigaStar switch at that speed; be switched into four full-duplex 100Mbps Fast Ethernet connections or a single ATM or FDDI uplink; or cascaded down to as many as 160 dedicated 10Mbps full-duplex Ethernet connections. The GigaStar 100 chassis is \$1,600, the GigaPipe is \$2,500, the GigaScuz is \$5,000, eight switched 10Mbps Ethernet ports cost \$1,200, and two switched Fast Ethernet ports are \$2,000. The GigaStar 2000 chassis is \$15,000 but is free for a limited time if you spend \$15,000 on modules. They arrive on October 31. GigaLabs was born in 1988 as Input Output Systems Corp. It is a member of the Gigabit Ethernet Alliance and will offer its users "an easy migration" to Gigabit Ethernet as soon as the standard is ready, even though it "may actually slow down switch-to-server traffic." The first taker for the switch is Cable & Wireless Internet Exchange Inc, based in Vienna, Virginia, which will use it to provide extra capacity for its Internet access services.

OBJECT/FX HAS SPATIALWORKS TOOL FOR VERSANT DATABASE

St Paul, Minnesota-based Object/FX Inc has implemented its SpatialWorks tool set for organising, viewing and analysing enterprise-wide data on Versant Object Technology Corp's object database. It will sell the bundle to run under Unix, OS/2 and all Windows from \$12,000 for a 10-user license. Versant is one of that shrinking band of companies that still describes itself as an object-oriented database vendor. Electronic Data Systems Corp said it is using the Versant object database for its Media Vault multimedia management system, an initial implementation of which is being used by Sprint Corp, Kansas City, Missouri in its Drums project.

PLATINUM'S OBJECT WATER (continued from page 1)

Platinum says its version will support Rational's Unified Modeling Language and the Open Modeling Language. Platinum claims Rational's metamodel is "restrictive" but we're not quite sure why. The group claims it will produce a vendor-neutral metamodel with Corba and ActiveX bindings that supports the CASE Data Interchange Format (CDIF) metamodel, the Common Object Methodology Meta-model Architecture (COMMA) design methodologies and a definition of the CDIF metamodel with Corba bindings that enables extensibility on the fly. Products are expected by the end of next year. The group of 28 comprises software companies including ParcPlace-Digitalk Inc, Intersolv Inc, i-Logix and Intellicorp, together with Swissbank and Centre for Object Technology Applications and Research, among others. It's led by Platinum's Erick Rivas, designer of Paradigm Plus.

MICROSOFT MAKES ACTIVE X DATE FOR OCTOBER 1...

Although Microsoft Corp has finally picked a date for its ActiveX standards group event - Tuesday October 1 at the Downtown Convention Center 7, World Trade Center - it appears Redmond is going to keep a firm grip on the reins of its object technology. Initially just a basic set of services are up for adoption by whatever organisation Microsoft chooses to guide the direction of the technology; "enough to get objects talking to each other," according to Internet division marketing director Tom Button. These include Component Object Model (COM), Distributed COM, system registry, remote procedure call, automation and storage extensions. Microsoft has invited more than 70 ActiveX "stakeholders" to the meeting, the goals of which are to "detail options for the process that will govern the future licensing and management of ActiveX technologies and to poll the participants to help determine the best option." Microsoft says stakeholders - customers, ISVs and vendors - will help draft the options but that it will conduct a poll and make a recommendation on that poll; there will be no vote as such. Only after the basic ActiveX technologies are handed to the TBD organisation will Microsoft and its partners decide which other higher level object services should be turned over to the group. They include data access, remote distribution of software, transaction processing, large-group development and others. The services are built upon COM but now reside under the umbrella of Object Linking and Embedding, a term Microsoft recently resurrected to shelter its core object technologies from the ActiveX handover. Microsoft has already promised to provide specifications and source code implementations of COM, DCOM and other interoperability technologies and says its aim is to drive the standardization and evolution of ActiveX technologies and accelerate their adoption on non-Microsoft platforms including Unix and Macintosh. Hewlett-Packard Co, Intel Corp, SAP AG, Computer Associates International Inc, Netscape Communications Corp and Digital Equipment Corp are amongst the 70 with a ticket.

...ORACLE, SUNSOFT, WILL GO TO THE BALL

Oracle Corp says it will most certainly be going along to Microsoft Corp's October 1 ActiveX fest in New York. VP server marketing Mark Jarvis is expected to hold the ticket. Oracle just recently endorsed IIOP, the Object Management Group's Corba-compliant Internet InterORB Protocol, an ORB-to-ORB tom tom that Netscape Communications Corp threw its weight behind and which lead to Microsoft's offer to put ActiveX into an open consortium in the first place. IIOP will go into Oracle's Web Server 3.0 which is supposed to ship by the end of the year. The company plans to detail its wider ambition for Corba in a couple of weeks. The thinking is it may end up endorsing Microsoft on the desktop and have Corba do its server work. SunSoft Inc says it'll be at the event too. It doesn't look like Microsoft wants to have Object Management Group at the meeting.

DEC RETAINS VLSI TO HELP POPULARISE THE ALPHA RISC

Still trying to make the Alpha RISC a hit outside its own computers, Digital Equipment Corp has signed VLSI Technology Inc to design and manufacture core logic chips for use with future versions of the Alpha. DEC hopes VLSI will be able to help it to produce and market Alpha components and subsystems on the OEM market - particularly to people building for the mainstream \$2,500 and up Windows NT personal computer market. The target is to outperform NT on a 200MHz Pentium Pro and do it at \$2,500.

SUNSOFT CONCEDES, INCLUDES NT MANAGEMENT IN SOLSTICE

Recognising Windows NT's slow but sure invasion of its space, SunSoft launched version 2.0 of its network management platform, Solstice Enterprise Manager last week, with a scripting capability to manage SNMP agents on Windows NT as well as Solaris. Having found favour in the telecoms sector, it's now being positioned for the commercial market as heir apparent to SunNet Manager. It also includes RPC and CMIP support, advanced event correlation, customisable event response capabilities and backward compatibility with SunNet Manager and Domain Manager. A new Solstice Workshop tool based on the Java Management API was announced, as was Solstice Network Client 3.0, an NT-ready update of Sun's PC/NFSpro which provides NFS file and print services and TCP/IP utilities to Windows clients. Solstice Internet Mail 2.0, which Sun fancies as a rival to Microsoft Exchange, is reportedly a more scalable version of the IMP-based mail server that's expected to ship by year-end. Sun released its fully supported IMAP4 mail client for NT, Windows 95 and Solaris with Internet Mail 2.0. LDAP support is expected by the beginning of next year.

SUN AND APPLE SWAP KEY MAC, JAVA AND SOLARIS TECHNOLOGIES

In keeping with the name of the show, interoperability, Apple Computer Inc and Sun Microsystems Inc cosied up together, sparking off the inevitable takeover rumours that Sun denied, as they announced a raft of bridges between each other's technology at Networld+Interop in Atlanta. Of course it could be that Sun has run the rule over Apple so finely that it knows what it wants from Apple and doesn't have to buy the whole company anymore. Sun will bundle their Apple File Protocol with Solaris servers so Mac clients can be managed by the Solstice network management software, and develop a common security architecture and file access to web applications through Sun's WebNFS, based on Sun's SKIP security protocol. The pair confirmed that Sun's Java Beans and Apple's OpenDoc spec will work together so that Beans can be embedded inside OpenDoc containers. IBM Corp gave the pair a pat on the back for the effort. The companies are setting up a joint lab to do all this, but we don't know where yet. Also announced was the integration of Apple's Quicktime with Sun's JavaMedia APIs and libraries so QuickTime audio and video can be incorporated into Java applications. The two companies will also work to get chip makers, system developers and ISVs to support the mediaLib API, formerly know as Virtual Device Interface. Sun uses it for the layer between the CPU and applications APIs. Finally, Sun and Apple will write development tools, separately, together and with third parties, to take advantage of all the good work they'll be doing in their lab. There's no time frame for any of this at the moment, according to SunSoft president Janpieter Scheerder.

DATA GENERAL OPTS FOR ALR'S SMP IN NEW AVIION SERVERS

Data General Corp has picked Irvine, California-based Advanced Logic Research Inc's SMP technology for its Aviion AV3600 departmental servers. ALR was chosen back in May, because although IBM Corp, Compaq Computer Corp and Hewlett-Packard Co have announced SMP stuff for Pentium Pro chips, they weren't shipping them at the time, whereas ALR apparently was, according to George Lyras, Data General's Avion server product marketing director. He also said it was chosen for its 15 slots I/O and storage features. The previous Pentium-based AV3000 model used an Extended Express board from Intel Corp, and the higher-end AV4900 and AV5900 are based on Intel SHV boards, but that technology was deemed too expensive for the departmental-level servers. The 200MHz Pentium Pro-based AV3600s with 64MB RAM and 512Kb cache go for \$17,000 for a single processor, \$21,000 for dual and \$29,000 for a four-way, and are out now (UX No 605).

CANDLE SEEKS END TO REDMOND'S ACTIVE X SCHIZOPHRENIA

Candle says it's getting increasingly frustrated with Microsoft's skulduggery over the transfer of ActiveX technologies to an independent standards body (UX No 607). Candle's problem is a shelf full of new object and Internet management products it's created that will supposedly allow users to define management objects in one domain, such as OLE, and reuse them in another. It can't begin to shift product until it knows how Microsoft's object cookie will crumble; what's in OLE and ActiveX and what's not, and how and if the pieces will work with Corba and other services such as transaction processing. "Let's either do the whole [ActiveX] thing or declare it dead and move on," says Candle VP solutions management R&D Andy Mullins. Meantime Candle says there's a ton of applications management holes it's still got to fill by development or acquisition, including full end-to-end and drill down facilities. It plugged one hole last week by licensing Tivoli Systems Inc's application development environment toolkits to integrate the TME 10 framework into Command Center products. Users will be able to share data between both companies' system frameworks and interface Candle solutions with Tivoli-based modules from ISVs. Candle will embed code from Tivoli's framework into Command Center architecture. Craggs says about 85% of its mainframe customers have both Candle and Tivoli systems and about 20% to 30% of its client-server users do as well, so interoperability was an obvious move. Candle says the first level of the agreement is bi-directional capability, so that an event monitored by a Tivoli product will also be passable to Command Center. By the first half of 1997 it'll have achieved framework to framework linkage so that any application in a Tivoli domain will be accessible for Command Center. Fresh from its Tivoli agreement, Candle has struck a deal with Unison Software Inc to build an interface to its Maestro job scheduling, workload balancing and backup restoration software. The contract is expected to be officially announced in the fourth quarter and includes a provision for Candle to act as a reseller for Unison products. Candle says it'll seek out more reseller agreements in the future to make its direct sales efforts more comprehensive.

SUN GETS CHOSEN BY RUSSIAN FEDERATION'S MINISTRY OF FUEL AND ENERGY FOR \$200m FIVE-YEAR PROJECT

Sun Microsystems Inc has been selected as the network computing supplier to the Ministry of Fuel and Energy of the Russian Federation. The company says this translates into projects that have investment potential from \$50m to \$200m over a five-year period. Sun is assisting the Ministry in building a multi-Terabyte distributed petroleum database system located at a main site in Moscow and at various regional oil centres in the Commonwealth of Independent States. The system is supposed to create a unified information infrastructure for the world-wide petroleum industry, giving companies and government agencies within the Commonwealth and elsewhere access to data for exploration and production drilling purposes. The project offers data on more than 1,000 government owned oil fields in the Commonwealth. Sun will collaborate in the development and deployment of the Federal Data Bank with Central Geophysical Expedition, the Russian agency appointed by the Ministry, and Roy International, a system integrator and Sun partner based in Moscow. Sun will supply an undisclosed number of Ultra Enterprise servers, Sparcstations and Sparcserver systems, running Sybase Inc databases initially in Western Siberia and Moscow. The agency is using Dynamic Data Image Inc, a software vendor based in Houston, Texas to provide the visualisation software for the stored data. It runs under Sun Solaris 2.5 with OpenGL graphics libraries. The initial test site's Western Siberia, roll-out planned for six sites by 2001.

NEC CREATES ORBITAL MIDDLEWARE, TEAMS WITH HP ON DISTRIBUTED OBJECT FRAMEWORK

NEC Corp's Systems Laboratory in New Jersey has created an object-oriented middleware solution called ORBital, described as a framework which will support a wide variety of functions, including the execution of mainframe batch jobs and provision of a single system view to clustered environments. NEC has licensed parts of ORBital to its new buddy Hewlett-Packard Co as part of a joint development project to create a Corba-based distributed object environment the two say will offer a range of services to ISVs for creating object-based systems and network management applications. NEC and HP have previously collaborated on the specification of topology and event notification services for use in OMG Corba environments and have submitted them to X/Open Co Ltd for use as common object services. Although a prototype version of ORBital was built upon an NEC_ORB, the company says it is porting a production version to third party request brokers and is developing a high-level API it says will allow developers to create large-scale distributed object systems spanning multiple ORBs if required. ORBital can use NEC's existing Percio database for persistent storage where required (UX No 500), though NEC says most users will choose to deploy ORBital against their existing relational databases. NEC's NetShepard batch job management, NetAdmin and TP-Base OLTP applications are currently being re-worked with object-oriented techniques.

SYBASE TRUMPETS DATA MALLS AS WAY OF THE FUTURE; WAREHOUSING IS OLD HAT

Sybase Inc wants us to believe that its so-called Data Mall initiative, which combines its massively-parallel shared-nothing technology with its IQ database query stuff running on IBM RS/6000 SPs is actually something new. However, the company admitted it's "just IQ running on an RS/6000," but nevertheless, it's a "new concept." Sybase announced the availability of Sybase MPP on the SP platform in July and Sybase IQ on AIX's availability last week. For the uninitiated a Data Mall is a collection of Data Marts, which are usually well-defined subsets of data warehouses containing less than 50Gb of data that are implemented to address a specific problem. And just as most of us started to understand what they're all about, Data Warehouses are old hat, or so Josh Bersin, Sybase's group director of, you've guessed it, data warehousing solutions would have us believe. They are "yesterday's solutions to the problems," he said. Sybase also announced general availability of its QuickStart Data Mart for AIX, including tools from Carleton Corp, Brio Technology Inc, Cognos Software Inc, Business Objects SA and Informatica Corp (UX No 603). The last of those was announced last week. Informatica's PowerMart client-server development tools are included in a bundle due out next quarter for \$95,000. QuickStart DataMart for mainframes, which includes Carleton's Passport data extraction stuff goes for \$125,000. The bundle with just Brio, Cognos and Business Objects' software is available from Sybase. No prices. Sybase IQ on AIX costs \$32,000.

INTEL UNVEILS PENTIUMS FOR EMBEDDED APPLICATIONS

Surprised by the number of customers that are already using the Pentium processor in embedded systems applications, Intel Corp has now extended its embedded offerings above the 80186, 80386 and 80486 parts it currently aims at point-of-sale terminals, industrial controllers, avionics and the like. At last weeks' Embedded Systems Conference in San Jose, California, Intel showed off its new embedded family of Pentiums, in 100MHz, 133+VRT and 166MHz versions. The 133+VRT includes Intel's voltage reduction technology already used by many laptop manufacturers. There are also two chip sets for the PCI bus: the 82430MX, designed for mobile applications that need a fast bus (from 25MHz to 33MHz); and the 430HX PCIset, Intel's first chip set to support its Universal Serial Bus. The 430HX is a two-chip package with fast Enhanced Data Out random access memory, better CPU to PCI performance, additional buffering, and arbitration and writeback enhancements. No prices were given, though both sets are in production. Intel has added specific support for embedded applications and enlisted third parties to provide tools, operating systems and BIOS. It will maintain support for the chips way beyond the typical life-cycles of desktop systems.

ORACLE AND SQL SERVER WILL DUKE IT OUT IN LOW-, MID-RANGE MARKETS

Oh, well, that's alright then. Microsoft Corp's database effort, according to folks at its SQL Server Developers Conference, isn't aimed at replacing Oracle Corp, merely reducing Oracle's available market by commoditising most of it and leaving Oracle with the support-intensive, extreme high-end. Wall Streeter Morgan Stanley suspects that given Redmond's progress and despite its Internet distractions there will be room for only Microsoft and Oracle in the mid and low-end markets over the next two years. Financial analyst Chuck Phillips wrote, "From our perspective, there was no way to feel better about database industry profitability after this conference, but growth in data and applications on the high end might provide enough room for three vendors to do well." The high-end is thought of as 300 gigs and above. Redmond won't be handling 500Gb to a terabyte for another two years. By then, Phillips notes, Microsoft should be fielding SQL Server 98 which is supposed to have full native clustering support. He figures the thing for what he calls the Unix-heritage databases to do is change the game and offer as much performance on a single box as Microsoft does on a cluster.

IBM PLANNING TO SHED UP TO 5,000 EUROPEAN JOBS, SAYS REPORT

The *New York Times* reported last week that IBM Corp is planning a voluntary employee buyout scheme and other inducements to reduce its workforce by between 3,000 and 5,000 in areas such as maintenance, marketing, public relations and lawyers. The inducements are thought to be being considered for IBMers outside the US; the company told *Reuters* it expects its US total to grow this year. Analysts are also pointing to Europe as the likely region, even though severance there is often more difficult and costly than the US. However, the company is not likely to take a further charge this fiscal, as it already set aside \$400m for second half restructuring and double that for the year. It's thought to be a balancing exercise as the Internet and services growth causes the company to re-think its priorities, especially in Europe. One unnamed analyst that *Reuters* quoted reckoned the number was more likely between 6,000 and 10,000. IBM was not talking, but employees with five years' experience are expected to be targeted.

SAMSUNG FOLLOWS ZENITH TO DIBA FOR INTERNET TV TECHNOLOGY

Diba Inc, the company formed by Oracle Corp refugees who believe that \$500 is much too much to pay to put the coffee machine or the toaster on the Internet, and is putting together core software that can be used for building application-specific Internet access devices, has won its second taker in the shape of Samsung Electronics Co Ltd. The first for the Menlo Park company was Zenith Electronics Corp. Samsung wants to enlist Diba's skills in the development of a line of Internet-enabled television sets. Samsung's Internet TV will use the Diba Application Foundation to support a wide range of internet services, including browsing the Web and accessing electronic mail. The first product offering, a 29" Internet TV, will enable users to access information from the Internet by just pushing a button on the remote control - and a built-in electronic keyboard can be displayed on the screen and manipulated with the remote control for inputting and transmitting data, including electronic mail. There is an optional wireless keyboard and the modem runs at 33.6Kbps.

MICROSOFT CLAIMS SUB-\$100 TPC-C NUMBERS TRUNCES UNIX COMPETITION

Microsoft Corp has submitted the industry's first audited sub-\$100 \$/tpmC TPC-C benchmarks, saying a four-way 200MHz Pentium Pro-based Compaq Computer Corp box running NT 4.0 and SQL Server 6.5 wiped out Unix-based competition that included the likes of a 16-way Sifticon Graphics Inc Challenge XL Server. The Compaq ProLiant 5000 6/200 scored a tpmC of 6750.53 and \$/tpmC of \$89.61. Compaq's closest competitor in the tests, which are considered a major indicator of online transaction processing (OLTP) performance, was Sun Microsystems Inc with a six-way Ultra Enterprise 3000 that scored 6662.47 with a \$/tpmC of \$152. The Challenge server came in third, with a tpmC of 6313.78 and \$/tpmC of \$479. The tests also included a 10-way Unisys Corp U6000/500 Model 80 that scored 5253.32 with a \$/tpmC of \$304, a four-way DEC AlphaServer 4100 5/400 that scored 6056.04 and \$223 (DEC withdrew its results in embarrassment) and an eight-way IBM Corp RS6000 PowerPC Server J40 that scored 5774.07 and \$243. While NT was pitted against an array of Unices, SQL Server faced off against the giants of the database industry. Sun ran Solaris 2.5.1 and DBS for Solaris 2.1.2. SGI ran Informix OnLine 7.11UD1 on Irix 6.2. Unisys used UnixWare 2.1 and Oracle 7.3.2, DEC its Digital Unix 3.2F-2 and Oracle 7. Last-place IBM used AIX 4.1.4 and Sybase 11.0.3. The systems in the tests weren't trivial. The ProLiant was loaded with 2 gigs of RAM and half a terabyte of hard disk and was hooked to a half-dozen NT-based workstations that simulated 5,500 concurrent database connections. Microsoft used Internet Explorer as the front-end for the workstations, the first time a browser has been used in TPC tests instead of dumb terminals or Unix workstations. (Even Redmond used Unix workstations in the earlier TPC tests it did on lower-end systems.) The complete ProLiant setup, including server and client hardware, software, client licences and a five-year support contract, priced out at \$604,976. That's hefty for an NT configuration, but pales next to the breath-taking \$3,024,897 price tag on the SGI system tested.

MOMENTUM TOUTS GUARANTEED MESSAGING

Momentum Software Corp claims 150 production sites using its X*IPC messaging software, and last week began shipping version 3.0 of the product, claiming improved scaling, guaranteed message tracking and message delivery (UX No 607). The company's about to move into larger premises close to its current headquarters in Englewood, New Jersey in anticipation of snaring a lucrative part of what market researcher the Standish Group estimates will be a \$500m product sector by 1998. By its own admission winning even 10% of that market would be a huge success and a more realistic target will be to grow its installed base 40% year-on-year. The privately-held, 35-person company currently has revenues of less than \$10m and claims to be in profit. Unlike messaging rival PeerLogic Inc, which believes messaging will take off on the back of widespread distributed object computing, Momentum thinks the jury is still out on Corba and its ilk and that getting its software embedded into third party solutions and deployed in enterprise customer sites remains the most immediate business opportunity. That's not to say it isn't working with the object folk. It says it's done work with object request brokers internally and has a plan to deliver Corba functionality to X*IPC, but just like PeerLogic (UX No 594), says it isn't ready to talk about it yet. It's also working on getting its APIs supported in other vendors' object development environments. Although X*IPC's being used by the likes of Lucent Technologies Inc and Information Builders Inc as their core messaging software, and is deployed by integrators such as TRW Inc, Momentum needs some other high profile wins: it claims to have a few up its sleeve. By comparison, messaging leader IBM Corp has got its MQSeries product into play with the likes of Candle Corp and Boole & Babbage and has Sun Microsystems Inc supporting MQSeries APIs in Java (UX No 604).

THE SECRET'S OUT: INTEGRATED SYSTEMS BOUGHT DIAB FROM BULL

Although Compagnie des Machines Bull SA sold its Swedish compiler company Diab Data AB as long ago as December 29 last year, the sale is only now being disclosed. The buyer was Sunnyvale, California-based Integrated Systems Inc, which says it didn't volunteer the information until now because it wanted Diab Data, whose US base is in Foster City, California to have time to establish a track record as an independent unit. Diab Data specializes in compilers, including C, C++ and Fortran, for embedded processors. Integrated Systems says it acquired some technology, related assets and all shares of Diab Data but did not say how much it paid for the company.

DEC TARGETS UNIX WITH INTEL-BASED NT PERSONAL WORKSTATION

Digital Equipment Corp is expected to launch its DEC Personal Workstation line of "cost-effective" Intel Pentium Pro-based NT Personal Workstations today. Monday that it says will open up the Windows NT market "to disciplines previously confined to RISC/Unix platforms" - including, presumably, its own. Those disciplines include high-end business and technical applications that can benefit from DEC's PowerStorm graphics adapters, which are included as part of the package. DEC, of course, already ships higher-end NT workstations using its Alpha RISC, and a few weeks ago launched its HiNote Ultra II notebook pre-loaded with NT 4.0 Workstation, along with low-end Pentium Pro Venturis GL desktop and Pentium Pro Celebris GL client systems, with prices starting from \$2,600. The DEC Personal Workstation is basically a re-christened Celebris XL. There is an Alpha XL equivalent.

JYACC SPINS OFF NEW COMPANY, LAUNCHES PROLIFICS WEB DEVELOPMENT TOOLS

Low-profile New York-based software development tools house Jyacc Inc - the firm behind the JAM fourth generation language tool - has formed a new company to sell its latest product, a three-tiered Web-enabled application development environment. The new company and the new product are both named Prolifics, and Jyacc's former executive vice president and chief technical officer, Frank Vafier, takes on the role as president. This is Jyacc's second spin-off this year: in January its professional services and technical consultancy arm, based in Massachusetts, was re-named Quadris. Jyacc itself is now just the holding company for the two subsidiaries. Prolifics uses some JAM (and the more recent two-tier JAM/Web) technology, but the new product - described as multi-tiered, partitioned and object-oriented - is aimed at customers looking to deploy transaction-based applications over the Web. It uses a drag and drop visual programming tool for Web and GUI development, works with standard browsers, implements what Prolifics calls a Transactional Object Model, and is integrated with Tuxedo transaction processing middleware licenced from BEA Systems. Future plans include a version using the Java-enabled Jolt implementation of Tuxedo. Prolifics is giving away some basic single-user Web applications such as take-away restaurant order screens and employee registration systems to start customers off. Five user development systems start at \$35,000 on Windows NT, Unix and VMS platforms. The new name also marks a change of attitude, says Jyacc chairman Bob Ismach: whereas privately-held Jyacc took 18 years to grow its user base to 3,000 sites, mostly by word of mouth, and was largely eclipsed by its market-aggressive competitors, Prolifics this time "intends to seize the position of market leadership". It sees its main competition as the three-tier development companies such as Forte and Dynasty, and fellow 4GL companies such as Progress and Uniface.

NATSEMI CLAIMS FIRST WITH EMBEDDED JAVAOS

National Semiconductor Corp last week became the first company to announce an embedded version of SunSoft Inc's JavaOS operating system. Working with SunSoft, the Santa Clara, California chip maker now has it running on its NS486SXF 25MHz 486-based processor board that it's offering as an evaluation board for manufacturers looking for a ready-made Java-based platform around which to build some sort of Internet device. The company claims it's the only 486 class system on a single chip available, as it also includes DRAM, PCMCIA, LCD and Dynamic Memory Addressing controllers, real time clock, interrupt controllers, timers and other personal computer-type elements on the chip. NatSemi claims all the prospective manufacturers have to add to get a network computer of some sort is a VGA card, monitor and modem card to see what kind of performance it will get from NatSemi's 32-bit 486 chip. The company priced the evaluation board at \$486, but put the material costs at somewhere between \$200 and \$300, as it comes with third party software. NatSemi's not looking to sell the boards in volume, just the chips, and it's meant for companies to look at and go away and assemble a board of their own, preferably using the NatSemi chip.

UNISON KEEPS ON RISING A YEAR AFTER FLOTATION

Unison Software Inc reported a healthy progression in its first quarter. The Santa Clara, California-based systems management software company saw net profits rise 132% to \$763,000 as revenues climbed 56% to \$7.8m. After 16 years, Unison took the plunge and went public a year ago and since then has been that unusual beast these days, a software company that's seen a steady climb in profits and revenues since then. During the quarter the company released a mainframe agent for Maestro, its job scheduling agent, and appointed Dominic Gattuso as president and chief operating officer. Earnings per share were up 80%, but that was diluted by the 1.0m shares issued. Unison Software Inc reported first quarter net profits up 131.9% at \$763,000, on revenues that rose 55.6% to \$7.8m. Net earnings per share rose 80% to \$0.09 (UX No 539).

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Informix Software Inc duly rolled out the Unix version of its On-Line Workgroup Server offering last week. It's a combination of version 7.12 of the Informix database, tools and Netscape Communications Corp server products. It's up on Solaris 2.5 on UltraSparc and Windows NT now, and AIX, SCO OpenServer, HP-UX and Solaris on Intel versions will follow early next quarter (UX No 594). Workgroup Server costs \$300 per user on Unix and NT.

Cray Research Inc reckons **NEC** will make only about \$15m from the five-year deal to sell four supercomputers to the US National Center for Atmospheric Research, while spending \$80m in production costs. NEC told *Dow Jones & Co* it found Cray's estimates "ambiguous and hard to understand."

Microsoft Corp is creating a 64-bit version of Windows NT for use with **Intel Corp's** next-generation IA-64 instruction set, the first implementation of which will be the so-called Merced processor: the version Microsoft creates will provide seamless support for Pentium Pro (IA-32) applications and new applications optimised for IA-64, the companies say.

Microsoft Corp has proposed an object model specification for the HTML to the **World Wide Web Consortium**, which it is claiming represents "a significant enhancement" compared with the current set of proposals: no final decisions have been made.

One of those **Dascom Inc** Far East wins has come down (UX No 602) - **Secom Information System Ltd** is to distribute Dascom's Distributed Computing Environment-based IntraVerse intranet management system in Japan. Secom's claimed to have 400,000 customers for its DCE-based SP21 security network. The deal is for \$5m of Dascom software a year. Secom also paid \$2.65m for a 10% stake in Dascom.

Integrated Systems Inc claims its pSOS real-time operating system is the first to support the Corba 2.0 Internet Inter-ORB Protocol (IIOP), and it's using **Iona Technologies Ltd's** Orbix object request broker to achieve it.

Meantime, **Iona's** Orbix now supports **Wind River Systems Inc's** Tornado embedded development environment.

The beta version of **Microsoft Corp's** Distributed Component Object Model for Windows 95 is now available from <http://www.microsoft.com/oledev/olemkt/oled-com/dcom95.htm>

Los Gatos, California-based **Red Brick Systems Inc** is pushing into new international markets with the formation of Red Brick Australasia Pty Ltd in Sydney. Anton Ferreira, formerly sales manager of database products for Platinum Technology's Australian operations, has been appointed managing director of the new venture. The company has also appointed distributors in eighteen European, African, South American and Asian countries.

Borland International Inc is to use the Java Generic Library from Dallas, Texas-based **ObjectSpace Inc** to provide reusable algorithms for its Latte Java development environment.

The one-time hit **Pure Atria Corp** will take as a result of the merger of Pure Software and Atria will be \$36.5m, not the \$365m it had in its original documents (UX No 605).

Unify Corp's reselling **BMC Software Corp's** Patrol application management suite for use with its Vision and DataServer application development tool suites. Patrol Knowledge Modules for both Unify packages are under development - they'll cost \$1,500 each.

Help desk company **Clarify Inc's** trumpeting a \$4m deal it's landed from the **Sprint Spectrum LP** partnership of Sprint, TCI, Comcast and Cox Communications for a customer management information system to support Sprint Spectrum's wireless network.

CrossZ Software Inc, the Mitchell Field, New York company whose founders stuffed terabytes of data into missile nose cones and developed that into its QueryObjects data warehouse server software, has won **Siemens Nixdorf's Pyramid Technology Inc** over to create Smart Mart, a bundle of QueryObjects and a Reliant RM1000 Parallel Server (UX No 607).

OpenLink Software Inc, Burlington, Massachusetts has announced pre-release versions of its Java Database Connectivity Drivers for most Unixes, VMS and Windows NT. They support Informix, Oracle, Sybase, SQL Server, CA-Ingres, Progress, Unify and Postgres95 database engines.

BEA Systems Inc has swallowed the South African distributor of its Tuxedo middleware, **Innov-X SA Pty Ltd** on undisclosed terms. Based in Cape Town, Innov-X will now open an office in Johannesburg. Sunnyvale, California BEA acquired **Unix Systems Labs SA** in May to get into the European market (UX No 589).

Candle Corp VP solutions for network applications Steve Craggs believes **Momentum Software Corp**, **Peer Logic Inc** and other middleware vendors' effort to define common messaging interfaces through the Message-Oriented Middleware Association (MOMA) is a non-issue because "in reality there won't be any APIs to choose from, just **IBM MQSeries** and **Microsoft Falcon**. All other discussion is a red herring," see page 1 and 3. Craggs is the former IBM MQSeries business manager who cheekily asked MOMA to adopt MQSeries APIs as its standard before he hopped to Candle.

The **OLAP Council's** sent a draft of its proposed interface specification for accessing and managing multidimensional views of data from OLAP data sources out for public comment (UX Nos 562, 585). The Council says it offers a single, vendor-independent link between front-end access software and the data itself and is supposed to simplify the incorporation of multi-dimensional data access and design into any applications. It's called MD-API V.5 - a final version 1.0 will be released after comments are addressed. The spec is a browse-only, Windows-based implementation. Updating and write-back will be addressed in future versions of the spec. The Council is reportedly going to have an ISV write a driver manager for 16- and 32-bit Windows platforms by next April.

Hewlett-Packard Co has chosen IA-64 to be its future processor architecture and will run both HP-UX and NT on IA-64 systems.

SunSoft Inc has put off its embedded Solaris release for now. Originally due at the Embedded Systems Conference this week, the operating system release was pulled off the launch pad at the end of last week.

DEC's 15 million-transistor 21264 Alpha RISC, aka EV6, will be described at next month's 1996 *Microprocessor Forum* and is expected to deliver 30 SPECint, twice the performance of the current high-end, its 500MHz 21164 (UX No 579). The EV67 shrink is expected to reach 50 SPECint and the EV7 for 100 SPECint. The \$400 part dubbed 21164PC DEC's working on with **Mitsubishi Electric Corp** engineers will also be announced at the Forum and could turn up in PCs costing as little as \$2,500. It's also expected to include multimedia extensions to compete with Intel Corp's Klamath MMX remake of Pentium Pro. The cheapest Alpha is now \$700. DEC's also supposed to be working with **LSI Logic Corp** on a chipset called Koala.

NEC Corp is currently developing local language versions of a clutch of applications that have not yet seen the light of day in Japan. NEC expects to begin distributing NT, then Unix versions, in a month or so.

Baan Co NV product marketing VP Andries Bottema says the pace at which **Microsoft Corp** is managing to push development of its high-end products has led the manufacturing software company to adopt a dual operating system strategy at the high-end. The company's original blueprint for future generation applications supporting multiple thousands of users called only for Unix implementations; now it's targeting Windows NT too. Moreover Bottema believes Unix is in danger of "falling off the map" if the industry fails to coalesce around a standard operating system, and it doesn't appear that Hewlett-Packard Co-Santa Cruz Operation Inc's pairing meets all of this requirement. However Bottema's impressed at the way Unix vendors such as Sun Microsystems Inc are taking up Redmond's challenge and keeping a healthy lead at the high-end.

Meantime, Bottema says **Baan** is experiencing increased demand for decentralised Enterprise Resource Planning (ERP) implementations; instead of the large-scale, multi-company central servers, downsized sites are asking to run their own ERP systems and then replicating and communicating data to other sites. "This is an interesting playground for Microsoft Backoffice, since in the downsized Unix-ERP organizations, MIS is sometimes struggling with system administration and maintenance, and on top of that [trying to implement] client/server. Microsoft offers a lot here, and reduces costs of operation. And this is where ERP buyers really have interest."

Word reaches us that acquisitive **Reed Elsevier NV** has, as we speculated it might (UX No 607), stepped in for financially strapped UK trade show management company **Blenheim Group Plc**. What's more, not only is Reed supposedly hiving off Blenheim's IT trade shows - which include Unix, I2, PC and Networks Expos - to **SoftBank Comdex**, but will turn its own Reed Exhibitions' IT concerns to it as well. Softbank is expected to lift the lid on plans for its new shows at Comdex Fall. The move will leave Softbank and **Mecklermedia Corp** as the two main IT show organisers in the US.

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SANTA CRUZ OPERATION GOES IT ALONE WITH 64-BIT GEMINI

The Santa Cruz Operation Inc is secretly developing a 64-bit version of Gemini, the 32-bit merged UnixWare and OpenServer offering that is due mid-next year. Gemini 64, as the stealth project is known, is reportedly due around the middle of 1998, which would make it coincide with Merced, the 64-bit chip being developed by HP and Intel Corp. SCO is producing Gemini 64 by itself. It was not in the original plans and is apparently a late addition. People are being terribly secretive about it, and cancelled appointments with *Unigram.X* to talk about it last week. SCO claimed Wednesday not to have heard of Gemini 64. HP agreed to meetings and then pulled the invitation, saying it could only talk with SCO present, as its agreement with SCO demands. SCO would only offer up VP products Scott McGregor, but he was at home ill in bed and SCO claimed nobody else was available. Gradually it became more difficult to reach anybody concerning Gemini 64. Unisys was planning to talk and then was unavailable. Sequent could not muster up anybody either. We got the impression people were avoiding us. However, following a meeting with SCO last Wednesday, Samantha Owen, Unix business manager for Fujitsu-ICL Computers Ltd confirmed Gemini 64's existence. So did a high-ranking source at NCR. SCO is producing by itself a 64-bit version of Gemini called Gemini 64 for release some time in 1998, preferably in line with the release of Merced. Owen said Gemini 64 was a known product name. Phil Gerskowitz, Data General Corp's VP NumaLine business unit, said he'd heard of Gemini 64 but wouldn't be more specific. Which of course begs the question: why is SCO doing this? Is it concerned that the 3DA work won't be delivered on time, and so wants to hedge its bets and do a 64-bit cut of its own, lest HP ride roughshod over it? Our sister publication *Client Server News* last week noted that HP was very anxious to have 64-bit NT ready for Merced, suggesting that 64-bit will be late.

SILICON GRAPHICS TO DEBUT LEGO R10000 SYSTEMS OCTOBER 8, "WILL ONLY SCALE UP TO 64-WAY"

We had a call late Thursday from an unidentified informant who claimed to have details of the Silicon Graphics Inc R10000-based next-generation shared memory high-end NUMA parallel processing technology, once dubbed Lego, which is meant to eventually replace its entire Challenge server line. He said the company is supposed to announce the stuff on October 8, when SGI will claim that the machines will scale from two to 128 CPUs. Although figures over 200 CPUs were being mentioned earlier this year, our guy can only account architecturally for 64, and it's probably more likely to be 8-16 to start with. SGI is so touchy about this stuff that at a beta site due to go live today, Monday, it is insisting on a physical wall being erected around the machine to ward off snoopers. Our caller doesn't think Irix, SGI's Unix flavour, can scale up to 128 as presently constituted. Each Mips CPU will be clustered in nodes of two. Each node is then connected to two banks of memory worth between 64Mb and 2Gb per bank. The node-to-memory bank connection and the node-to-node connection is via SGI's Spider (Scalable Pipelined Interconnect for Distributed Endpoint Routing) crossbar chips or hub switch, and the connection speed between node and bank is said to be 800Mb/sec - pretty fast. And we'd heard previously that Spider had a point-to-point latency of 330 nanoseconds. Each node has two ports. One goes to the Spider chip and one to the I/O subsystem to form a so-called hypercube topology. The I/O subsystem doesn't go through the crossbar. Our man called it a four-dimensional topology, accounting for 32 nodes, each with two processors, that's 64 in all. It's not clear what this thing is going to be called, or whether it will wear a Cray or an SGI badge. To get over the Irix scalability problem, which our caller reckons will get stuck at 32 CPUs, SGI will use the work it's done at Stanford University on the Hive operating system. Hive is a cell-based OS where the cells are distributed kernels. It's supposed to be more fault-tolerant as software faults only affect one cell rather than the whole system, and is more scalable because few kernel resources are shared by processes running on different cells. It's a complete SVR4 implementation. The stuff SGI is considering maybe based on the Stanford DASH project.

SUN TO LAUNCH NEW NETRA INTERNET SERVER MODELS

The next raft of Sun Microsystems Netra Internet servers will be unveiled tomorrow, Tuesday. There are three new models: the Netra i 4000 and i 5000 are Ultra Enterprise 4000 and 5000 boxes with internet bells and whistles, and the Netra i 2/120 is based on the 2-way Ultra departmental server. The servers come with Netscape Communications Corp SuiteSpot internet software, and added Sun security stuff like virus scanning, firewall and intrusion detection software. For the record the family is called Net Server 3.1, and are due out this quarter. Once again with the Netra servers, Sun thought it best not to issue any prices, they come later in October. And as for when Sun's own Web server suite, codenamed Vishnu, might be bundled with the Netras, Netra product manager Raj Sehgal claimed to not even have heard of Vishnu (UX No 607). Sun claims the two-way 2/1200 performs up to 626 operation per second based on SPECWeb96, compared to 305 for the 1/170E. Netscape apparently had a 2/1200 handling up to 17m hits a day from its web site.

HP REVS HIGH-END CONVEX SERVERS, WORKSTATIONS

Hewlett-Packard Co this week launches the first big iron it's revamped from its acquisition of Convex Computer Corp with its PA-8000 RISC-based SMP Exemplar S- and Scalable Parallel Processing X-class machines. It also filled in its mid-range workstation line with some PA-7300-based machines, updated its graphics workstations and cut prices on some others. And the company also announced Enterprise File System, based on the OSF's, and now the Open Group's Distributed File System (DSF) technology to share data across Unix and Windows platforms, coming next year. *More details, page 3.*

DEFECTS FOUND IN SGI R10000 MIPS SYSTEMS, EARNINGS AND REVENUES HIT

Silicon Graphics Inc last week revealed that some of the R10000 Mips-based Indigo 2 workstations and Challenge servers it shipped between March and July of 1996 were defective to the extent that the systems affected had a tendency to shut down while in use. The processors were manufactured by NEC Corp in Japan. SGI's other Mips chip maker, Toshiba Corp, was not involved. The problems are now over and in the process of being fixed by SGI, which has started replacing boards in systems that have showed the fault, and will replace boards in every system shipped between March and July early next month, free of charge, of course. All systems shipped since August 1 are clear. The replacement program was the main reason for an SGI profits warning released after the markets closed last Wednesday, stating that its first quarter revenues to September 30 would turn out only "slightly higher" than the combined revenues of SGI and Cray Research Inc, which SGI acquired back in February. They would have been \$758m. SGI wouldn't put any numbers on the revenue shortfall, or on the effect the problems would have on the bottom line, but director of Mips marketing Derek Myer admitted that earnings would be affected by this. The trouble was with the thickness of the oxide, which got too thin in places, causing the processor to draw too much current, according to Myer. He said it caused no computational errors, just the shut-downs, and that the problem had related only to a "relatively small number" of systems. The chips are in full production now and SGI is talking to NEC about future plans, but NEC will continue as the primary Mips supplier. SGI also claimed the shortfall was due in part to its "most significant new product announcements in several years," coming next month, but wasn't saying what that might be. SGI shares were off \$1.375 at \$22.125 at press time.

OS/2 WARP SUCCESS DEPENDS ON JAVA NIRVANA BUT IT'S NOT FOR NCs

What has consistently let IBM Corp's OS/2 operating system down - aside from Big Blue's poor record on marketing, of course? Lack of ~~application support. You simply don't see applications vendors lining up in droves to stand behind the OS/2 banner because they're already too busy pledging allegiance to the Microsoft flag - be it Windows 95 or NT.~~ So what's Big Blue to do? At last week's launch of the latest iteration of OS/Warp in San Francisco we found out. The answer, very simply, is Java. In fact you could've been forgiven for thinking that the whole event, ostensibly celebrating the release of IBM's 32-bit client operating system OS/2 Warp 4.0 - formerly codenamed "Merlin" - was really a Java jamboree. Certainly the J-word was on everyone's lips much more than OS/2 - a fact lamented by several of IBM's software development partners present at the event. But the IBM line was typified by John Thompson, general manager of IBM's personal software products when he said, "Java is clearly where we want to be. We want to make Java the cornerstone of our true open computing approach. Application support for OS/2 has always been an issue for IBM. Moving to Java creates relief for us." As supporting evidence, he quoted analyst figures predicting that the Java applications market will be worth more than \$4bn by 2000. OS/2 is the latest IBM OS to embed the Java Virtual Machine. AIX was the first this summer, OS/390, the old MVS did it last week as well, and OS/400 is due to appear Java-ised by the year-end. Thompson revealed that IBM opted for Java support over native support for Windows 95. "We could've done the latter by building Windows 95 binaries into OS/2, but it would've taken a long time. We'd rather invest in open Java than in creating binary compatibilities that will be defunct by 1998." He insisted that supporting Java isn't inconsistent with the company's existing OpenDoc technology. "Java is a language, OpenDoc is an architecture," he argues. "If Java has traction within the marketplace and we're trying to leverage our component technology, rather than try and push OpenDoc, it makes sense to put the two together." IBM's Lotus has been quite vocal of late about not being over-keen to support OpenDoc, preferring ActiveX. Jeff Dean, worldwide product manager for OS/2 Warp isn't phased by this contradiction. "Lotus supports IBM's componentisation strategy. We'll see the convergence of ActiveX and OpenDoc in JavaSoft's JavaBeans APIs. OpenDoc is clearly not as mature as OLE, but its architectural foundations are much stronger," he said. We then asked Dean about the idea of using OS/2 as a possible future operating system for IBM's NetStation network computers. His answer was guarded. "we did think about it for OS/2 Warp 4.0. Warp is very tailorable and you can make it very small. For example, by replacing the Workplace shell with a very thin shell." One area IBM was keen to clarify was its continued commitment to OS/2 and that with more than 15m users the operating system is far from dead. "I'm not daunted by what people think they believe in," says Thompson defiantly, referring to the funeral bell many analysts have already tolled for OS/2. "More customers are embracing the server product in higher percentage volumes than ever before. It ain't over yet."

...IBM SHIPS OS/2 WARP 4.0

Meantime, IBM Corp has duly launched the OS/2 Warp release 4.0 which includes VoiceType speech recognition, plus support for the Java programming language. It also bundles in Netscape Communications Corp's Navigator browser and implements OpenDoc. It costs \$250 if you are new to OS/2, \$150 as an upgrade. IBM claims that since 1992, it has shipped more than 14 million copies of OS/2 Warp, but no-one knows how many of those were stuck to the covers of computer magazines and went out with the garbage - but it says bravely that it expects Warp 4 to accelerate shipments, and its ability to deliver low-cost speech recognition should push it into vertical markets. Minimum system requirements are a 33MHz 80486 machine with 12Mb to 16Mb memory, and speech navigation and dictation need a Pentium. The estimated number of actual users is 11 million, compared with 140m for Windows, but unfortunately for IBM, the 3,000 largest OS/2 customers, which include big banks and insurers, generate 25% to 30% of IBM's \$72bn annual revenue, so they are not people it wants to annoy. The biggest weakness of OS/2 is that it does not support 32-bit Windows applications, and IBM's answer for that is that users should run them on the server under Citrix Systems Inc's WinFrame/Enterprise v1.6 multi-user version of Windows NT, since the product supports OS/2 as a client, but that sells for \$6,000 for 15 concurrent users and \$1,000 for each extra five.

JAVA ON THE MAINFRAME A REALITY AS IBM RUNS FIRST JAVA DEMO ON S/390

IBM Corp wheeled out its promised port of the Java Virtual Machine for its MVS mainframe line at London's Java Expo ~~Show last week, demonstrating a Java applet it had pulled~~ straight from the net. Java for OS/390, said IBM software strategy consultant Mark Cathcart, fits well with the Internet Server for OS/390, part of the Internet bundle for MVS promised back in February (UX No 578) and now available. It means that Internet-enabled applications, CGI programs, and extensions of and access to existing applications and databases, can all be run or be integrated with the mainframe. Large customers interested in hosting IBM's new Network Computers with a mainframe, or writing thin-client applications, might also be interested. On the System 390, the Java Virtual Machine is part of OpenEdition, which has recently been certified X/Open 95-compliant: at least MVS/ESA 5.2.2 is required. It was ported from the AIX version, along with all the standard classes. Java's AWT windowing toolkit is implemented in X Windows. Because the S/390 is used to packed decimal, IBM had to rework the IEEE floating point portions of the Java VM, and also had to work on ASCII to EBCDIC extended binary code character sets. A beta test program is beginning now, with a free beta available for download (from <http://ncc.hursley.ibm.com/javainfo>) by the end of this month. Next year, the Java Virtual Machine will be integrated into the OS/390 operating system. Future plans - for the not too distant future, says IBM - include access to CICS transaction processing systems and DB2 and IMS databases, via Java classes yet to be written, and an implementation of Sun's JDBC database connectivity specification for the mainframe. All could emerge before the year is out. As for Java on other proprietary IBM platforms, OS/400 remains "a committed plan", while a VM/ESA version is a somewhat more distant "future plan".

...AND BRINGS JAVA FOR WINDOWS TO ALPHA

Right alongside its demo of Java on the mainframe (see separate story) IBM Corp went to the other extreme and showed its version of Java for Windows 3.1, aimed at all those users gagging for Java but determined not to upgrade to Windows95. It's a job Microsoft Corp declined to perform. Here IBM is swimming against the tide and is working on a fully 16-bit, rather than the current 32-bit version, in order to speed up performance. It had difficulty adapting Java's multi-threading model and long file name support. Currently in Alpha, the software has won its first licensee in the shape of FTP Software. IBM is currently considering whether to concentrate on licensing deals or package it as a product.

UNIX HOUSE QUALIX BUYS OCTOPUS FOR ITS ENTRY INTO NT HIGH AVAILABILITY

Qualix Group Inc, the San Mateo, California-based vendor of Unix-based high-availability products, has made its move on the Windows NT market by acquiring Octopus Technologies Inc, a Yardley, Pennsylvania company that provides real-time data protection and fault-tolerance for Windows NT and Windows 95 platforms. No financial details were disclosed. Octopus has gained some 5,000 customers since it launched in 1992, and its eponymous software runs on Alpha, Mips and PowerPC platforms running NT as well as Intel. Octopus gives NT users access to mirroring and automatic switch-over facilities across local and wide area networks. The company becomes a division of Qualix, with Octopus president David Crocker remaining head of the unit. Combined resources should enable faster product development, the two companies said, claiming there was no clash between Octopus and the Qualix HA monitoring, high-availability failover and recovery system sold to Unix customers. Qualix HA does however use the FirstWatch product from Veritas Software Corp as its base failover engine, and Veritas recently ported FirstWatch over to NT with the help of Data General Corp. This is the second acquisition by five year-old privately-held Qualix this year: in May (UX No 590) it bought software house Automated Network Technologies Inc for its distributed file software.

IS MICROSOFT CORP'S ACTIVEX BOUND FOR THE OPEN GROUP?

Suspicious have been raised that Microsoft Corp may try to steer ActiveX into X/Open, the Unix standards body, at what is now called the ActiveX Working Group meeting set for October 1 in New York. A well-placed source close to the consortium reported that Microsoft was in Japan the week before last at a meeting of the Open Group - the umbrella organization over X/Open - sounding out the possibility. At press time the outcome was unknown. The Open Group's spokesman, reached in Japan, declined to comment saying board meeting agendas are closely held. He denied there were any technical meetings in Japan that Microsoft might have approached which is what we first heard.

Microsoft's first choice was believed to have been the World Wide Web Consortium but W3C is believed to have turned them down as being a political hot potato. There aren't too many other places Microsoft can lodge the stuff. The European Computer Manufacturers Association (ECMA), for instance, is too head-strong and tainted by its association with APIW. The Internet Engineering Task Force is also not particularly docile. Parties at loggerheads with Microsoft say that it wants a reference implementation of DCOM on Unix to give DCOM the aura of being multi-platform. Finding a way to silence criticism raised by the fact that ActiveX is only on Windows platforms is supposedly the whole rationale behind Microsoft's turning ActiveX over to a standards body in the first place.

The Perfect Choice

X/Open, it is said, might be ideal for Microsoft's purposes considering that X/Open is not exactly what one might call quick on its feet and the process could take two to three times longer than it might otherwise. X/Open could of course provide Microsoft with a branding mechanism as it does for Unix and the Open Group could fast track ActiveX under the Pre-Structured Technology (PST) process that's supposed to handle deployed technology seeking joint development. Of course, nothing of any significance has ever emerged from PST, a Sun brainchild, in the two or three years it's been in place. Ironically, X/Open, as it is today, derives from the European group that was originally responsible for busting Unix out of its narrow academic confines and setting it on the road to widespread adoption by computer vendors back in the '80s. It has subsequently grown somnolent. Recent economy measures among the Unix set, ostensibly aimed at reducing the small fortunes they each pay to support industry consortia, have paired X/Open with the Open Software Foundation, the schismatics who originally fragmented Unix, under the Open Group's umbrella bureaucracy. Of course the name Open Group has a nice ring to it and may be just the propaganda ticket for Microsoft while giving Open Group, which is losing members and could use the money, a reason for being. Rumours have Microsoft ready to plunk down a million dollars plus equipment to become an Open Group executive sponsor, something the organization has always wanted even in its previous incarnations. Microsoft is currently only a \$25,000 member. How Microsoft would deal with enemies like Sun and IBM who are already executive sponsors remains to be seen and of course if Open Group sells itself to Microsoft some kind of rumpus is likely to ensue that could discredit the whole exercise.

Stumbling Block

A potential stumbling block is the Open Group's existing tie-up with the Object Management Group, a rival to anything Microsoft might set up. Only the week before last - after a seemingly endless search for a permanent chief executive - the Open Group installed Joe De Feo, formerly of Barclays Group, as its president and CEO. As its new boss, sources report that one of his first moves was to try to put in a call to Bill Gates, suggesting that De Feo was anxious to pull off a coup at his inauguration and bring Microsoft into the fold. His timing may have been premature and maybe that's why he didn't get through to Gates. De Feo, however, is said to believe the Open Group's future rests with NCs and the Information Superhighway. Meanwhile, however, X/Open looks to be in bed with Microsoft already on CIFS, its Common Internet File System, which X/Open's fast tracking - at least the CIFS superset Server Message Block (SMB) protocol 3, creating a potential problem for Unix stalwart Sun Microsystems and its CIFS-opposed protocol WebNFS. Oddly enough, Sun reportedly made little or no appearance at the recent Open Group festivities in Washington, DC - from which press were barred - and a Microsoft representative was asked to answer questions - possibly trial balloons - posed by its Software Council as to why X/Open shouldn't standardize Java and why for that matter it shouldn't standardize ActiveX. Going with an existing standards body would of course be cheaper and it some respects easier for Microsoft to do than creating one from scratch. An existing organization might also look less puppet-like.

HP'S REVAMPED CONVEX SERVERS, WORKSTATIONS

HP's Exemplar X-class supercomputers actually scale up to 512 64-bit PA-8000 processors, though in the real world 64 will be the ceiling for most pockets. It's purely meant as a computer engine going against the likes of SGI's Power Challenge servers, it can deliver a peak of 46 GFLOPS and comes with 16Gb RAM, upgradeable to 64Gb. The Convex crossbar switch technology delivers a 4Gb/sec bandwidth and the ccNUMA system bandwidth is 64Gb/sec. It's HP's fourth ccNUMA offering, and it reckons it's four years ahead of any competitor's ccNUMA platforms. The cache coherency is guaranteed by a Scalable Coherent Interface derivative of HP's. The X-class systems are due next May, costing from \$720,000 for a 16-processor 1Gb RAM and 4Gb disk storage configuration, ranging to a cool \$3m at the top end. This is the first Convex offering since the then-ailing company was bought last April (UX No 586). HP is still aiming these at the scientific and research communities, particularly in the mechanical design automation, electronic design automation and technical software development markets. HP reckons the prices have been cut by up to 40% from what Convex would have charged, and the performance trebled. A one-year warranty has replaced the 3-month one Convex offered. The Exemplar S-class technical servers scale from four to 16 PA-8000 RISC CPUs and deliver 11.52 GFLOPS peak. The crossbar interconnect gives 15.36Gb/sec performance. The S-class come with 4Gb RAM, up to 16Gb and \$180,000 buys a 4-processor base model. HP is claiming these machines easily outstrip the performance of SGI Power Challenge XL or Sun Ultra Enterprise servers. Each node in the X-class machines is an S-class. The server systems are not upgradeable to 64-bit Merced as such, but the architecture is, according to HP. The B-, C- and J-class workstations are Merced-ready however, according to HP. The three new B- desktop workstations are PA-7300-based and include 128Kb on-chip cache and with an optional level two cache on the B132L an standard on the B160L. They all have Visualize-EG graphics on board and support Visualize-8 and -24, with the B132L going up to Visualize IVX. They start at \$10,840 for the B132L doing SPECint95 5.9 and SPECfp95 6.2 The one new C-class desktop offering, C160L has a 1Mb L2 cache as standard and four slots instead of two on the B-class that support PCI, EISA and GSC. The 160MHz machine performs SPECint95 7.8 and SPECfp95 7.6 and costs \$19,840. The B- and C-class machines are available now.

Graphics Performance

In terms of 2D graphics performance, HP reckons it's got Sun and SGI licked. The B132L has a 26% integer performance advantage - but a 21% floating point deficit - at a price 13% lower than the Sun Ultra 1/140, and a 44% and 42% integer and floating point advantage over SGI's Indy 5000SC/180 machine for a 28% lower price. Sun outperforms the HP boxes on 3D performance, however comparisons with SGI were not given. But HP nevertheless claimed a competitive price-performance. The new deskside J-class workstation, the 180MHz PA-8000-based J280 supports up to Visualize-48XP graphics and has a 2Mb cache. HP claims a uniprocessor J280 with 64Mb RAM, a 2Gb disk and Visualize-EG graphics outperforms a 2-way Sun Ultra2 2200 with the same memory and Creator graphics by 50% with a SPECint95 mark of 11.8 and 31% with a SPECfp95 mark of 11.8. The HP box costs \$1,000 more at \$38,500 and will ship in November. Prices for the entry-level 712 and 715 workstations have been cut by 40% on the former and up to 52% on the latter so a 100MHz 32Mb RAM, 2GB disk and 17" colour monitor 712/100 goes for \$7,000. Enterprise File System is aimed for HP's truly global customers, where engineers have to ensure they're working on the same version of the same document, or with the right version of an application. HP plans to start pilot programs this fall, with products announced during next year. It's basically a set of enhancements to DFS. HP announced D-, K- and T-class PA-8000-based servers earlier this month (UX No 607) and the first workstations using the PA-8000 back in June (UX No 599).

IBM GIVES UP ON OFFICEVISION - OFFERS MIGRATION TOOLKITS OVER TO NOTES

IBM Corp began replacing core parts of its disappointing OfficeVision software suite with Lotus Notes as early as 1992, but now it owns the company it's finally prepared to go the whole hog. Lotus Development Corp and IBM announced last week a set of migration offerings to help its six to seven million OfficeVision terminal users make the move from basic e-mail and communications over to the more powerful workflow and collaboration capabilities of Notes 4.x. The Lotus Notes Migration Toolkit helps customers, business partners, and IBM itself, to build migration tools that will move users from OfficeVision, and from other proprietary office software suites such as DEC's All-in-One, Fischer Em2/TAO, Verimation's Memo and H&W Computer Systems SySM. Migration tools have two components: a Notes migration engine and a platform-specific extraction tool that needs to be developed specifically for each mail system. Directories, messages, folders, distribution lists and calendar information can all be moved over automatically. IBM is understandably ahead of the pack with its own efforts, already offering tools for cc:Mail integration and shortly to offer OfficeVision migration tools for VM and OS/400 users. IBM is also working on the Memo version, but is leaving MVS experts TBS Software Inc of Richmond Hill, Ontario, to produce MVS OfficeVision migration tools. Various third parties are concentrating on the other office products. The tools are backed up by integration services. IBM also made available OfficeVision support for Lotus Notes Clients, allowing those customers who don't want to go through the whole migration process to at least get a feel for Notes through its interface. The Toolkit is currently in limited availability, becoming generally available in the first quarter of next year. Client support for OfficeVision will be out, shortly after the release of Notes Version 4.5, now in beta and expected some time in the fourth quarter of this year. No prices.

OLD-STAGER AUTO-TROL DISCONTINUES MOZAIC ENGINEERING SOFTWARE

Launched with great fanfares in 1992, Auto-trol Technology Corp's Mozaic engineering software is to be discontinued, the company announced last week. Mozaic was an object-based system designed to help companies integrate existing engineering and non-engineering applications together in a consistent framework, but appears to have been too ambitious. Auto-trol, a 30 year-old company based in Denver, Colorado, has seen better times - it's been posting losses for years, and for the six months ending last March revenues again fell 28% to \$10.3m, with a net loss of \$6m. It sells to the engineering, petrochemical and manufacturing industries, and at one time was a full service provider, offering hardware, software, integration, consulting and support to around 2,000 customers. There were around 350 staff before the announcement, but 35 are now likely to be laid off. Auto-trol's new focus is on product data management and electronic document management, for which it offers its Centra 2000 and Konfig products. In August it announced a new partnership with workflow and document imaging company FileNet Corp, and will resell its products.

DIMENSION X SNAPS UP ANYWARE FAST GRAPHICS EXPERTS

Dimension X Inc, the year-old San Francisco-based Java development tools house has bought a small San Jose-based graphics development tools company called Anyware Fast Inc, which has just four employees. The four have been around for some time though, and specialize in 2D and 3D graphics applications, Java development and virtual reality software. The partners of Anyware Fast are Alan Walkendowski, Alan Greenblatt and Chet Haase. The two Alans formed the company in 1989 after working at Computervision Inc's graphics group together. Haase left Sun Microsystems Inc's XGL graphics group two years ago to join the company. Dimension X had about 15 employees six months ago and now has 40. Its main product is its Liquid Motion Java development tool for end-users (UX No 588).

HITACHI SHIPS APPGALLERY

Hitachi Europe has finally started to ship its much hyped Visual Basic-like development environment, AppGallery, after many months of hints and pre-briefings (UX No 602). The product which is firmly targeted at the Windows and Windows NT world is designed to build applications using OLE and ActiveX components. ~~Java applets are supported, but~~ native Java component creation is not. These components, according to Hitachi, can either be standard such as those like Word or Excel or generated using AppGallery's scripting language for specific business tasks. From the developers viewpoint, AppGallery will allow users to visualise chosen components on a canvass and drag and drop them on to each other, whereby automatic links are created between components. At this point a wizard is invoked so developers can specify databases to be chosen, or specific fields or any other prerequisites given. AppGallery is shipping now and comes pre-packaged components.

SYMANTEC AND TIVOLI GET IT TOGETHER FOR NETWORK MANAGEMENT

Symantec Corp just could not keep it to itself any longer and wants us to know that it's in discussions with IBM Corp's Tivoli Systems Inc to integrate Tivoli's Management Services Broker into Symantec's Norton Administrator Suite and support Tivoli's 10/Plus APIs. The idea is for network administrators to connect both bits of software seamlessly for tasks that require both products. Norton Administrator will have a runtime of the broker embedded inside so software can be distributed to both Norton- and Tivoli-run desktops from either administration suite. Symantec's also signing up to Tivoli's 10/Plus Association partner program. There's no word on the time frame, but the work has started already. Tivoli apparently wanted Symantec to make the partner program news public.

MICRO FOCUS AND HP TO JOINTLY DEVELOP COBOL ON HP-UX

Micro Focus Plc and Hewlett-Packard Co have updated their 12-year-old Cobol-on-Unix agreement by sharing the workload and releasing a single product. Previously the deal was much looser and the development had been done separately. Micro Focus will do the initial work and then hand it to the joint development team. It says although that will take away one or other company's competitive advantage, it'll get the product out sooner for HP-UX. Further announcements are expected in early October, with a Windows NT collaboration likely. The Unix Cobol products will be ready in November.

SOFTWARE AG APPOINTS NEW CEO

Software AG has appointed Dr Erwin Koenigs to replace president, CEO and co-founder Peter Schnell, who resigned in June after heavy losses at the Darmstadt, Germany-based privately-held systems, data warehouse and application software company (UX No 595). Koenigs has climbed the German corporate ladder. He was chairman of Linotype-Hell AG, and before that worked at what was then called Nixdorf AG in research, working on fail-safe Unix systems.

PUZZLE PUZZLES OUT NETWARE 4.X EMULATION UNDER UNIX

Puzzle Systems Corp, which has been making a living out of Novell NetWare emulation under Unix from its Morgan Hill, California home since 1989, has introduced its first NetWare 4.X emulation. SoftNet Utilities 4.0 runs on Hewlett-Packard HP/UX, Sun Sparc (Solaris and SunOS), Silicon Graphics and Intel platforms running SCO Unix, UnixWare or Solaris x86, and allows them to function as NetWare 4.x (or 3.x) compatible servers to DOS, Windows, Windows95 or NT workstation clients on Novell networks. Host systems running SoftNet appear as NetWare servers in Novell's Network Directory Services, and to associated printers. Using the IPX protocol, PC NetWare clients can access Unix directories and printing resources, and Unix workstation users can send print jobs to NetWare printers. It's available immediately, downloadable for two-weeks free trial from <http://www.puzzle.com>. Puzzle has also updated its other products - SoftNet NFS and IPConnect - to work with NetWare 4.x, along with its recently launched SoftNet WebServ, which provides a full set of intranet-Internet services to NetWare 4.x. Here, it's likely to come into direct competition with Novell itself, and WebServ is ultimately likely to appeal more to NetWare 3.x users who would otherwise have to upgrade to gain access to Novell's Internet offerings.

ORACLE POWEROBJECTS 2.0, VB RIVAL, FINALLY ARRIVES NEXT QUARTER

The second full version Oracle Corp's Visual Basic clone, Power Objects is in beta now and will finally be with us next quarter. It ~~has been delayed somewhat - the web page still says it will be~~ launched in April this year (UX No 580). It's a fully 32-bit version to compete head-on with Visual Basic. This time Oracle is going after all those VB developers that don't use other Oracle software, having had "a lot of success primarily in Oracle accounts," according to Neil Morgan, Power Objects product marketing manager. This version will also add some mobile computing and internet capabilities, but not Java support as yet, and there's no timetable for that. The internet stuff comprises Netscape Communications Corp and Microsoft Corp browser plug-ins to run a Power Objects application from a browser and web server combination, and in reverse, an ActiveX control to embed Oracle's Power Browser into a Power Objects application, but everybody knows what browsers are actually being used out there. Oracle licensed Crystal Reports v5 from Seagate Software Inc to include its reporting capabilities into Power Objects, as most of the target market is used to Crystal. On the mobile front, Oracle has licensed some ODBC drivers from Intersolv Inc for access to products such as FoxPro, Excel, Paradox and the like. Oracle's small-footprint Personal Lite database is also included which can replicate to and from any Oracle 7.x server. It's also licensed some ActiveX controls from Crescent Software Inc, bought early last year by Progress Software Inc in the shape of its QuickPac VB toolset. Oracle has also released a Power Objects API. There will be two versions, a professional and a client-server edition. There are no fixed prices yet, but the professional version will cost a few hundred dollars and the client-server will go for more than \$1,000, according to Morgan. There's "no story" at the moment on the integration with Designer/2000 development toolset, but that "doesn't say we won't do that in the future," according to Morgan. Oracle adds Power Macintosh the list of platforms supported with this release.

DEC PROMISES WINDOWS WITH EVERYTHING WITH 'ALL-CONNECT'

As expected, Digital Equipment Corp announced a Unix to Windows NT interoperability scheme that also combines its Affinity OpenVMS to NT scheme (UX No 601). It's called the All-Connect Program. The scheme will enable not only the co-existence of Unix and NT, but naturally, migration to NT as well. The Affinity programme is to retain its name despite Unisys Corp claiming rights to the name Affinity. DEC said it was "confident that [it will] be able to resolve that issue," in its favour (UX No 597). The Unix-to-NT part of the scheme is just known as All-Connect for Unix. DEC claims its research shows more than 90% of all organisations that use both Unix and NT will be integrating them at some point. Don Harbert, VP of the Unix business segment said he's "really not seeing that much migration at the moment," more integration, and the Unix side of things will position it as such. The villeins of NT people at DEC might want to see more migration than integration though. Harbert claimed the Unix people have always considered Microsoft to be the desktop of choice as far as Unix servers are concerned. DEC and Microsoft have been partners since their coming together in August 1995 to promote NT across the enterprise (UX No 550).

ORACLE ADDS PROCESS APPLICATIONS WITH \$94M DATALOGIX BUY

Oracle Corp is expanding its base of applications with the acquisition of Valhalla, New York-based Datalogix International Inc, where it already has 13.4%, for \$8 a share, representing an \$81m cash outlay and valuing the company at \$94m. Datalogix provides software for process manufacturing applications, including its Global Enterprise Manufacturing Management System, or GEMMS, and its Computer Integrated Manufacturing for Process, CIMPRO, product lines. Oracle plans to maintain a development and operations facility in the Valhalla area to facilitate a smooth transition for staff. Datalogix is doing some \$50m a year or so.

BMC TURNS ITS ATTENTION TO DATABASE MANAGEMENT

Systems management supplier BMC Software Inc is hungry for world domination and has announced another bevy of products which it believes ~~will take the market by storm, following hot on the heels of its Web systems management portfolio released in August (UX No 602). This time~~ round it is all about database management. There are six products ready to ship. Some are targeted specifically at the complex world of data warehousing and others have been pinpointed to shore up the problems with database utility management. On the large database *cum* data warehousing side, there is DB Change Manager, which is designed to enable administrators to propagate structural changes and help control versioning. In association with this is Patrol DB Integrity, which as it suggests checks the integrity of static and non static data in a database and actively searches for invalid objects. Patrol DB Stat, meanwhile, is a pure database tool that looks for fragmentation and spots trends and recommends solutions. In companion with this is DB Reorg, which once the latter module is used allows users update and modify the database according with decisions that have been made. All the above tools are shipping now, initially for Oracle databases, but Informix, Sybase and DB/2 support will follow. The final two modules have been tailored for the Informix market and are describes as entry level tools. The first is called Patrol DB Basics Admin, which provides entry level schema generation and table truncation, for example, for Informix's OnLine database, and the other is Patrol DB Basics Utilities which provides loading, unloading, recovery and backup functions. Apart from the six new modules there are also two names for existing products: Patrol DB Voyager - formerly known as MetaDESK - which allows users to browse the data dictionary, objects and data from multiple databases to allow automatic SQL query generation and the presentation of results; and Patrol DB Alter, is the module that enables administrators to make database changes. These two modules are available now for Oracle, Informix, Sybase and DB/2 for OS/2/AS/400 and RS/6000s.

BORLAND STILL SEARCHING FOR NEW CEO, APPOINTS AN INTERN BUT LOSES R&D MAN

Borland International Inc's search for a new chief is taking so long - two months and counting - that it has ditched its strategy to have three executives act as an "office of the president" with chairman William Miller reaching down to help shoulder the CEO responsibilities. Instead, Whitney Lynn, who's consulting on Borland's acquisition of Open Environment Corp, - which still hasn't closed - and is a well-known face around Scotts Valley, has been appointed acting president and CEO (UX No 590). Lynn replaces long-time Borland executive Gary Wetsel who left after dismal third quarter numbers in July. Borland says last weeks' executive-level changes will give Miller more time to search for a CEO replacement; we suspect the move is in part due to senior VP Paul Gross defection this week, reportedly to Microsoft Corp. Gross, who was in charge of research and development at Borland, was playing one-third of the "president" role. He too was working on the integration of Open Environment's technologies. Borland said it has come close to clinching a deal with three CEO candidates, but no enchilada. It probably wants to find someone who'll stay in the top spot longer than Chief Wetsel, who left the job after a year and a half.

TEMPLEX CLAIMS TO HAVE HOLOGRAPHIC STORE LOCKED UP

Companies and universities as far apart as Storage Technology Corp and Tamarack Systems Inc in Austin are working feverishly on holographic storage systems, but they may be wasting their time if a new company in Eugene, Oregon is to be believed. Called Templex Technology Corp, it claims to have all the patents on the concept and technology sewn up. The storage technique uses the natural properties of colour to achieve what is claimed to be 100 times the capacity of conventional storage techniques, although only eight times - 8G-bits per square inch compared with 1G-bits for the best current magnetic disk recording density - has actually been achieved so far. In Templex's system, an acousto-optic deflect or manipulates sound waves to move the data-writing light beam aimed at crystals doped with rare earth elements. The company is using an Yttrium Aluminium garnet crystal treated with Thulium ions which make up the actual storage spots. Templex describes the technique as four-dimensional holography or TASM temporally-accessed spectral multiplexing, and suggests that data can be accessed at 100,000 Terabits per square inch per second. Although storage is the primary focus, the firm also talks of the technique being used for optical switching and routing.

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Hewlett-Packard Co has launched its DataMart Manager middleware that selects the most suitable table for queries, cutting response times and advising on tables that should be created or deleted, according to HP. It supports Red Brick, CA-Ingres, Informix, Oracle and Sybase databases and is up on Unix, Windows NT, Macintosh and OS/2.

Transarc Corp is reselling IntelliSoft Corp's DCE/Snare security software which is claimed to extend DCE security services to other network applications by securing TCP/IP traffic under the DCE security umbrella. DCE/Snare requires DCE on the client, DCE/Snare Lite doesn't. Prices start at \$80 per Windows client plus \$1,250 for its associated GUI configuration management tool. It's up on NT, Windows, Solaris, AIX and HP-UX.

The Open Group's financial and administration controller, Norma Clark, died suddenly at the group's recent meeting in Japan. She was 48 and had been with them for six years, coming from the OSF side.

It looks as if those going along to the ActiveX meeting October 1 get two tickets, and one of **Oracle Corp's** is held by Steve Muench, director of product marketing for the tools business. It doesn't look as if VP server Mark Jarvis is going as the tools guys are more used to dealing with ActiveX and the thinking is that Oracle is happy with Corba on the server side, but the details are about a week away still. Oracle described the meeting as "informational." As to where it all might end up, Oracle thinks the Internet Engineering Task Force maybe the most likely bet.

Integrated Computer Solutions Inc has a new programmers development kit, supporting C, C++ and Java, which with an extra SDK can enable C/C++ code to be deployed across Windows systems. Obviously the Java code will run on everything caffeinated. Its Builder Xcessory Pro suite comprises the Cambridge, Massachusetts company's Builder Xcessory GUI builder for Java and OSF/Motif, its ViewKit ObjectPak C++ tool and EnhancementPak, a library of 27 reusable components. It supports Sun, HP, IBM, DEC and SGI Unices and is out now, a floating license costs \$6,500. The SDK arrives in December.

Brio Technology Inc has got itself some data mining help in the shape of DataMind Corp server software. The pair will combine BrioQuery Enterprise desktop query, OLAP and charting software with dataMind's offering. Meantime, the BrioQuery Enterprise tool now supports Hewlett-Packard Co's Intelligent Warehouse interface so BrioQuery can be used to query data in the "virtual warehouses" that HP's product creates from disparate physical databases.

Platinum Technology has bundled its Paradigm Plus, ObjectPro, SQL-Coder, Final Exam lifecycle development tools into a package call Netcessities which is released this week. Paradigm Plus has been scaled down to just a couple of methods for this package. It costs \$3,000. Platinum says the cost bought separately, with a complete Paradigm Plus would be \$11,000.

Pyramid Technology Inc is claiming the lead in decision support benchmarks. At 300Gb, Pyramid's Reliant RM1000 running Oracle7.3.3 has a TPC-D power mark of 1169.2 and a TPC-D throughput of 749.3 making \$13,728.98 per query-per-hour. It claims that's more than double the price-performance of a similarly-configured IBM SP2 running DB2 Parallel Edition 1.2.

Tricord Systems, the Plymouth, Minnesota server builder, is at a loss to know how to secure any kind of future and has called in Smith Barney Inc to help evaluate options for the company's strategic direction - be that strategic alliances, an equity investment, merger or the acquisition of the company.

Unisys Corp, Blue Bell, Pennsylvania plans to raise \$250m with an issue of senior notes due 2004 under its previously filed \$500m shelf registration. The company intends to use the net proceeds from the offering to call, at par, its \$135m principal amount of 8.875% notes due July 1997 - it doesn't need to pay that kind of rate with prevailing rates so low - and to call or otherwise repay other securities set to mature in the near future. The underwriters are Bear, Stearns & Co Inc and BT Securities Corp - BT stood for Bankers Trust long before British Telecommunications Plc was thought of.

DEC and Mitsubishi are apparently hoping to get a \$400 Alpha chip out of their collaborative development of a mass market widget.

Observers call **Microsoft's** project Falcon, its store and forward messaging queue that went to beta at the end of August, a combination of Unix's IPC and IBM's MQSeries.

As we went to press Seymour Cray's condition was being described as critical but stable in Penrose Hospital. The family did say though that he was "much improved," and they were now "cautiously optimistic." Cray suffered a broken neck in a car crash near Colorado Springs last Sunday and underwent surgery to prevent brain swelling soon after. Cray, 70, founded both Cray Research Inc and Cray Computer Corp and designed the first supercomputers at Control Data Corp in the early 1960s, before moving on to form Cray Research in 1972.

It's not clear what the point is of the **Securities & Exchange Commission** decree - and nobody at Informix Corp was able to tell us - but it appears that it does not want companies buying in their own shares at a time when they are buying other companies in share exchanges. As a result, **Informix**, which bought **Stanford Technology Group** and **Illustra Information Technologies** in share swaps last year, has rescinded its share buy-in programme, on which there were about 4.4m shares remaining that it was authorised to buy.

Unify Corp is doing its bit to combat illegal software in China with an agreement with the Chinese Ministry of Light Industry. It's more of a case of catch-up though, with the Ministry chasing up unregistered copies of Unify software, as well distributing Unify Vision and VisionWeb to Ministry organisations.

Red Hat Software Inc says its Linux 4.0 is now up on Sparc. The new release also has security and other performance improvements, as well as easier installation, according to Durham, North Carolina-based Red Hat. It's out now, costing \$50 on Intel and \$100 on Sparc and Alpha platforms.

Oracle's globalisation continues with an expected announcement on Tuesday this week revealing a whole new corporate product architecture. The label Network Computing Architecture has been thrown around, but apart from that not much else has been said.

Wind River Systems Inc will provide JavaOS technology for its Tornado development environment and VXWorks operating system for embedded developers. Wind River claims the deal with **Sun Microsystems Inc's** JavaSoft unit makes it the first embedded software firm to license the Java operating system. Meanwhile, Wind River will ship a Java, C/C++, and Tcl embedded scripting language browser, called WindNavigator, in the fourth quarter.

Diba Inc has taken on former **Zenith Electronics Corp** president and CEO Albin Moschner. In the newly-created, board-level position of vice chairman, Moschner will be charged with forging partnerships with consumer electronics companies (wonder which firm it'll partner with first - Zenith?). Diba has also appointed Michael Fitzpatrick to its board of directors; he's president and CEO of Pacific Telesis Enterprises.

Check Point Software Technologies Ltd has added support for Sybase SQL Server and Open Server applications in Check Point FireWall-1, its network security software which enables administrators to customise firewalls to incorporate new applications. It currently supports Windows 95, Windows NT and Unix. Support will be available through FireWall-1's Inspect engine.

Symantec Corp is offering a free beta of its dbAnywhere technology which enables Java programs to access corporate databases over the Internet using JavaSoft's JDBC API. The product enables Internet applications to run on the client instead of the database server and uses smart buffering. dbAnywhere includes drivers to connect to Oracle, Sybase Watcom and MS SQL Servers and provides access to more than 30 databases via ODBC support. It runs on Windows 95 and Windows NT.

Remember where you were when you heard it: **IBM's** mainframe OS is no longer proprietary, it's got its XPG4 certification. X/Open certified OS/390 v1 release 2 with its security server and C++ compiler on September 19. IBM Corp apparently wanted to wait and make a big noise about it, but it's on the Open Group web site for all to see.

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SILICON GRAPHICS CASTS ORIGIN & O2 IRON...

Silicon Graphics Inc goes for the big one this week, replacing its entire server and workstation lines and overhauling its Onyx graphics subsystems technology (UX No 609). The new server line - once code-named Lego, more lately SN0 - is dubbed Origin and comprises tower, deskside and rackmounts which are claimed to scale to 128 180MHz or 195MHz Mips R10000 RISCs. The workstations are called O2. The Origin 200 tower and Origin 2000 deskside and rack use a modular architecture SGI has been calling SNx in conjunction with SGI's fabled Spider interconnect. Each SN module bears up to eight R10000s and up to 16Gb RAM on four dual CPU cards. Each module supposedly performs a sustained 4.8Gbytes/sec via 12 Crosstalk slots. Six external CrayLink connections - not the 3D Torus interconnect from Cray, SGI's just leveraging the name - join multiple modules into large cache-coherent, shared memory systems. Additional cards have two R10000s, 1.2Gb/sec I/O connections, 64Mb to 4Gb RAM and the hub chip which serves as a processor interface, memory controller and I/O controller. It routes global memory requests to physical memory and transfers data to and from the processor, memory and I/O. SN0Net will debut as a collection of high speed links and routers tying together sets of hubs that make up the system. Crosstalk and Crossbow ASICs handle I/O and crossbar routing. The Origin 2000 uses two-to-128 195MHz R10000s, and comes with up to 256Gb RAM, 74Tb Fibre Channel or 14Tb Ultra SCSI connections, performing up to 51.2 GFLOPS. The numbers we've seen claim 102.4Gbytes per second I/O with the express link and 81.9Gbps without. Prices range from \$85,000 to \$2,073,000. SGI will claim Origin can scale to 128-ways, though sources we spoke to aren't sure Irix can support that number of CPUs. SGI will say it's the applications that can't cut it. The Origin2000 deskside is a one-to-eight-way 195MHz machine with up to 16Gb RAM doing 3.2 GFLOPS with either 18.5Tb Fibre Channel or 3.5Tb Ultra SCSI. It will cost between \$30,000 and \$220,000. The Origin 200 tower is a 180MHz quad going to 1.6GFLOPS and costing \$12,000 through \$41,500. The O2 deskside workstation family comprises R5000 and R10000 Mips machines clocked at 150MHz, 175MHz and 180MHz. The base model is the R5000 180MHz machine with 1Gb storage, 32Mb RAM and a 17" monitor, costing \$6,000. These go to a \$9,000 box with enhanced O2 graphics, up to 4Gb disk and 64Mb RAM. R5000SC variants running at 180MHz come with more storage and cost \$8,500 and \$10,000. At the top end are the R10000 machines, going from the 150MHz at \$13,500 through to the 175Mhz version with O2 video enhancements, 4Gb disk and 64Mb RAM at \$19,000.

...CELLULAR IRIX USES STANFORD'S HIVE

There's also more on an enhanced version of Irix SGI will talk about this week. It's based on Hive, a cellular version of 64-bit Irix 5.2 that SGI is developing along with Stanford University (UX No 609). SGI calls it Cellular Irix. The operating system divides services into partitionable cells that run independently on the system. Its main attributes are said to be fault containment and scalability. Fault containment protects each cell from faults caused by other cells using a firewall, a write-permission bit-vector associated with each page of memory discards pages when faults are detected. In Hive, shared memory is achieved by a unified file and virtual memory page cache across the cells, through a unified free page frame pool. Hive is designed to work with multiprocessor systems using Stanford's own Flash processor, and systems are likely to start testing around December, with a hundred processors, one in each node, according to Mendel Rosenblum, leader of the Hive research group at Stanford. He reckons Hive will eventually scale to thousands of processors. SGI claims Cellular Irix will support more than 32 times the current number of available CPUs and more than 300 times the I/O bandwidth. The operating system includes an enhanced scheduler to ensure system resources, virtual address space of 1Tb and SGI's XFS journaled file system.

CASTANET IS MARIMBA'S JAVA TOOLSET

Marimba Inc finally reveals its products this week as a set of tools for writing and deploying Java applications across networks. Sticking with the percussive theme they're called Castanet. There's a Castanet server and client, called Transmitter and Tuner respectively. Transmitter is written in C++ and Tuner in Java, but a Java version of the server is coming. The technology allows software to be distributed across the internet or intranets using Marimba's Application Distribution Protocol. It's meant for things like customised newsfeeds a la PointCast, interactive games and simulations. Despite Marimba's Java devotion it reckons the applications run better on PCs than NCs; they'll require more than 4Mb. The Castanet Tuner client requests applications channels - they actually launch the applications but aren't browsers - from the Transmitter server, which updates the software in the background at set time intervals. So if the client logs off and back on it will pick up the latest version when it re-connects. The applications and channels are stored on local hard disks. Channels can be launched from within browsers and vice versa, according to Marimba. It wants to get away from the idea that browsers are the only way of deploying applications across networks. Castanet 1.0 will be out by the year-end. Version 1.1, due in the first half of next year will include encryption support for the deployment of non-Java code such as DLLs, ActiveX, Shockwave and the like. Marimba cites AT&T, Apple, Disney, Netscape and JavaSoft as already using Castanet. Castanet runs on any platform with a Java virtual machine. Betas are at www.marimba.com; the full version ships year-end. The Tuner client is free for non-commercial use and Transmitter-Basic server is \$1,000 supporting 100 users per hour per channel. Additional 100-user licenses are the same price and the Transmitter-Pro unlimited user licence goes for \$15,000. There is a Repeater kit for channel replication for \$500 and a Proxy Server for \$1,000.

SUN CALLS UP CLUSTERING...

Sun Microsystems Inc will this week unveil a big bus option for clustering its server iron courtesy of 1Gbit/sec Sbus adapter cards created for it by Dolphin Interconnect Solutions A/S that implement the Scalable Coherent Interface ANSI connection standard (UX No 607). Initially up to four Ultra Enterprise servers - bar the Model 150 - as well as older SparcCenter 2000 and SparcServer 1000 technology can be mixed in high-availability arrangements using Oracle Parallel Server, Informix On-Line XPS or Sybase MPP. Not until next year, when a key cluster file system is offered on top of a new 2.6 release of Solaris for UltraSparc, will customers be able to write their own clustered applications. At that time Sun will extend clustering support to eight nodes - by then up to 2km apart - and offer application agents for SAP, Baan, Remedy and the like, fault management APIs, Java cluster management tools and integrated recovery features. Support for WAN connections will follow by the end of 1997. 16-way clustering will become an option by mid-1998 when it'll offer other node configurations, job scheduling, multi-domain support and a new Solaris release. Sun will also offer the interconnect for use with its IMP-derived ft-Sparc boxes and CraySuperServers - see below. Alongside the parallel database options Sun will offer NFS, Web, DNS, mail and news failover services, plus fault management templates and APIs as the software architecture for turnkey Smart Cluster packages. As an added attraction, Sun's got a six-month exclusive on a new high-availability version of the Tuxedo OLTP monitor created by BEA Systems Inc. Sun says HA Tuxedo ensures there will be no transaction loss during a failure and recovery process. An entry-level cluster configuration with two dual-processor Ultra Enterprise 2 servers is priced from \$80,000. Ships begin in November. Sun expects SAP R/3, data warehouses, call centers and intranets to be the biggest applications for its clustering wares. The company calls the 1Gbit/sec (100Mbyte/sec) interconnect Sun Cluster Channel - it couldn't trademark Ultra Channel - and claims a message latency of four microseconds.

...WILL FANFARE XFIRE

Meantime Sun's hardware boss Ed Zander is apparently sooooo pleased with the SuperServer technology picked up from Silicon Graphics Inc's Cray Research Inc unit that he's decided the long-awaited UltraSparc makeover of the one-to-64 way line, codenamed Xfire, deserves its own ceremony. Sun had originally planned to tag the introduction on to an Ultra Enterprise refresh or the clustering rollout - see above - but has delayed the launch to try and grab more attention. Sun bought the Cray Business Systems division initially because it had a nice customer list. Sun reckons the UltraSparc Xfires will extend its current high-end, the 30-way E6000, by three to five times with over 10Gbits/sec throughput. Xfire clusters using the Dolphin interconnect will support up to 1,024 processors.

MICROSOFT'S VISUAL TEST TO RATIONAL FOR \$23m TO SEAL DEAL

Rational Software Corp, Santa Clara, walks away with the Microsoft Corp Visual Test software quality automation tool as part of a deal in which ~~Rational's products for analysis and design will be tightly integrated with~~ and included in future versions of Microsoft's enterprise development tools. Microsoft has also licensed its Developer Studio software to Rational to make it part of the framework for that company's products for component-based development. And Rational will add software for change management and process automation to Microsoft's Visual SourceSafe application. The deals follow Microsoft deciding that the software products fell outside its chosen spheres of activity. Rational will make a single cash payment of \$23m for it, about three quarters of which will have to be taken as a research and development write-off. Microsoft says it wants to focus on development environments such as the Visual Basic programming system, the Visual C++ development system and the Visual J++ development tool, leaving Rational to take care of life-cycle tools business for analysis and design, testing, documentation and change management. Visual Test is designed to make it easier for organisations to deploy mission-critical applications under Windows95 and Windows NT and on the World Wide Web. It is conceived to help developers to create tests for applications of virtually any size, created with any development tool, and do it quickly. The product is available now from Rational worldwide; Microsoft will look after the current customers for the next six months. The first upgrade from Rational is planned for early 1997. Rational reckons combining the Rational Rose visual modelling tool and Visual Test will represent a significant advance in software specification and verification. Rational Visual Test 4.0 costs \$600.

HP's CFO TELLS MONTGOMERY CONFERENCE INVENTORY MANAGEMENT IS THE KEY TO HP'S CONTINUED SUCCESS

Hewlett-Packard Co's executive vice-president and chief financial officer Robert Wayman took the podium at the Montgomery Securities Investment Conference in San Francisco last week to say HP has been working to improve inventory management and reduce sales channel inventories, and that while it has been pleased with progress in financial management, inventory management was the notable exception. "Where we've been struggling as we're dealing with how to deal with flat growth and long, complex supply chains," he said. At retail, it must build higher levels of inventory ahead of new product launches to meet subsequent customer demand. Noting the sharp drop in order growth in the third quarter to end-July - 8%, down from 35% a year earlier and 24% in the second quarter, Wayman said management would in future be "pleased" with order percentage growth in the mid to high teens; on distribution channels, he said "We believe that is the better course of action, to work with them to reduce their inventory and order backlog levels, than to incur the possibility of excessive price protection costs and inventory write-downs," but warned there is "still lots to be done in the supply chain management as well as a few other areas." Turning to the computer business, which accounts for 80% of sales, Wayman highlighted strategy in four key markets - enterprise computing, interconnected workgroups, small businesses and the home. On the first, he lauded strategy of developing high-end processors with Intel Corp - the 64-bit Merced project - to enable its most powerful machines to leapfrog a generation of computer technology, and Microsoft Corp's agreement that Windows NT will support this, and also suggested that HP's efforts to build up marketing expertise in the home market demonstrated its willingness to reinvent itself - "Not so long ago, people used to say that we were the kind of company that would market sushi as cold, dead fish."

NCR TO OEM OCTASCALE INTERCONNECT

NCR admits it's in negotiations with more than one unidentified company to OEM them OctaScale, its way of building P6 eight-ways. We've put our ear to the ground and heard the names Sequent Computer Inc and ICL Plc, possibly Olivetti and Data General Corp too but it's still hearsay. Meanwhile, we've been given to understand that the reason Intel Corp blessed OctaScale and said it would incorporate the interconnect technology into future products (UX No 603) was because it's backed off doing eight-way underpinnings itself, having underestimated the ASIC and firmware work and stuff like that. Next year, NCR is going to turn OctaScale 2, an unannounced update geared to Intel's promised Deschutes P6 shrink, into a merchant chipset. There will also be an OctaScale 3 presumably for Merced. OctaScale 2 will be made to handle Deschutes' larger cache, heightened performance and greater bandwidth.

ARBOR SUES COMSHARE FOR UNPAID ROYALTIES

On-line analytical processing pioneer Arbor Software Corp has fallen out with its largest reseller, Comshare Inc, and is suing the Ann Arbor, Michigan company, alleging it "systematically underpaid or failed to report royalties" due under their two-year old agreement. Comshare peddles Arbor's Essbase multidimensional database server and reseller royalties from Comshare accounted for 27% of Arbor's revenues last quarter, or around \$2.5m. Arbor is seeking damages and fees. As Morgan Stanley notes, filing suit against a reseller, especially one that accounts for 27% of one's revenue, is a drastic and rarely pursued option. It observes the dispute has been growing for over a year, leading to Arbor's suggest to go to arbitration in August. Price Waterhouse's audit report turned up a \$400,000 reported shortfall in reported royalties to Arbor from Comshare. Arbor claims Comshare refused to even read the report and essentially didn't take the dispute seriously. What's important to note, Morgan Stanley says, is that Arbor has now unleashed its sales force to sell in to Comshare accounts. It's wanted to for a long time because these customers are already convinced of the value of Essbase. Moreover, if Arbor sells direct to these customers, it can construct a \$200,000 deal for full use Essbase licences as opposed to receiving a \$15,000 royalty from Comshare on the limited use licences it has been selling. Because of the incremental market and higher price points, Morgan Stanley reckons Arbor might actually generate more revenue this quarter than it would have with Comshare - especially since it should still get Comshare's royalty check from sales in the September quarter. Things are not going well for Comshare at the moment. It recently reported fourth quarter and year-end losses after charges on revenues that fell 8% in the quarter.

ORACLE TO ENTER SUITE WARS WITH ONE FOR NETWORK COMPUTERS IN JAVA

Oracle Corp is developing its own suite of network-based personal productivity applications written in Java and designed to run on Network Computers, according to InfoWorld. The company is working on "a suite of network-aware applications" comparable with Microsoft Corp's Office suite "that assume there's a dial tone, assume there's a server at the other end," Joseph Vassallo, vice-president of the Sun products division at the company told the paper, adding that they will have the advantage of having been designed from the start to run on a network. More information on when the applications will be released will be given in 30 to 45 days, he said, adding that information will likely be available at Oracle Open World in San Francisco next month. This is different from Oracle's InterOffice groupware package.

US GOVERNMENT STILL HAS ACCESS TO THE ENCRYPTION KEY, EVEN THOUGH IT'S A 56-BIT ONE

They are easily pleased - "This is clearly a step in the right direction," said Diane Smioldo, speaking for the Business Software Alliance on the US government's plan to allow US companies to export up to 56-bit key encryption, up from 40-bit, provided the key is left in escrow so that US law-enforcement officials have access to the codes. And "this is a major easing of export restrictions," said Irving Wladawsky-Berger, head of IBM Corp's internet division - but it's hard to see the switch making any difference for the really important customers like big foreign banks, many of which no doubt have legal obligations to transmit sensitive material in anything other than a totally secure way. And so long as Uncle Sam, with his Freedom of Information Act, holds the key, all traffic using US encryption has to be regarded as totally insecure. Under the proposed system, law-enforcement officials with a warrant would be able to decrypt computer communications without having to obtain the key. They could instead use the warrant to obtain co-operation of third parties to decrypt the header to the message to enable them to draw mathematical inferences that would lead them to the key - the idea being that by requiring the co-operation of at least two outside parties previously designated by the code users themselves, the approach will address the main criticisms against the original key-in-escrow proposals. The plan makes it more complicated but doesn't get round the fact that it makes encrypted messages inherently insecure - but, proposed by IBM Corp, it is apparently backed by Digital Equipment Corp and some encryption algorithm developers.

SGI UPGRADES ONYX GRAPHICS

Along with its server and workstation overhaul (*see front page*), Silicon Graphics Inc is also upgrading the Onyx visual workstation subsystems with Onyx2 machines. It's also adding digital media capabilities for film, video, audio and broadcast applications. They're based on the SNx architecture, enabling multiple graphics pipelines to be used in parallel to render complex scenes. They are the Onyx2 Reality, InfiniteReality deskside and InfiniteReality racks. The Reality machine has one-to-four 180MHz R10000 chips, 64Mb to 2Gb RAM, one-to-five 3.5" Ultra SCSI drives, audio and CD-ROM and four slots, performing 5.5m polygons per second and costing \$80,000 with a SuperWide, 1,920 x 1,200 non-interlaced colour pixel monitor. The InfiniteReality deskside does 11m polygons/sec with its two-to-four 195MHz R10000s and costs \$165,000. The two rack-mounted machines come in either a one-to-24 way or 8-to-16 195MHz R10000 configurations and with either two-to-six or four-to-eight graphics pipes; the higher-end machine also has multi-pipe rendering. The smaller rack does 11m polygons/sec like the deskside, but has room for up to 11 Ultra SCSI disks and more slots. The top-end rack does 80m polygons and a 5.3 Gigapixel/sec fill. Both can take up to 8Gb RAM. The racks cost \$205,000 and \$770,000 respectively.

RED BRICK READIES VERSION 5.0

Los Gatos, California data warehouse Red Brick Systems Inc will announce version 5.0 of its Red Brick Warehouse on October 14 including a bunch of embedded algorithms and analysis from DataMind Inc (UX No 592). Red Brick reckons intelligent software algorithms has been the key to its success in the past - claiming an eighteen month technology lead over the rest of the data warehouse wannabes - and is adding to the catalogue with Red Brick Data Mine to provide categorisation analysis capabilities against all data in the Red Brick data warehouse. Data mining in the relational engine is accomplished by creating models that appear as tables in the database, says the company. The models can be accessed and manipulated via SQL. When data is inserted into the model, calculations are performed, in turn creating other tables containing results of the calculations. This avoids overloads, network bandwidth and administration overheads because the data mining software is brought to the software rather than vice versa. Logging, locking and user admin are all issues which would otherwise need to be dealt with, it claims. The Red Brick Data Mine uses Redwood City, California DataMind's Professional Edition access tools. Version 5.0 features include a new Object Oriented Operator Model for optimised parallel processing, multi-level star join, hybrid index capabilities such as mixed sub-types on a single column and automatic sub-type default, complex SQL processing such as Where clause optimisations, correlated subquery cache and SQL Query Rewrites. It's up on most Unix and NT 4.0. No prices. The company is ramping up its European operation adding eight people to its UK operation and opening offices in France and Germany in the first half of next year. It has 220 staff worldwide. It'll name a "favoured five" partnering deal later this year.

UNISYS AIRS ITS PENTIUM PRO QUADS

Unisys Corp gives its ClearPath SMP 6400 Pentium Pro quads a public airing at Unix Expo this week. It's been delivering the things to customers for a couple of months now. The 6400 uses 166MHz or 200MHz Pentium Pros and starts at around \$13,500 for a uniprocessor with 32Mb RAM and 2Gb disk. A max'd out 200MHz quad with a gig of RAM will go from around \$60,000. The 6400 uses the Acer Inc Pentium Pro board inside Unisys packaging and peripheral arrangements running UnixWare, Unix SVR4MP or NT. Clustered configurations are available using SCO Clusters; Unisys houses two 6400s in one cabinet for the purpose. They're seen as departmental boxes. The one-to-ten way ClearPath SMP 61000 Pentium Pro server which uses Unisys' 533Mbps Synchronous Coherent Memory (SCM) - it's already being delivered as a Pentium engine - is due in December. Pentium users will be upgraded. The ccNUMA ClearPath variant based upon Data General Corp's NUMA backplane design and software plus Scalable Coherent Interface boards will surface mid-1997. Unisys' use of Data General's NUMA topology over the NUMA-Q variant developed by its OEM supplier Sequent Computers Systems Inc means the Unisys/Sequent relationship is likely to fritter away in regions where there have been few customers. Unisys says its Sequent business is strongest in the UK, Netherlands and Australasia.

SCO RINGS TELEPHONY FIRST FOR UNIX

Santa Cruz Operation Inc and Dialogic Corp will announce at Voice Europe 96 in London this week that they are developing what they claim to be the first Computer-Telephony Integration (CTI) system based on open standards. CT-Connect, as it is known, will run under SCO UnixWare when it is released in the second quarter of next year. There are already HP-UX, SCO OpenServer and DG-UX Unix clients for CT-Connect, but no Unix server. In fact, Parsippany, New Jersey-based Dialogic must be one of the only companies migrating its server product from Windows NT to Unix. Up until now telephone systems and Unix-based computing networks have had to operate independently, says Dialogic. Both companies are looking to feed off a market which Dataquest expects to be worth up to \$8bn by the turn of the century. SCO estimates the telephony market accounts for up to 10% of its revenues at present. CT-Connect enables applications to trigger responses such as placing calls on a line when another application already has a call in progress. It comes as server software running under the operating system, supporting call control and monitoring through links to telephone switches. It works by implementing communication protocols to work with each switch's computer telephone integration link, map the differing protocols and messages to a common call and manage telephony service requests and status messages between the server and apps. There will be four versions of CT-Connect server. A full configuration will support all the client operating systems, which also includes Windows.x, as well as SCO OpenServer HP-UX, DG-UX, and an unlimited number of clients. A Desktop version will support an unlimited number of clients, but restrict the management to the desktop, where typically each client can manage one or two telephones, rather than managing some telephones directly from the server. A Desktop Lite version will also be available, supporting up to 36 client systems running desktop applications, and an evaluation version will be available free of charge, supporting up to 16 clients. The UnixWare version will support Microsoft Corp Telephony API (TAPI) and Dynamic Data Exchange (DDE) standards initially, with support for Novell Inc's Telephony Services API (TSAPI) following later. Once the product is ready - there'll be a developers' release out in January - the two companies will jointly market it, mainly through their existing channels and OEMs. SCO has been selling OpenServer, and more recently UnixWare into the CTI market for some time, according to Gordon Jago, SCO's telecommunications market development manager, but this will be the first time with a product it's helped to develop. Dialogic's CTI marketing director Carl Strathmeyer said the UnixWare version will be designed to be binary-compatible with Gemini, the merged UnixWare and OpenServer. The full version is likely to cost around \$15,000, with the Desktop and Desktop Lite version costing about \$7,500 and \$3,000 respectively, according to Strathmeyer.

ITC CLAIMS FAULT TOLERANT INVINCIBILITY

Invincible Technologies Corp has introduced a fault-tolerant version of its Lifeline NFS server system. Lifeline Symmetric Fault Tolerant (SFT) is a Digital Equipment Corp Alpha-based dual server system running 64-bit DEC Unix. Each server is running the clients: one is not merely a replica of the other, according to the Medway, Massachusetts-based company. ITC has also inked deals with Pure Atria Software Corp and Parametric Technology Inc to provide versions of Pure Atria's ClearCase software configuration suite and Parametric's Pro/PDM and Pro/Engineer computer-aided design tools on ITC's NFS servers. The servers also incorporate ITC's storage array and failover software. They have two 275MHz Alphas inside. The new machines have an enhanced version of ITC's Management, Environmental, Diagnostics Subsystem (MEDS) as well as its Rapid Response software. Rapid Response monitors the status of the system and warns of potential problems. All the systems management is done through MEDS, including supporting ClearCase, Pro/PDM or Pro/Engineer applications, where they are installed, as well as stuff like configuring RAID levels and file system management. Arun Taneja, ITC's VP marketing claimed MEDS provided fault-tolerance at the application level, as well as all the necessary systems management. Taneja said ITC had sold "a few hundred" of the Lifeline Information Servers it launched last year. He said sales had recently started to accelerate. Prices start at \$168,000 for a 256Mb RAM, 20.5Gb RAID 5 disk configuration. It's expandable to 1Gb RAM and 246Gb of RAID storage.

THE FORCES THAT CONSTANTLY DRIVE THE COMPUTER INDUSTRY TOWARDS A DE FACTO MONOPOLY

By Tim Palmer

Remember the time when IBM Corp effortlessly dominated the computer systems business? How long ago it seems. Today, IBM has lost its power to dictate standards in any part of the business, and we have a new monopoly to worry about, that of Microsoft Corp and its enthusiastic cheer leader, Intel Corp. IBM was originally able to dominate the computer industry not because of any inherent excellence of its architecture and system software - in the late 1970s, specialists would have agreed that ICL Plc, Burroughs Corp and Sperry Corp all had better architectures and operating systems than IBM, but, by fair means and foul, IBM had built itself to the point where it was 10 times the size of any of its rivals. The cost of developing applications, and the penalty for getting it wrong, were so great that data processing managers became as risk-averse as trustees investing mites for widows and orphans. They had seen Xerox Corp abandon its mainframe business to a Honeywell that ran it for cash, while conducting disconcerting hot-and-cold affairs with flighty Parisians, seen RCA Corp hand its mainframe business over to Sperry, and watched it fade away, and if they were Burroughs or NCR users, wondered whether their supplier would be next. And with each new generation of hardware, more and more decided it would be safer to migrate in their own time to the one company that clearly was not going to go away than be forced to do it at a point of maximum inconvenience in an unpredictable future.

Escutcheon

Today, of course, IBM's power to dictate standards is confined to the fading mainframe business and no-one cares much any more - and even in mainframes, IBM's power is extremely circumscribed. It failed to establish Serial Storage Architecture and has ceded dominance of mainframe storage to EMC Corp to the point where it has had to rush to one-time arch-rival Storage Technology Corp for a remedy. As for the PowerPC adventure, it has turned into an embarrassing fiasco and a spreading stain on King Louis Gerstner's escutcheon. All that has been achieved is that the PowerPC is used in the regrettably fading Macintosh, but the hidden cost has been huge. The decision to move the AS/400 over to the PowerPC is mocked by the fact that the PowerPC AS is only partly compatible, minimising the benefits of economies of scale - at the price of largely paralysing the AS/400 base for three years at a time when it was absolutely vital for the health of the line to that IBM made a quantum leap in functionality just to persuade the System/36 users to migrate, let alone attract mid-range virgins to the line. The decision instead to devote vast internal resources to the migration to PowerPC has probably doomed the AS/400 to fade away early next century. IBM today looks moderately successful again because, now that it has cut an enormous swathe of costs out of the business, it is so big and is in so many sectors of the market that - unlike Digital Equipment Corp which lacks its scope - it is cushioned from the full impact of poor performance in any two or three activities - remember disks, personal computers and the AS/400 were all doing badly last year.

Corporate victims

And Louis Gerstner and his team have battered everything down and made the company reasonably stable, where the reverse is the case with Robert Allen and his team over at AT&T Corp, which should be a lot easier to run than IBM but begins to look like General Motors Corp when everything started falling apart. But IBM has no chance for the foreseeable future of again dominating the industry as it once did. It has to settle for being as respected and successful as Xerox Corp while fearing that at times it will be regarded as as much of an underachiever as Eastman Kodak Co. IBM's twin nemeses were the original IBM Personal Computer with its MS-DOS operating system - to which, lets not forget, CP/M and the Z80 played John the Baptist - and the plunging cost and soaring advance in performance of CMOS, which has made the Pentium Pro as powerful as 90% of IBM's mainframes of five years ago. The fact that by 1985, users could buy a personal computer from any manufacturer and know that shrinkwrapped software bought off the shelf would run happily on it was the most phenomenally liberating experience to users used to being locked into one hardware and software vendor. And users and IBM's corporate victims alike began to wonder why this model was not being extended up into the mid-range. Unix seemed the least inadequate vehicle, and all the systems builders IBM had defeated embraced Unix with varying degrees of enthusiasm. But they fatally flawed the model by deciding they couldn't compete on service, price-performance and by writing superb vertical market applications alone, they had to differentiate their various implementations of Unix by adding proprietary features. And instead of recreating the personal computer model, it was as if, when Philips Electronics NV and Sony Corp launched the audio Compact Disk in 1980, they implemented the standard differently, so that to run Polygram NV disks on Sony players, Sony disks on Philips players, you had to throw some DIP switches inside, switch them again for EMI Group Plc disks, while all the record companies had to produce several formats of each recording. And as a result, the Unix world begins to fear that it has been fattening frogs for snakes as its users begin to regard Windows NT, owned by a dictator, as the fulfilment of Unix's promise. And just as two decades ago, users dictated IBM mainframe compatibility to the industry, today it is the so-called independent software vendors, which sound like software retailers but are in fact software developers that are dictating conformance to the Windows-on-iAPX-86 APIs, to the detriment of the

Mac and of all the less than fully compatible Unixes, the AS/400, and ultimately the mainframe - and to all processor architectures apart from iAPX-86. The likes of DEC with Alpha and IBM with PowerPC will always find it an uphill struggle to keep up with the standard even running NT in a Windows NT world, because their machines will always either be more expensive or much less profitable than ones that run NT on the Pentium Pro and its successors - as what is clearly currently the wisest company in the business, Hewlett-Packard Co, has so coolly recognised. Windows NT is the only major piece of software Microsoft is implementing for several processors - PowerPC, Alpha, R-series, Sparc perhaps - as well as Pentium Pro, and is no doubt doing it in the certainty that all versions apart from Pentium Pro will fail, so that it can turn to the regulatory authorities and say "look, we tried to be open and support multiple architectures at great cost, and look what happened." It would be absurd to characterise the computer industry as a natural monopoly as are activities such as water supply, but without active regulatory intervention the industry in its present form will always tend towards a monopoly.

GIGABIT ALLIANCE SIGNS UP A FURTHER 24; DISCLOSES STANDARD ROLL-OUT

The Gigabit Ethernet Alliance has signed up 24 new members, and has announced its schedule for the implementation of a Gigabit Ethernet standard. The company says it expects to have the standard approved by early 1998. A first draft of the standard will be produced in January. Gigabit Ethernet will initially be used in backbone environments as the preferred interconnection between switches which aggregate multiple lower speed - 10Mbps and 100Mbps - Ethernet segments. The new Alliance members are Acacia Networks Inc, Alliance Semiconductor Corp, Allied Telesyn International Inc, Amdahl Corp, Ancor Communications Inc, Auspex Systems Inc, Digi International Inc, Emulex Corp, Fibronics Ltd a unit of Elbit Ltd, GEC Plessey Semiconductors Ltd, Hitachi Cable Ltd, Hitachi Internetworking Ltd, IBM Corp, LanOptics Communications Inc, MicroOptical Devices Inc, Motorola Inc's Semiconductor Products Sector, NEC Electronics Inc, Ornet Data Communications Technologies Inc, Siemens AG, S-MOS Systems Inc, Spike Technologies Inc, Sumitomo Electric Industries Corp, WideBand Corp, and Xircom Inc. The group has also established a Web site to provide easy access to Alliance news, updates and activities at www.gigabit-ethernet.org/

EXPONENTIAL READY WITH ITS 500MHz X704 POWERPC

Exponential Technology Inc, the San Jose company developing a 500MHz version of the PowerPC, has been utterly silent on the development for the past year, but is finally ready to show its hand, MacWeek reports. The paper expects Exponential to describe the 500MHz X704 BiCMOS version of the PowerPC on October 22 at the Microprocessor Forum in San Jose, preparatory to shipping the things early next year. Apple Computer Inc was known to be interested and Mac cloners DayStar Digital Inc, of Flowery Branch, Georgia, Power Computing Corp of Round Rock, Texas; and Umax Computer Corp of Fremont, California are all said to be working with Exponential to design 500MHz systems. In addition to funding Exponential, Apple has loaned engineers to work on the project and is rewriting the Mac ROMs to run at high speed. The company finally received a PowerPC licence from IBM Corp in February. Use of BiCMOS has meant that Exponential has had to develop a patented cooling system to prevent overheating. It will have a small bipolar Level 1 cache on the chip, and a much bigger second level CMOS cache off chip, but while compute-intensive tasks will benefit enormously from the new chip, performance on applications with a lot of input-output activity will be severely constrained by the speed of the bus.

ORACLE SETS NETWORK COMPUTING ARCHITECTURE AGAINST ACTIVEX; CORBA WITH EVERYTHING

In the week that Microsoft Corp persuaded almost everybody that the best place for its ActiveX technology was inside the Open Group, Oracle Corp came out and declared that it was basing its entire business on Corba and HTTP across the internet and intranets. And whereas Microsoft had virtually no vocal support - ~~apart from the Open Group, of course - and some downright hostility at its ActiveX meeting in New York, Oracle had major industry players falling over themselves~~ to say what a great thing Oracle's so-called Network Computing Architecture (CA) is. The architecture is based on the Object Management Group's Corba 2.0 model, specifically its Internet Inter-ORB Protocol (IIOP) distributed object part. Oracle reckons the architecture converges client-server computing, network computing and distributed objects, and Oracle will roll products out over the next few months supporting it, according to Peter Relan, VP internet server technology. Relan believes that the internet-centric future will be based on "Corba objects with IDL services that make them robust." The NCA supports desktops that are compliant with the Network Computer Reference Profile set of standards (UX No 591), as well as the Netscape Communications Corp's Open Network Environment (ONE) and ActiveX desktop, in other words it supports Microsoft's Common Object Model (COM) but not Distributed COM. Relan said Oracle was waiting to see what happened with the Open Group's new Active Group on that one.

Cartridges

Oracle claimed the support of more than 60 system vendors, integrators and ISVs, as well as more than 45 licensees for its NetSolutions bundle, which is a coming-together of such things as Designer/2000 and Developer/2000, its WebServer web application development platform, Oracle7 Workgroup Server or Enterprise Server, Oracle InterOffice messaging and calendaring software and a Network Computing Cartridge Development Kit. Oracle has been talking about cartridges for some time, but what they are hasn't been too clear until now. Cartridges, it seems are any object that complies with the NCA standards. They can be plugged into client applications, application or database servers. Oracle said there are more than 30 application developers writing cartridges. Relan compared cartridges to Informix Software Inc's DataBlade architecture, which he dismissed as "unsafe" and "proprietary" with programmers having to be "rocket scientists" to understand it. Cartridges, like DataBlades are what enables the architecture to be extended. They can be written to support new data types and provide access to database services such as indexing, query execution and query optimisation of those data types. Cartridges can be built using Java, C, C++ or Visual Basic, supporting Corba and IDL.

Integrity problems

Informix wasn't taking this lying down. Malcolm Coulton, the company's Universal Server director of product marketing dismissed NCA as "so clearly architecturally inferior" to Informix's imminent Universal Server, which shipped to developers last week. He claimed "we will be able to plug Oracle cartridges into Universal Server," which actually implies a degree of openness on Oracle's part that Oracle didn't claim itself. Coulton said the problem with cartridges is that they plug into a middle layer away from the database itself, whereas Informix Data Blades plug straight into the database. This means the data has to be moved out of the database layer before it can be manipulated in any way, which creates potential data integrity problems, as there is no precedent or architecture for complex data manipulation in middleware, he said. Relan retorted that this was ridiculous, Oracle has said they will plug into the database. As for Data Blades being proprietary, Coulton responded, "how can they be? They're based on SQL3." Relan hit back by saying that all SQL3 talks about is extensions to the database, it's the "completely proprietary kernel APIs of Data Blades," to which he was referring. Coulton also said Informix had a Data Blade developers' kit, where Oracle was asking developers to use existing tools, which again is a pretty weak argument against being proprietary. Coulton also reckoned Corba will be dead within two years and OLE/ActiveX is the future. This one was easy for Relan: if Corba will be dead, then so will Informix's good friend Netscape. And therefore Informix "is proclaiming their own death within two years," he said. Informix's Coulton said Oracle was right in the short-term but wrong in the long term, and anyway, there was no product associated with NCA at the moment, which is the only point Oracle would concede, but it wasn't claiming to be a product announcement anyhow. After summing Oracle's NCA up as "slow, clumsy and unmanageable," Coulton claimed Universal Server's performance will be "one hundred to one thousand times" that of NCA. Universal Server general availability is due and on schedule for December, according to Coulton.

Public relations

Oracle's Web Request Broker, which enables cartridges to talk to the relevant database and applications, as well as to each other will be fully Corba-compliant by the roll-out of version 3.0 of WebServer, due by the year-end (UX No 599). And Sedona, Oracle's next generation server development environment and object database extensions will be Corba compliant when it's released in the first quarter of next year, along with Oracle8 (UX No 586), said the company. Expect Oracle to make an announcement in the next month or so about its ORB technology. Oracle has its own stuff, but also works with Iona Technologies Ltd, Visigenic Software Inc and Expersoft Corp. So, it now looks like

Microsoft in one corner and most of the rest of the industry in the other. Brian Kroll, SunSoft Inc's Solaris Server marketing director dismissed Microsoft's strategy as "an interesting PR move with very little substance." But "having a Java front-end with IIOP in the middle and SQL at the back-end is a real interesting architecture," he reckons. And Kroll said companies such as Sun and IBM can crow on about such an architecture for ages without anybody really taking it too seriously, but when an database and applications company like Oracle comes along "with two feet firmly planted in this space," things start to happen, he said.

OPEN GROUP TO HOST ACTIVEX DEVELOPMENT

Not surprisingly, Microsoft Corp's carefully orchestrated meeting of 84 ActiveX "stockholders" held in New York last week voted to turn control of Redmond's key object technology specifications over to the Open Group (UX No 609a). 63 companies voted in favor of that proposal while 19 preferred the creation of a new Microsoft-lead body to guide development of the core technologies. There were two abstentions, one them Netscape Communications Corp, which - effectively channeling for Object Management Group (OMG) boss Chris Stone - was unhappy at the lack of provision for creating interoperability between objects using ActiveX and OMG's alternative Corba Internet Inter-ORB Protocol (IIOP). Moreover, "why create a process where it's not needed?" asked Carl Cagill the company's standards program director, "OMG already has the expertise in object standardization." The vote means that for the foreseeable future there will be two incompatible models available to object-oriented application developers. Whilst outgoing Open Group boss Jim Bell said he'd welcome the opportunity to expand the group's relationship with OMG, neither he or Microsoft group VP Paul Maritz could offer anything concrete to the New York delegates beyond suggesting if there is "genuine desire" for Corba interoperability "then we will examine it." The proposal adopted at the meeting will see the creation of an Active Group within the Open Group, controlled by a steering committee appointed by, and including Microsoft. The Active Group will license ActiveX technologies including the Common Object Model (COM), Distributed COM (DCOM) and Microsoft's royalty-free MS-RPC variant of the OSF Distributed Computing Environment remote procedure call, plus the other storage, registry, security, monikers and automation specifications that Redmond turns over. The components supposedly run to some 750,000 lines of code and validation suites representing over \$100m of Microsoft investment. The licensing terms, like so much else, have not yet been decided.

Pre-Structured Technology

The Open Group says it will create one of its Pre-Structured Technology (PST) projects to house development of ActiveX specifications by the end of October. Microsoft will submit an initial specification, source and binary reference implementations and conformance test suites to the PST. Licensees will have to agree to share any intellectual property pertaining to ActiveX created through the PST process. Licensees will be able to modify ActiveX source to create new reference implementations and ship the resulting binaries; the Open Group will be the sole supplier of source code. The initial PST will make core technologies available; Bell anticipates a cluster of PSTs will guide the evolution of different ActiveX components. The first meeting of the steering committee - the makeup of which is being chosen entirely by Microsoft - is scheduled for the second week of November. Microsoft will sell implementations of the specs and says all of the ActiveX technologies it's handing over are now shipping on NT, with Windows 95 and Mac implementations in beta. Software AG and Microsoft have also ported the technologies to SunSoft Inc Solaris 2.x, a demo version of which is up on the web. The two expect the Solaris port to be used as the basis for other Unix implementations. OMG president Chris Stone responded by describing the planned PST program as a "closed" group that decides "what to build, when, and how much to spend on it. It has nothing to do with standardisation. This is like hiring Cambridge Technology Partners to port your product to another platform."

WANT TO SAVE A FEW HUNDRED MILLION A YEAR?

Sun last week finally put a price on computing by way of what its CEO Scott McNealy likes to call "zero administration clients" and what the rest of the world has taken to calling thin clients. Sun says that based on its own internal experience it will cost around \$2,500 a seat a year for Java-based thin clients. The number is a far cry from the \$11,900 a seat a year that the Gartner Group figures it costs to run traditional fat clients. Sun's arithmetic says moving from fat to thin clients could save an enterprise with 10,000 clients \$100 million a year. Actually \$100 million is small potatoes. Sun's real targets are the Fortune 1000s where it figures it's not unreasonable to estimate a conversion rate of 75% of their 100,000 nodes. In that situation, the savings could conservatively be \$562.5 million a year. Even figuring on a 25% conversion rate, the savings would still be \$187.5 million a year. However, 25% is considerably below what Sun says the customers it consulted projected the conversion rate would be - ultimately 90% of all desktops - which, if it happens, turns the Wintel model on its head - exactly what Sun is hoping for. The numbers are part and parcel of a 35-page pro-Java argument Sun memorialised in a white paper called "Java Computing in the Enterprise" that it published last week right before Intel hosted its anti-NC "Managed PC" forum in New York City, Intel's own attempt to come to grips with the total cost of Wintel computing. Intel's own figures, based on its own internal experience, put its cost at \$9,324 a seat a year with Windows 3.1 or \$6,800 with NT/95, numbers it's trying to reduce by 15%. Java Computing, a phrase Sun would like to make commonplace, also of course indicts the kind of computing Sun has always sold as too expensive to maintain. Sun's numbers are meant to reflect fully loaded IT costs including the annual expense for client and server hardware, network infrastructure, application development and support and on-going user and dedicated maintenance resources. Its white paper breaks the costs down according to the style of computing a company uses. Sun claims the typical heterogeneous environment consisting of fat clients and servers - Wintel, Unix, OS/2, Mac, MVS and the like with primarily local applications and local data file storage - can run as much as \$15k per seat per year, higher than the Gartner estimate, but costs at least \$10k a year - which is the figure it uses for its savings projections. A more homogeneous desktop-centric environment using, say, Sun's own Solaris clients and Solaris servers costs \$9k-\$12k per seat per year. (This is its own example so presumably Sun feels its own business could withstand a mass migration should customers take them up on their suggestion.) X terminal clients, an early attempt at what has become thin clients, backed up by very high-bandwidth infrastructures and high-performance servers run \$7k-\$8k a seat a year. Diskless clients fronting the same kind of high-bandwidth network infrastructure and high-performance file servers run \$6k-\$7k per seat per year. Homogeneous dataless clients with all applications and data files stored on servers of the same architecture, which is the way Sun has gone internally so it speaks from experience, cost \$4k-\$5k.

SAP DROPS DEVELOPMENT OF R/3 FOR SYBASE

SAP AG and Sybase Inc have thrown away 18 months of development and won't be releasing a version of R/3 for Sybase after all. There had been talks of delays in the past, but SAP revealed this week the project was dead. SAP told our sister publication, *Software Futures*, that it had stopped development on R/3 for Sybase two months ago, and told our daily sister publication *Computergram* last week that it couldn't comment because "there is no relationship with Sybase." Sybase put on a brave face, but admitted SAP had "de-emphasised" development, despite the database company sending over developers and technical assistance at various times. Sybase emphasised that it's going to keep playing with SAP rivals PeopleSoft Inc and Baan Co NV. SAP's problem supporting Sybase may have stemmed from the fact that Sybase can't do row level locking the way other database firms do it. Sybase said that issue wasn't solely to blame, since Microsoft SQL server can't do row level locking either, but R/3 was still able to support it. Currently R/3 applications can run on Sybase, but they eat up enough resources to make you question the point.

OPEN MARKET TO SHIP WEB COMMERCE DATA LINKING SOFTWARE

Open Market Inc will next month ship a web commerce system to link to companies' existing data, called ActiveCommerce DB. The capability means that firms could make databases of items for sale accessible to consumers browsing the internet. The software uses Bluestone's Sapphire/Web development tool. The product supports Solaris, AIX, Irix and HP-UX and a Windows NT beta will be out before the end of the year. The Cambridge, Massachusetts-based firm is selling ActiveCommerce DB for about \$3,000

HDS NETWORK HAS SECOND GENERATION NETWORK COMPUTER

HDS Network Systems Inc reckons it's way ahead of the field in Network Computers with its @workStation, claiming that it is still the only company shipping a Network Computer with local web browser and Java - and it is determined to stay that way. Last week, the King of Prussia, Pennsylvania-based company became the first Network Computer vendor to get into its second generation of the things, launching the new @workStation Supra-66 models, based on the Intel Corp's 66MHz 80960-HD superscalar RISC processor, which offers performance "equivalent to or faster than today's typical desktop personal computers," according to the company. The Network Computers run Java, Windows, Unix and mainframe applications "at very fast speeds over a network," it said. Later this quarter, HDS will also move into the second generation of its netOS operating system, release 2.0 - and once again, you can license it if you want to build your own network-centric devices. But the talk of \$500 machines remains ambitious: the cheapest HDS' @workStation is \$700, and prices for the @workStation Supra-66 models begin at \$1,300, which buys a system with 8Mb of memory, and a keyboard and mouse.

USOFT DELIVERS DEVELOPER 4.0 - PLANS WEB-ENABLED VERSION

Unisys Corp's Brisbane, California-based Usoft subsidiary has launched the latest version of its fourth generation development environment, Usoft Developer 4.0. Usoft, which nowadays pitches itself at what it calls the "business rules automation market", claims the tool delivers direct support of business rules, technology Usoft says is essential for the building of logical three-tier architectures. Usually, it says, these rules are defined only in analytical and design documents, and then buried deep in procedural code, which results in inconsistent enforcement of the rules and an inability to make rapid changes. Three-tiers allows a business policy layer to sit between database and presentation, providing a central place for change and extension to occur with more flexibility. Usoft 4.0 uses data modeling and standard SQL, rather than procedural language, to define and store business rules at a single point, from where they can be processed with no further programming by the Business Rules Engine. An SQL Definer provides a graphical drag and drop front-end to SQL. Rules can be made available to non-Usoft applications through ODBC. The Rules Engine replicates a local, compact copy of the central repository for each client workstation and tasks are dynamically distributed between client and server using a partitioning algorithm. The new version adds a Windows95 look and feel and TeamWork version control and update facilities for business objects, along with multilingual support. Supporting the major relational databases, including DB2, Usoft Developer 4.0 runs on Windows 95 and WindowsNT, but can also be deployed on Windows 3.1 and Unix/Motif target systems. Pricing is \$10,000 per developer, with no runtime fees. Future plans include a Web version that automatically generates Java and ActiveX applets. These will be coordinated with the Business Rules Engine on Usoft's web server, code-named "WebRuler", which was demonstrated for the first time at the Client /Server Expo in Paris last month. Beta testing is set to begin some time this quarter.

ACTIVE SOFTWARE TO UPDATE IN DECEMBER

One-year-old Active Software Inc is to update its software - which extends existing applications and data to the web - with a toolkit to enable developers to build their own adapters. The adapters would allow users to integrate data written in languages such as C, Cobol and SmallTalk into their web systems. ActiveWeb Developer Suite 1.2 will ship in December. Last week, the 20-person, Mountain View, California firm added Microsoft Windows NT and SQL Server database support. The product already provides adapters for Informix, Oracle and Sybase servers. The NT version was delayed because bugs were found during beta testing and took 45 days to fix, Active said. The product initially shipped in July.

WANG IN TALKS THAT COULD LEAD TO KODAK BUYING ITS SOFTWARE BUSINESS

Wang Laboratories Inc last week confirmed that it's in talks that could lead to sale of its imaging software business to Eastman Kodak Co in a deal that could be worth "several hundred million dollars" - but would say no more. A sale would mean there'd be little left of Wang apart from a substantial third party maintenance business - and a lot of cash. The newspaper, citing unnamed sources, said the talks were serious and focussing on price. It would not be surprising if Kodak were interested - it already uses the software and new broom George Fisher needs to make his mark quickly at a company that has been drifting for about 20 years.

JSB FORMS NEW SURFCONTROL DIVISION FOR EPONYMOUS WEB ACCESS CONTROL TECHNOLOGY FOR CORPORATE USERS

Having re-styled itself the intranet company at the end of last year, JSB Computer Systems Ltd has created a separate product and division, surfControl, to deal with the thorny issue of Internet-intranet access control. The personal computer-to-Unix terminal emulation company saw the stagnation of its core business coming, and is looking to the emerging Internet technologies for its future success. Last year, it apparently launched a multimedia kiosk-style front end with its own suite of back office operations for corporate intranets, which it called Intranet Jazz. However, the company is now referring to this offering as a "technology showcase," which it has apparently been touting around to potential customers. It would seem the access control options were what most impressed the customers, so, buoyed up by some independent research on the subject, JSB has launched surfControl. Some 84% of companies interviewed in the research said connection to the Internet was a fundamental business requirement, but most of those were concerned about time-wasting by surfers. While employees were cagey about giving precise timings, 100% of those questioned admitted to surfing the Internet for personal use, averaging 15 to 30 minutes per day. SurfControl currently runs under Novell Inc's NetWare. It consists of an access control engine, in which organisations define their access rules. The system uses Novell Directory Services to implement the access rights. In this way, users and workgroups are already defined. The administrator simply drags a user or group onto company-defined access rules. The company can create a blacklist or a whitelist, either listing all sites that a user is not permitted to visit, or alternatively listing only those sites that the user is allowed to visit. The system is equally applicable to internal intranet access or external access to the Internet. SurfControl also includes a monitor of all sites visited by each user, so that companies can build up the blacklist as they go. JSB will also bring out versions of surfControl under Windows NT and Unix, it said. JSB's European managing director Steve Purdham will also become president of surfControl. He said the company's traditional business will continue to be an important revenue stream, and he does not see it dwindling in the near future. In fact, 60% of the Intranet Jazz product has been incorporated in a new 32-bit intranet-enabled version of the company's Multiview terminal emulation product, soon to be released as Multiview 2000. However, Purdham says he expects surfControl to become JSB's main business in the next few years. The NetWare version of surfControl is available now, on CD-ROM or to download from JSB's Web site. It costs £5,000 for the first 50 concurrent users and £4,000 for each additional 50 users.

SEQUOIA SELLS FT BUSINESS TO GENERAL AUTOMATION

Irvine, California-based Pick popper General Automation Inc is buying rival Sequoia Systems Inc's fault-tolerant systems business for stock and deferred payments worth \$11m. Marlborough, Massachusetts-based Sequoia will end up with slightly less than 10% of General Automation's stock within two years following the transfer of 800,000 General Automation common shares in two equal tranches. Sequoia's shedding its fault-tolerant business on the back of news that consolidated revenue for its September quarter just ended will be significantly below expectations although the net loss will be in line with predictions. Sequoia lost \$4.5m on \$102m revenue in its fiscal 1996 to June. The deal leaves Sequoia with the 280-person embedded Intel systems business it picked up with the acquisition of Houston-based Texas Microsystems Inc in November 1994 for \$20m (UX No 513). Texas Micro boss Michael Stewart succeeded Sequoia president and chief executive Neil McMullan in February this year. Before its Texas Micro buy Sequoia was known as a supplier of Motorola Inc 680x0- and Intel-based fault-tolerant boxes to Hewlett-Packard Co and others; HP once held a 10% stake in the company. General Automation takes on the business and 120 staff of Sequoia's enterprise systems business in the US, UK and Australia. It will support and maintain Sequoia's 500 fault-tolerant system users. General Automation expects the Sequoia business to double its revenue; it earned \$631,000 on revenue of \$7,291,000 in its June quarter - \$1,342,000 on \$19,129,000 for the nine month period. General Automation says the high-end Sequoia system complement its low- and mid-range high-availability solutions which are based upon OEMed Compagnie des Machines Bull SA and NCR Corp PowerPC and Intel servers running the Pick database. It claims an installed base of 5,000. General Automation will create a single engineering team to create new products from designs underway at both companies; it's currently readying NT/Pick solutions.

WILL CISCO'S GRANITE BUY KILL OFF ATM?

By Gary Flood

Up until very recently, the received wisdom of most networking industry luminaries was that the future of high-speed datacomms belonged solely to asynchronous transfer mode (ATM). Customers, however, have had other ideas. While ATM is winning some support in the wide area network space, it has spectacularly failed to penetrate the corporate backbone and seep down to the desktop. Proponents of ATM are increasingly struggling to convince sceptics that ATM's costs will shrink sufficiently to make a switch from the workhorse local area network standard Ethernet to ATM worthwhile, despite the technology's advantages in terms of speed. Perhaps more importantly, users are also proving reluctant to adopt what is perceived as an untested environment. As ATM vendors have struggled to get their message across, the sizeable Ethernet camp has fought back with a vengeance. First came fast Ethernet, running at 100 Mbps. Now an even faster variant, capable of 1 gigabit per second capacity, is being touted. Hopes are high for gigabit Ethernet (GE). The market research group Dataquest predicts that it will beat ATM to become the dominant communications backbone technology by the year 2000, creating a \$2.9 billion worldwide market in the process. In April, the IEEE announced that it had begun formal work on defining a GE standard, although that is unlikely to be finalised before the end of 1998. Meanwhile a 'Gigabit Ethernet Alliance' was set up in May to spur commercial uptake of the technology in advance of the full standard, with UB Networks, Sun, 3Com, Compaq and Intel among the 11 founders (there are now over 50 members). The group's goals include resolving the technical problems that may hamper commercial acceptance and, with its own 'draft' standard due in January, it predicts that 'pre-standard' commercial GE products will appear as early as next year. Two companies that were also founding members of the GE Alliance - Cisco and a small R&D company called Granite Systems - now only need one seat at meetings. Growth-hungry Cisco recently made its fifth purchase of 1996, snapping up Granite Systems in a stock swap valued at \$220 million. Cisco is happy to admit that the reason it was prepared to spend that much money for a 50-strong Palo Alto, California company that is years away from product delivery was to grab one of its founders, Andreas Bechtolsheim. Bechtolsheim's career got off to something of a good start: he built the original Unix workstation while finishing his doctorate at Stanford University, and then left in 1982 to co-found Sun Microsystems Inc with Scott McNealy, Bill Joy and Vinod Khosla.

"A genius with a short attention span"

Other milestones include doing much of the foundation work in building the RISC SparcStation. "A genius with a short attention span," as Sun CEO McNealy describes him, Bechtolsheim quit his role as vice president of technology at Sun only last year, setting up Granite Systems - dedicated to ultra-high performance local network switching technology development - with \$2 million of his own money. Granite's original mission statement was to simply offer high-performance network switches; the focus on GE came later, although there is speculation that fellow Granite founder David Cheriton's work on VASSA (virtual address space switching architecture) might be a factor. Bechtolsheim's aim now, and one which Cisco clearly agrees with, is to develop GE in ASICs (application specific integrated circuits). The idea is that using this approach, GE can be deployed in a modular fashion, allowing Cisco, which has tended to concentrate on software rather than hard-wired implementations, to have greater flexibility in developing products. Other GE players, like Plaintree, are also working on ASICs, and the company previewed a switch claiming 16 GE ports at last month's Network+Interop. Given that Bechtolsheim is unlikely to have accepted Cisco's offer purely for the money - which he does not need - the move must sound something of a death knell for ATM's chances at the desktop level. The news that Bechtolsheim has committed to remaining at Cisco for at least two years, acting as the head of its workgroup business unit (which will be based around Granite Systems), suggests that Bechtolsheim has become convinced that, with Cisco's backing, he will have the ability to dictate the future of communications technology to the same extent as his liaison with Sun helped set the mould of open computing. ATM developers may now have a truly formidable opponent on their hands.

NETSCAPE CLAIMS SWEET PRICES WITH SUITESPOT SERVER

Netscape Communications Corp says it'll release a return on investment report next month showing its SuiteSpot servers are less expensive options than Microsoft Corp and Lotus Development Corp. The study will show that for enterprises with more than 10,000 clients the SuiteSpot costs \$230,000; Microsoft Back Office costs \$1.3m; Lotus Desktop Notes is \$533,000 and a full version of Notes is \$2.1m. Mountain View, California-based Netscape commissioned a major research firm for the cost analysis and is expected to release the results at its developers' conference in October. The SuiteSpot line consists of six open server software components: Enterprise server, LiveWire Pro, Mail Server, News Server, Catalog server and Proxy Server.

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Hewlett-Packard Co has formed a new subsidiary to focus on mechanical design and product data management products out of its mechanical design division, which provides software solutions for mechanical design and product data management: the new company is set to begin operations in November as CoCreate.

The latest disaster to strike the hopelessly accident-prone **AT&T** is the revelation that as well as racking up losses totalling \$3,850m since 1993, **NCR Corp** has received more than \$2,820m in net cash contributions over that period, \$595m in the first six months of this year. And AT&T has to contribute another \$419m in cash plus whatever additional cash is needed to repay some \$68m in NCR debt, all prior to completion of the spin-off due by the year-end. All of which explains why it kept selling off pieces of NCR that looked as if they would have been valuable assets to the firm as a free-standing company. Its chip business, which had a strong line in disk controllers, and its terminals company, **Applied Digital Data Systems**, which would have been the ideal place to make the Network Computers that might have fitted very well alongside NCR's banking and retail terminals. AT&T frantically sold NCR assets to recoup a little of its outlay. NCR was doing sufficiently well as a free-standing company that it is almost inconceivable that it would have performed nearly as badly had AT&T not won its hostile takeover.

Digital Equipment Corp named 24-year DEC vet, currently boss of Digital Equipment Deutschland GmbH, Hans Dirkman to be president of the company's European operations. He moves to Geneva, Switzerland.

As we revealed in July and strenuously denied at the time (UX No 599), the **UniForum Association** is to be subsumed into the **Open Group** by the end of March. UniForum is an association of individual users of open systems, not just corporates. Tom Mace, former boss of 88open and the PowerOpen Association, has been appointed executive director on an interim basis, replacing Richard Jaross. UniForum says it will retain an independent board of directors and continue to provide services to its members. Its activities will continue to be managed from Silicon Valley, with expanded operations from current Open Group locations in Cambridge, Massachusetts, Reading, Berkshire and Tokyo.

The autumn 1996 **Xephon Plc** Handbook of IBM Terminology to hand - hooray! It's the last issue Jeff Hosier is going to edit - boo! It hasn't got a price on it, but it's worth whatever they charge for it for bon mots like "Structure - IBM speak for an architecture that isn't quite finished" - so why wasn't the thing called Systems Application Structure then, Jeff?

Nintendo Co Ltd's strategy of building suspense for its Nintendo 64 launch in the US, and then shipping in far fewer than retailers wanted, has paid off. Three days after the official launch, all of the 350,000 machines initially sent to stores have already been sold. Nintendo boasts that it took **Sony Corp** 13 weeks to sell that many Playstations.

Catamount, **Digital Equipment Corp's** end-of-life uniprocessor VAX, named for an American wildcat will be announced in Barcelona this Tuesday. The box will supposedly provide the low- and mid-range VAX base with an upgrade path good for another three years; there's nothing left at the high-end. Catamount will use SIMMs instead of pricier MS memory.

Apropos of the **Addamax** antitrust suit against the **Open Software Foundation**, **HP**, and **DEC** is finally going to trial on October 15, the judge is trying to get both sides to settle. There was a court appearance last week conducted mostly in the judge's chambers but our own attorneys' report that the defendants indicated that Addamax' settlement demand was somewhere in the mid-\$50 million range. The defendants' lawyers argued that, even if they lost the entire case, their liability exposure wouldn't be that high. As we went to press, the judge was trying to get them to agree to try the damages portion of the case before the liability part.

As well as introducing the Terlingua hardware at this week's Unix Expo show in New York (UX No 604), **IBM Corp** RS/6000 general manager Mark Bregman has a keynote in which he'll reaffirm IBM's commitment to Unix in the same breath as promising to incorporate NT as much as possible.

Iona Technologies Ltd's expanding its European operation, looking for a head of sales, a channel manager and UK sales staff.

Sun's forthcoming Java servers: SMCC tells us it's all in the software.

OTJ, the technical journal for **Oracle Product Users**, a magazine independent of the company itself, has published the verdict of some of its 30,000 US readers on the relative qualities of Oracle versus other products. The results are not likely to please the database giant. In the decision support and OLAP category, **Business Objects** was placed higher than the Oracle product, winning the Gold award. And Oracle Data Query only managed a tie for Silver with **Red Brick's** database. The results have prompted the expected response: silence from Oracle's Redwood Shores headquarters, and a gleeful press release from Red Brick Systems.

After talking to the European operations of a bunch of the software houses on its books, **Morgan Stanley** concludes that Europe is around eighteen months behind on client/server adoption.

Compuware Corp is set to announce the anticipated version 7.0 of its Uniface 4GL towards the end of the month (UX No 584): it'll ship in January.

Show manager **Softbank Comdex** was a little hasty when it claimed in a statement last week that it had changed the name of its annual **UniForum** open systems exhibition and conference to Pl@tform. In fact the proposal is still before the UniForum board and has yet to be voted on. It's now thought unlikely SoftBank Comdex will win approval for changing the name of the show in time for 1997's festivities and that its first incarnation as Pl@tform will probably be in 1998.

Sun's workstation and server lines will get a 250MHz UltraSparc II facelift around the beginning of next year; there's no betas on the ground, only lab engines.

The **Open Group** has indicated it would call its unwieldy Pre-Structured Technology process (PST) by another name if it could think of one, but admits it's stuck with the acronym for now. Would *Unigram.X* readers care to offer any suggestions?

Responding to our piece on the delayed four-way **Tandem Computers Inc** ServerNet-based S4000 Unix box (UX No 607), Tandem marketing manager Alan Goodman points out that the ServerNet router has a per link rate of 50Mbytes per second, not megabits, meaning that with each of the six links being full duplex the individual router throughput is 300MB/sec, and that routers can be cascaded in a net structure to increase bandwidth to whatever is desired. He also says that ServerNet does not use 10Base-T but has a parallel internal data path architecture that is "easily capable of handling ATM or T3 communications lines". For the record, it wasn't us, but Andreas Schreyer, director of ServerNet and ServerWare product marketing that referred to 10Base-T, so we assume he was using it as a theoretical example.

So far so good: **Informix Software Inc** duly launched its Universal Server developer release on Solaris last week for customers and partners to test applications and DataBlade modules against Universal Server, the object-relational combination of Informix and Illustra databases. It's due for general release in December.

Sun says it's managed to fill most of that Ultra Enterprise backlog it built up during its fourth quarter, but expects some to spill over into the December quarter, its fiscal second. It reckons it's got fulfilment back on to a two-to-four week cycle (UX No 598).

Dallas, Texas-based **ObjectSpace Inc** will announce this week that its Java+ Generic Library of containers and algorithms will be included in **Microsoft Corp's** Visual J++ Java development environment.

Checkpoint Software Technologies Ltd will this week release version 3.0 of its FireWall-1. New this time are such things as integrated anti-virus capabilities, Java security, URL screening. It also has something called Content Vectoring Protocol which enables third-parties to write plug-in content inspection modules with Check Point's APIs. Check Point has support for this from the likes of Symantec Corp, Cheyenne Software, McAfee Associates, Integralis

Sun Microsystems Inc's gearing up to answer the high-end PC crowd touting Intel Corp SHV board-based NT and Unix servers with a new line of one-to-four way tower form factor workgroup server products that it promises will extend far beyond the reach of its current LAN server workhorse the Ultra Enterprise 150 and its incarnations. Sun's seeking a VP and general manager for the unit. The workgroups unit's current director is Dave Douglas.

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Number 611

SUN READIES PCI ULTRASPARC *i* FOR LONG-OVERDUE REVAMP OF LOW-END WORKSTATIONS...

Sun Microsystems Inc's processor arm is calving a new line of 'system-on-a-chip' RISCs from its 64-bit UltraSparc design which the system side of the company will use to improve the lacklustre performance of its low-end uniprocessor workstation line. Sun doesn't want to say it in as many words but UltraSparc *i* looks like the part originally known as microSparc III, conceived as a microSparc II shrink, then re-focused as a microSparc-compatible Sparc V9 architecture UltraSparc core device (UX Nos 555, 583). First cut of the UltraSparc *i* series is due from the end of next year as a 300MHz device doing 10.6 SPECint95 and 14 SPECfp95 performance, as much as seven times greater than the performance of the 110MHz microSparc II Sun currently uses in the SparcStation 5, but not that much different to UltraSparc SPECmarks. It will supposedly reduce system cost by integrating main memory and system bus interfaces - it retains a 'slave' implementation of Sun's proprietary UltraSparc Port Architecture bus for graphics but not for memory - and supporting lower-cost memory chips. *Microprocessor Report* notes the chip itself will be no less expensive to build than UltraSparc. The chip employs integrated PCI bus interface, pre-saging, the *Report* believes, a move from Sbus to PCI in Sun's workstations. PCI add-in vendors will have to port their drivers to Sparc before their cards can be used in UltraSparc *i* devices however. Up to 2Mb of secondary cache can be attached as UltraSparc's direct L2 cache interface is retained, although it's been chopped down to 64-bits from a 128-bit data path. The design retains UltraSparc's key Visual Instruction Set multimedia extensions. The more integrated UltraSparc *i* design sits between microSparc - now refocused as an embedded part - and full-blown UltraSparc lines. There will be a 300MHz, then mid-200sMHz and possibly a 150MHz low-power version of the architecture for embedded systems. First cut of UltraSparc *i*, dubbed 1.0, is scheduled to tape out this quarter, sample in the third quarter of next year and go into production in the fourth quarter of next year. 2.0 will tape out by mid-1997. We don't know officially who is building the UltraSparc *i* in an 0.35 micron, five-layer metal process, although Sun handed manufacture of the part previously known as microSparc III to NEC Corp. Fujitsu Ltd fabricated microSparc I and II and has disclosed its own plans to upgrade microSparc installations with TurboSparc (*see page 5*). *Microprocessor Report* believes the performance boost UltraSparc *i* will deliver to Sun's low-end workstations is needed to match the performance of Pentium Pro and the increasing viability of NT as a workstation environment. Sun says it's disclosing its processor plan for UltraSparc *i* earlier than it would for other chips because it wants customers and the industry to understand that it hasn't given up on the low-end in its quest for the higher ground. It's also trying to establish an UltraSparc brand identity a la PowerPC.

...HOWLS FULL MOON TO NT'S WOLFPACK...

In addition to the multiple clustering hardware techniques it's going to offer, Sun Microsystems Inc's got a slew of clustering software technology up its sleeve which it's touting as Full Moon - and we all know what a full moon is supposed to do to packs of wolves. As well as new management, load balancing, job scheduling and application-level offerings (UX No 610), SunSoft's early 1997 software will be embedded into Solaris, presumably alongside the promised cluster file system. Beyond providing a single system image, developer APIs and stuff it says will deliver continuous availability Sun's mum on what exactly the Full Moon holds. It promises Full Moon will be hidden deep down in Solaris and that no add-ons or additional software packages will be required to operate Sun clusters.

...PROVIDES A PEEK AT PICOJAVA PERFORMANCE

Sun Microelectronics Inc will be talking up its picoJava I core at next week's Microprocessor Forum, offering a peek inside what until now has been a black box and offering some DIY benchmarks in an attempt to attract more wins for the design. The benchmarks use Javac, the compiler from Sun's JDK, and 3,500 line raytracer Java program and pitch an emulated picoJava I core-based processor running native Java code against Windows 95 Pentium and 80486-based machines running a Symantec Cafe just-in-time compiler and a Sun JDK interpreter. Scaling all system times to 100MHz, Sun claims picoJava is 15 to 20 times faster than a 486 running an interpreter, and five times quicker than a Pentium running a JIT compiler. Thing is, it's unlikely chips built around picoJava will competing with conventional iAPX-86 systems; they're going to appear in phones, network computers and other appliance devices. Sun said it will benchmark against other architectures, such as a StrongARM-powered device running Java, when it can get hold of them. The picoJava core will be available to implement in silicon from the first quarter of next year. Sun said it may develop other picoJava cores, such as a smaller one for control devices, or a beefed-up version supporting additional multimedia and graphics. The company said it would have products ready using its microJava chip implementation of picoJava by Christmas 1997, though it says competitors could get to market sooner. It's still unclear where a complete ASIC program to support picoJava will come from. Companies that have endorsed Sun's Java-on-tin core include Nortel, LG Semicon Co Ltd, Mitsubishi Electronics America Inc, NEC Corp, Rockwell International Corp, Samsung Electronics Co Ltd and Xerox Corp.

SUN TO TARGET SGI BASE NEXT YEAR

Sun Microsystems Inc will light out after Silicon Graphics Inc's key graphics, imaging and high-end, compute-intensive customer base next year with clustered system arrangements that string together large numbers of its low- and mid-range technical UltraSparc systems. Sun knows where it wants to get to but says it's still got several hardware options under consideration including use of Fujitsu Ltd's 200Mbps AP-Net (Advanced Parallel System Network) interconnect which the Japanese company uses to tie from four to 1,025 Ultra workstations and servers together as the AP3000 (UX No 581). Sun says it might otherwise use Thinking Machines Corp's GlobalWorks parallelising software or technology it's developing in-house, though that shouldn't be confused with the S3.MP serial link work or other stuff that Jeff Rulifson's team is working on (UX No 552). Sun will leverage the management, load balancing, scheduling and other tools - *see opposite* - being created for its new clustering arrangements (UX No 610) on to the SGI-beaters.

IBM DEBUTS SINGLE-CHIP POWER2 SC

IBM Corp has finally introduced its single-chip implementation of the Power instruction RISC architecture as the 135MHz and 120MHz Power2 Super Chip. The 135MHz part is rated at 6.17 SPECint95 and 17.6 SPECfp95, the 120MHz version performs 5.61 SPECint95 and 16.6 SPECfp95. 135MHz is deployed in a new Model 595 technical server which comes in above the 77MHz Power2-based Model 591. The MCA bus machine has eight slots, 2Gb to 75Gb disk, and 64Mb to 2Gb RAM. IBM's offering its threaded version of the Phigs graphics library with the systems - a threaded version of OpenGL is promised by mid-1997. It costs from \$47,500. It's also implemented the 135MHz unit as a Wide Node for its SP parallel systems costing from \$48,000 - a 120MHz Thin Node will cost from \$58,000. The Wide Node includes an embedded SCSI2 Fast/Wide interface, freeing up an MCA slot previously required for a SCSI adapter, four MCA slots, 64Mb to 2Gb RAM and up to 18Gb disk and supports 16-way and 8-way High Performance Switch (old switch) or SP (new) switches. The 120MHz P2SC Thin Node comes with up to 1Gb RAM, 9Gb disk and supports both switches. Existing 66MHz and 77MHz P2 Wide Nodes can upgrade to the 135MHz Wide Node and the Thin Node-2 to the 120MHz Thin Node. The SP nodes and the 595 run AIX 4.2. The new PCI servers - *see page two* - will get AIX 4.2, now six months old, by the middle of next year.

MARIMBA OFFERS BONGO INTERFACE DESIGNER FOR JAVA...

In addition to its Castanet Transmitter and Tuner set for deploying and accessing Java applications over the net (UX No 610 and see below), Marimba Inc is also offering a visual interface builder called Bongo. Marimba says Bongo can be used to create reusable interface building blocks and is claimed to allow developers to integrate components from multiple vendors into a single application. Bongo can also be used to create application and content channels for the Castanet environment and includes a set of graphical widgets. Marimba says Bongo could be used to build channels such as multimedia games that morph over time with new features; personalised stock management tools that continually monitor market trends; or a children's bedtime book that updates nightly. The Transmitter is server software which sends applications or content over the net at the request of a Castanet Tuner. Bongo is written in Java and can be extended by adding in-house or third party Java applets but in future will accept components written to Java Beans APIs. Because Bongo supports HTML and other scripting, developers do not have to learn the whole Java language to be able to use Bongo, the company claims. The interface designer runs on Windows 95, NT and Solaris and uses Sun's Java Development Kit 1.0.2. Betas are up on Marimba's web site - production versions will ship at the same time as Castanet, by year-end, at \$500.

...CASTANET FOR DEPLOYING AND ACCESSING APPLETS

Marimba's Tuner can store details of multiple channels and is similar to a browser's bookmark facility. The difference between Castanet and the browser metaphor is that applets can be distributed and opened in their native form from wherever a user chooses. They don't require a browser to be opened and a URL contacted before an applet is downloaded and run. Java software is distributed across the net from Transmitter server software using Marimba's Application Distribution Protocol. The company thinks its technology is ideal for bringing the Internet to consumers, providing home banking, home delivery or newspaper channels to small footprint devices such as network computers. The Tuner and Java virtual machine will run in about 1Mb, channels will require additional memory, the more multi media stuff they contain the more memory they'll use. The company recognizes application channels, such as a Microsoft Word applet component channel is conceivable, but Marimba CTO Arthur van Hoff doesn't find that kind of stuff very interesting. In any case he expects Castanet to be pressed into all kinds of nerdy use initially. Web sites like HotWired are using the stuff.

Channels

Channels can be launched from icons, a menu or from a Web page that contains links to channels. Likewise Web pages can be launched from channels. Marimba says most existing Java applets can easily be loaded into Castanet channels. The Transmitter is written in C++ and Tuner in Java, although a Java version of the server is coming. The Tuner runs channels in the background so that applets are constantly updated. If the client logs off and back on it will pick up the latest version when it reconnects. Castanet 1.0 will be out by the year-end by which time Castanet will be able to plug into and use the same port as the native http server. Version 1.1, due in the first half of next year will include encryption support for the deployment of non-Java code such as DLLs, ActiveX, Shockwave and the like. A proxy server is on its way which will provide cache-style features so that applets don't have to be resent to each channel separately but can be retrieved from a cache. Marimba says AT&T, Apple, Disney, Netscape and JavaSoft are already testing Castanet applications and its looking for OEMs. Betas are at www.marimba.com; the full version ships year-end. The Tuner client is free for non-commercial use and Transmitter-Basic server is \$1,000 supporting 100 users per hour per channel. Additional 100-user licenses are the same price and the Transmitter-Pro unlimited user license goes for \$15,000. There is a Repeater kit for channel replication for \$500 and a Proxy Server for \$1,000.

IBM REVS PCI SERVERS

Unconvincingly billing the announcement as the division's most important workgroup server announcement since the RS/6000 was launched, IBM Corp last week unveiled the anticipated new models in its AIX line, plus technical models using the new single-chip Power2 Super Chip (P2SC), see front page. Essentially it's upgraded its PCI bus line of workstations and servers with higher clock versions of PowerPC 604e. There are now five versions of the 43P workstation; the new Model 140 sports either a 166MHz or 200MHz part and up to 768Mb RAM whilst an SMP Model 240 comes with one or two 166MHz parts. They cost from \$7,000 and \$10,000 respectively - the two-way starts at around \$20,000. A server implementation of the 166MHz 604e is produced as the two-way Model F40, which sits above the existing F30. It costs from \$16,000 with up to 1Gb RAM, 82Gb disk, PCI or ISA adapters, 22 bays and nine expansion slots. Rack-mount versions are available as the Model H10 - IBM's first PCI rack-mounts with up to 1Gb RAM, 54Gb disk and nine ISA/PCI slots. There's also a 166MHz 603e version of the ex-PowerPersonal unit's Notebook as the Model 860 with a 12" TFT screen, 32Mb to 96Mb RAM, and up to 2Gb disk which costs from a wallet-bending \$13,000. Previous 820 and 850 models used 100MHz parts. 604e upgrades for existing servers start at \$2,000 - \$1,500 on the workstations. New PCI graphics adapters include the GXT800P for mid- to high-end 3D graphics at \$8,500 - or \$10,500 with a texture option - and the GXT500P/55P for mid-range 3D processing. The new PCI bus systems run AIX 4.1.5. The PCI bus boxes, the 43P 100, 120, 133, 140 and 240 plus E20, E30, F30 and F40 servers also run NT. All models are available next month.

Solutions not technology

The new systems are being swept to market on new general manager Mark Bregman's policy of promoting RS/6000s as customer and industry-specific solutions rather than technology products. The strategy may be a sound one in IBM's mind, but so far it's been badly communicated and in any case has yet to be implemented. The problem is that by removing the emphasis on the technology - and let's not forget the line still uses two incompatible chip sets, two bus architectures and that Unix is still predominantly a technology-driven affair - IBM effectively eliminates one of the key arguments for maintaining distinct RS/6000 and AS/400 product lines. AS/400's argument has always been that "the AS/400 is a solution - RS/6000 a technology choice" (UX No 486). De-emphasising the technology in product introductions - a policy implemented across IBM divisions - also makes it more difficult to understand just what the heck the company is actually trying to sell. Now we get an inch thick stack of paper full of waffle rather than facts. The fact that IBM is attempting to broaden the scope of its solution base with additional technology and operating system configurations gets lost in the generally confusing message about what RS/6000 is these days. Meantime, the much-needed RS/6000 re-naming and brand-building exercise - including details of ex-AIX boss Donna Van Fleet's business solutions group - still haven't made it to public view even though the whole strategy was handed down internally over 90 days ago. Bregman says he still couldn't make head or tail of model names and numbers in a first go round at renaming his people came up with and rejected them.

O2 BINDING CAN READ AND WRITE JAVA APPLETS TO RDBMS

French object database company O2 Technology Inc, which is headquartered in Palo Alto, California, is now offering its promised Java Relational Binding allowing developers to read and write Java applications into and out from relational databases (UX No 591). It includes a development environment and runtime version. From the description of a set of Java classes that development tool creates and equivalent relational schema and methods to read and write objects in the database. The methods perform the mapping between Java objects and their relational representations. The runtime runs atop a Java Database Connectivity (JDBC) layer and manages an object cache which O2 says improves performance. Object are automatically mapped into the database format. Prices start at \$2,000 per seat.

SILICON GRAPHICS SETS S2MP AS THE ANSWER TO BUS BANDWIDTH LIMITS

As expected Silicon Graphics is replacing its Indy workstation and Challenge SMP server lines with O2 and Origin products, upgrading Onyx graphics subsystems, while leaving the Indigo2 Impact workstation range intact (UX No 610). The new servers, Cray Origin 2000, Origin 2000 and Origin 200 employ different configurations of the company's new S2MP Scalable Shared memory Multiprocessor technologies to scale from two to a possible 1,024 R10000 Mips RISC processors, although anything over a 128-way will be a special order item. The servers use various combinations of Hub, Crossbow and CrayLink crossbar interconnect and routing technologies, including the fabled Spider ASIC, the basic premise of S2MP being that available bandwidth increases as CPUs are added while message latency stays the same. CrayLink includes a distributed directory system for maintaining memory coherence, which SGI describes as a ccNUMA configuration. The Spider interconnect supposedly provides a bandwidth of 800Mbps per device and a processor-to-memory latency of 330 nanoseconds or 550ns across nodes. The Origin systems run a new modular implementation of the company's Unix called Cellular Irix which distributes replicated operating system kernel functions in cells, each of which manage a subset of processes. It provides fault isolation and containment within individual cells and is based upon Stanford University's modular Hive implementation of Irix 5.2. SGI says SMP applications created for Challenge servers will run unchanged; in addition developers will be able to write new software that takes advantage of NUMA configurations.

CrayLink

The Origin 200 tower comes with up to four 180MHz R10000s each with 1Mb cache, up to 4Gb RAM, 109Gb disk, and can transfer data at 1.15Gbytes per second. There are six PCI slots and eight optional XIO slots - SGI's 2.6Gbytes per second, 400MHz I/O specification - though XIO-to-PCI bridge chips are being employed. Two Origin 200s can be joined with the CrayLink interconnect. Where Origin 200 has the interconnect, basic I/O and memory slots built on to the motherboard into which CPU cards plug, the Origin 2000 carries the interconnect ASICs, memory slots and processor on a node card. Deskside cabinets support up to four dual-processor cards with 195MHz or 180MHz CPUs and 4Mb and 1Mb cache respectively. The system is said to deliver up to 3.1GFLOPS performance, 2.5Gbytes per second bandwidth and support up to 16Gb RAM, 12 XIO slots and an optional PCI-64 bus with three internal slots. It supports up to 45Gb internal disk, up to 3.5Tb over SCSI and 18.5Tb over Fibre Channel links. Up to eight Origin 2000 'building blocks' can be linked via CrayLink to create a 25GFLOPS system with up to 128Gb RAM. While Origin 2000 nodes include routing and CPU processors on the same device, the Cray Origin 2000 uses a MetaRouter box, with no built-on CPUs, to configure additional building blocks which result in systems that can scale from 65 to 128 195MHz processors, delivering 50GFLOPS and supporting up to 256Gb RAM. Origin200 starts at \$12,000, Origin2000 deskside at \$30,000 and Cray Origin2000 rack at \$85,000. SGI claims a 195MHz R10000-based Origin2000 performs 9.43/8.57 SPECint95 base/peak and 19.1/17.5 SPECfp95.

RealityMonster graphics

The uniprocessor O2 workstation line incorporates a unified memory architecture design where the R5000 or R10000 processor is integrated on the same motherboard with 3D graphics, image processing, video and compression. It runs a new 6.3 cut of the Irix Unix and comes bundled with Navigator and Insignia SoftWindows in nine configurations starting as an 180MHz R5000 machine with 32Mb RAM, 1Gb disk and 17" screen. R5000 and R10000 models start at \$6,000 and \$14,000 respectively. O2 Modeler configurations include a full Web and graphics development environment. A new 24-way R10000 Onyx2 RealityMonster graphics engine is said to perform eight times faster than the existing high-end Onyx system. Onyx2 comes with up to four R10000s in desksides and 24 in racks. All O2, Origin and Onyx2 systems are supposed to ship this quarter - though some interconnect arrangements may fall over to next year - whilst Onyx2 RealityMonster will ship by mid-1997.

IMPERIAL SOFTWARE TECHNOLOGY DEBUTS JAVA INTERFACE DESIGNER

UK software company Imperial Software Technology Ltd has added a promised Java code generator to its X-Designer graphical interface builder which now allows developers to use the same interface tools to generate code for Motif, Windows and Java applications from Unix. X-Designer: Java Edition - actually Sun Microsystems Inc's name, IST had wanted to call the thing XD Java - allows developers to port existing Motif code to Java and convert Java interfaces built with X-Designer back to Motif. X-Designer's XD/Capture component can capture Motif-based interface designs from running applications, designs which can then be re-engineered as Java interfaces, as well as remaining in Motif. IST sees X-Designer: Java Edition as ideal for companies that wish to create Web-enabled versions of existing applications, especially when used in conjunction with JavaSoft's as-yet unproductised Ice Tea middleware that will connect Java clients, applets and objects to back-end legacy applications over TCP/IP networks. The idea is that users will click on HTML links on a web page, Ice Tea will go off and get Java classes that will open TCP/IP connections back to the server application. Of the Motif GUI builder competition, IST reckons only Integrated Computer Solutions Inc and Rogue Wave Software Inc can offer a credible competitive Java option for developers like X-Designer Java Edition, but even they can't migrate Motif interfaces to Java and Windows. There's a Java add-on for Visual Edge Software Inc's market-leading UIM/X interface developer, whilst Thomson Software Products' (Alsys) Teleuse is supposedly reaching the end of its life. IST says SunSoft Inc will pick up the X-Designer: Java Edition in a future release of its Visual Workshop toolset which already includes the IST technology. SunSoft's currently integrating X-Designer 4.5 into its forthcoming BART release of Visual Workshop. BART as in the Bay Area Rapid Transit - SunSoft's using train systems as its pre-production naming scheme. X-Designer: Java Edition (it's the 4.6 release) costs \$3,500 - existing support contract holders are due free upgrades. It's being sold on Solaris, SunOS, HP-UX and Irix now - AIX and DEC Unix versions will follow.

Java Designer

Really Java Edition is only the prelude to a full-blown Java application development environment which IST now says it will deliver in the first quarter of next year and target at Unix developers writing Java applications that'll be downloaded to thin clients and network computers. IST will be competing with the likes of Borland, Symantec, Oracle and Powersoft, except that those Java application builders are Windows based and IST's will be up on Unix and Windows. IST wants to call it Java Designer and says it'll carry on calling it that until if or when SunSoft asks it to change it to something else. IST, like the other Java development shops, is waiting on JavaSoft to deliver the Java Beans components. It says it'll ship a compatible technology with an initial Java designer release if it has to until Java Beans arrives. Meantime, IST has put its planned Windows version of X-Designer - WinDesigner - back on the shelf until it figures out how the Java work is going play.

SUN'S NETWORK COMPUTER, DUE NEXT MONTH, 'IS NO TOASTER'

Sun Microsystems Inc will introduce its first Java-based Network Computers on October 29 in New York reckons *Computerworld* - but its story is a little light on technical details. The rumoured roll-out name is Java WorkStation, they are believed to be codenamed Mr Coffee right now. But Sun's Computer Company president Ed Zander declined to comment on the date or name of the device at Unix Expo in New York. However, HDS Network Systems Inc said it had seen Sun's device at a customer site where Sun's machine was being evaluated alongside HDS' offering, the @workStation Supra-66 network computer. HDS told us Sun's offering does not look like the toaster prototype Sun's been showing for some months, and Sun has been saying as much. It's thin and flat and was working with the monitor sitting on top, much like a workstation, but thinner. Naturally, HDS's went much faster than Sun's machine, according to HDS. Presumably, though, the machines are JavaA1 models on its road map, which use the Micro Sparc IIep as the processor - which Sun says sets you back \$100 - plus copious ROM and RAM, which is expected to cost about \$615. We have to wait for next year for the first models - Sun's JavaA2 - using its microJava chip. *Computerworld* does have some users: it hears FTD Inc, the international florist shop, plans to use Sun's Network Computers in each of its 20,000 shops worldwide.

DEC'S CAR BOOT SALE: NOW CA BUYS ITS ASSETWORKS

Digital Equipment Corp appears to have got so near the bottom of the barrel in its quest for things that it can sell that one begins to fear for Robert Palmer's grandmother, if she's still with us. The cupboard is still not quite bare, and late Wednesday, Computer Associates International Inc announced it had acquired the Maynard's AssetWorks asset and desktop management program, on undisclosed terms. The Islandia, New York company plans to integrate AssetWorks with its flagship CA-Unicenter systems management suite. The new acquisition "is a valuable enhancement to CA-Unicenter because it addresses both the technological and business aspects of managing assets," Computer Associates said. DEC personnel will jump companies to continue to help customers use AssetWorks, and DEC will later resell it as a fully-integrated CA-Unicenter option, and stand-alone.

MOTOROLA CRASHES INTO THE BUFFERS

At the beginning of the year, we began to hear friends and colleagues bad-mouthing Motorola Inc's flagship cellular phones unmercifully, and were a little surprised since customer dissatisfaction usually very quickly shows up in a company's figures. Yes indeed! It turns out that those good figures simply represented the set while Motorola, little legs flailing furiously, remained up there suspended by sky hooks, before it looked down, realised it had run right off the end of the cliff, and duly plunged into the water. For the first time since its present setback struck home, Motorola, previously a super-fast-growing company in the Hewlett-Packard Co mould - and even that mould threatens to be broken this year - has really plunged into the sand, and turnover as well as profits are down. The company says net margin on sales was 3.2% in the third quarter, compared with 7.2% a year ago. In the first nine months, net margin was 4.5% compared with 6.8% in the year-earlier period. Company president Christopher Galvin said the decline in earnings was due to the recession in the semiconductor industry, competitive pressures and continuing price declines in cellular telephone, paging and modem businesses and the impact of weaker sales and order patterns on related components such as rechargeable batteries.

Sales

Third-quarter sales in Motorola's general systems sector were off 2% to \$2,600m, but sales in the semiconductor products sector plummeted 19% to \$1,800m compared with the year-ago quarter. Third quarter sales in the messaging, information and media sector were up 8% to \$1,000m but orders declined by 2%, the company said. Sales in the land mobile products sector rose 2% to \$929m. Selling, general and administrative expenses decreased to 16% of sales in the third quarter from 17% a year ago, but manufacturing and other costs of sales increased to 69% from 64% a year ago, because of more competitive pricing for semiconductors. In face of its woes, the company is slashing outlays and expects capital expenditures in 1996 to be \$3,100m in 1996, down from \$4,200m a year ago. And there are nasties on the way - it says start of the satellite deployment phase of the Iridium programme will result in much higher expenses being reported by Iridium LLC, as planned, but 25% of those have to be charged against Motorola's financial results. The company will reduce jobs and manufacturing capacity to cut costs in the businesses that are weak. Motorola Inc reported third quarter net profits off 58.5% at \$206m on sales that fell 5.8% at \$6,500m; nine month net fell 32.1% to \$916m on sales up 3.0% at \$20,300m. Net per share slumped 58% to \$0.34 in the quarter, 32% to \$1.51 in the nine months.

LERNOUT & HAUSPIE LOOKS AT WAYS TO MAKE WEB MULTI-LINGUAL

Lernout & Hauspie Speech Products NV, Ypres, Belgium says it is considering setting up a company to develop speech recognition and translation products to make it easier for a wider public to access the Internet. Chairman Gaston Bastiaens told De Financieel Economische Tijd that the new products could help those that did not speak English to use and explore the Internet, where 90% of material is in English. The firm, which currently employs some 500 people, majors on technology that enables computers to recognise speech automatically, transform text on the screen into speech, or digitise speech. It is available in Dutch, German, French, Italian, and Korean, with Russian and Chinese on the way. Founder Jo Lernout told the paper that gossip that Microsoft Corp might buy the company was wide of the mark because he and co-founder Pol Hauspie, would never give up their majority stake in the company. The talk is because Microsoft adopted Lernout & Hauspie's text-to-speech as its standard for software development.

DOLPHIN ACQUIRES PARALLEL TOOLS FROM BBN CORP

Dolphin Interconnect Solutions A/S has acquired the ToolWorks set of parallel processing and multiprocessing programming tools from struggling BBN Corp, for an undisclosed sum. Oslo-based Dolphin, which has its US headquarters in Westlake Village, California, says it will use the tools to expand the range of multiprocessor hardware and related software it offers to the OEM market. ToolWorks provides programmers with a common, platform-independent environment for developing workstation-targeted, high-performance or real-time applications, and includes the widely used TotalView debugger for parallel, multiprocessing and distributed computer systems software. Dolphin says it fits well with the technology it acquired from defunct supercomputer company Kendall Square Research at the end of last year. Dolphin uses commodity parts where it can for its hardware and software building blocks, allowing its OEMs and system integrators to use standard operating systems such as Unix and Windows NT for their systems. BBN, based in Cambridge, Massachusetts, was a key player in the parallel supercomputer market during the 1980s, when it was known as Bolt Beranek and Newman, but restructured to concentrate on the Internet market at the beginning of this year. Nevertheless, the company recently posted a \$56m loss for the year to June 30th.

MACROMEDIA LICENSES JAVA CLASSES, APP INTERFACES TO NETSCAPE

Is this a sneak preview of the Java Media application programming interface set? Macromedia Inc has announced a set of Java classes and associated application programming interfaces for multimedia development and licensed them to Netscape Communications Corp. The browser maker will be incorporating the 'Fireworks' application programming interface into its ONE development system. Fireworks will join the Netscape Java foundation classes in Netscape ONE, but Jim Funk, Macromedia vice-president of corporate development said "there may be some sub-licensing required." The Java Media application programming interfaces, which encompass two- and three-dimensional, audio, video, animation, telephony and collaboration are being defined by JavaSoft Inc, Macromedia, Adobe Systems Inc and Silicon Graphics Inc. Fireworks is described by the duo as being useful for "manipulating text, images, animation, and audio and video." It includes graphics functions such as ink effects, blends and transitions. A future version of Shockwave will be built upon Fireworks, finally merging the Shockwave and Java worlds. Fireworks is expected to be available in the Galileo version of Netscape Navigator, set for release by year-end.

LETTER

>From Donald Lewine Data General Corp. D112 4400 Computer Drive Westborough, MA 01580

Your story on the changes in export control regulations (UX N0 610), got some major facts wrong: (1) The government has no access to keys up to 56 bits. There is no requirement that there be any form on "data recovery" for keys less than 56 bits. This increases the strength of exportable encryption systems by a factor of 65,536. It increases the amount of time a hacker takes to crack a message from hours to decades. (2) The Freedom of Information Act applies only to official US Documents. There is nothing in FOIA that would require or even allow the Government to disclose anything it finds during a court-ordered search. (3) The Government will allow export of any strength cryptography if there is a plan in place for the Government to recover the data under a legal court order. Large organisations, like Boeing or GM could keep their own keys. More than the factual errors, the tone is wrong. It is like saying, don't build stronger locks because the police can always get a court order and break in. It is true that under the Fourth Amendment the police can search any home or office in America. However, it does not make a good argument for not buying a good lock. Do you feel your home is "inherently insecure" because the police can search it? Would you prefer to leave it unlocked? I have been working with the administration for over a year on export controls. Vice President Gore made a bold move over the objections of the FBI and the Department of Justice. It is a move that will help people lock their homes in cyberspace. A responsible press should encourage people to use the best locks available to them and not leave the impression that locks are useless. It is much more important to lock out the bad guy than the police.

- We were not trying to suggest that anyone should not use a lock, simply that organisations based outside the US might still feel safer using a German or a Russian or a Japanese lock to protect their sensitive data, rather than a lock that Uncle Sam could pick.

CA ACQUIRES NETWORK BACKUP CO CHEYENNE

Computer Associates International Inc has triumphed when McAfee Associates failed in April, and has acquired backup software house ~~Cheyenne Software Inc through a cash tender offer~~ for \$30.50 per share, \$1.2bn all told. In contrast to the McAfee bid, the two firms say, there is no overlap between CA and Cheyenne: Cheyenne has been pushing its storage management products into the Windows NT and Novell NetWare environments, and sells 95% of its product indirectly through OEMs and distributors, while CA is still largely a direct sales organisation that has concentrated on the wider enterprise market. The move marks a recognition by CA that desktops and Windows NT are now an important part of its "enterprise" brief. It will take on all of Cheyenne's 800 staff, based in Roslyn Heights, not so far from its own Islandia, New York-based headquarters, and will run it as a separate division under present CEO ReiJane Huai. CA already uses Cheyenne technology within its Unicenter systems management software, but now promises further integration between Unicenter and Cheyenne's hierarchical storage management and RAID technologies, and a combination of CA's policy-based security products with Cheyenne's anti-virus software. CA also hopes Cheyenne's partnerships with firms such as Compaq, Hewlett-Packard and Intel can be expanded through the new deal, and will push Cheyenne's software to its own close partners Tandem and Data General. Because of the synergy, CA's chief executive Charles Wang said he expected no dilution to occur: Cheyenne is currently growing at around 30% per annum. The tender offer, not yet published, is due out by Friday. During its enforced quiet period, CA has been building up its revenues and it is able to fund the acquisition through cash balances and existing credit facilities. The firm must have had a change of heart since earlier this year, when it was saying that rumors it was about to buy Cheyenne were "ridiculous."

DEC MAN REPLACES COMPAQ SERVER VP WHO DEFECTED TO DELL

It's getting bloody in the PC Server market since Dell Computer Corp launched its first Pentium Pro servers last month at an entry price of under \$4,000 - about half the price of equivalent models from IBM Corp, Compaq Computer Corp and Hewlett-Packard Co. Compaq responded immediately by cutting prices on its ProSignia, and ProLiant lines, but held prices on its own Pentium Pro models. Now Dell has enticed Compaq's vice president of Enterprise marketing, Michael D Lambert, to join it as senior vice president of the Server Group. He reports direct to CEO and chairman Michael Dell and to vice chairman Morton Topfer, and will focus server-related activities for the Dell PowerEdge line into a single group. Dell now has a dedicated server manufacturing facility and has boosted up its server support operations. Dell sells servers direct, as it has done with its desktop systems, and saw server revenues grow 115% in the second quarter of the year compared with the same period last year. Compaq immediately replaced Lambert with Robert Fernander, previously DEC's VP of worldwide channel sales. Before that he spent ten years at Sun Microsystems, spearheading its push into commercial markets. Compaq says it's now shipped over one million servers.

SUN'S WEBSERVER PACKAGING ISSUES STILL UNCLEAR

Sun Microsystems Inc will offer several different packaged software offerings it says will turn any UltraSparc server into a Java server. Meantime insiders claim it hasn't yet decided how its own Web server software, once known as Vishnu, now being called WebServer, will be packaged and sold. *PC Week* says WebServer is going to include web management tools, support Secure Sockets Layer 3.0 and digital certificates and replace the SunSoft's current offering, the Solaris Internet Server. SMCC people we spoke to said that as far as they are concerned there is no plan to replace the Netscape server software on their high-flying Netras. WebServer 2.0 is supposed to add the Jeeves Java-powered Internet servers alongside the HTTP engine allowing users to deploy Java applets from server applications - serverlets - without using CGI.

FOUR SEASONS SUPERNOVA IS NOW READY TO SHOOT ACROSS THE WEB SKY

Four Seasons Software Inc has finally released version 5.0 of its SuperNova Enterprise 4GL and its now web-enabled, says the Edison, New Jersey company. ~~The release had been touted for the end of last year. The~~ company is actually calling this release version 5.0//WEB as it enables its three-tier client-server model to be extended across the web without any code changes, the company claims. A set of objects and functions added to this release enable the developer to build HTML pages containing live data on the fly, and there is no need to run a SuperNova client to do so, just a web browser. HTML forms can be used in an application in the same way message dialogues are handled now. These forms generate the pages on the fly, which are then sent to the client. SuperNova is Four Season's 4GL which compiles down to pcode, executable across virtually any platform, including Unix, VMS, Windows NT, Windows 95 and soon, AS/400 running a SuperNova virtual engine. It includes ODBC and native database drivers to access most databases. Also new this time is the ability to pack data or logic, or both into an electronic mail message and send that over the network, which could be the web, and the command can be executed by a server at the other end. The company is promising component technology for the first quarter of next year that can be written in Java or an ActiveX-supporting language, or SuperNova. An application schema will decide the order of execution, I/O and whether inputs are satisfied and such. Also promised in the same time frame is a SuperNova state server, so that the component applications can be run from different applications and stopped, and started and re-started from any client without data integrity problems, an obvious requirement for the web. This has both security and workflow applications, said Jossi Gill, company founder and president. The company first introduced a SuperNova 4GL back in 1988. Once the SuperNova code is written, compiled down to pcode and encrypted it can be copied to any other system and it runs, the company claims. Up and running at five beta sites around the world, including 3M/Imation Corp and Wakefield & Associates Inc in the US, SuperNova 5.0//WEB is shipping now for Unix, VMS and Windows.x for between \$3,000 and \$15,000.

IN EUROPE, THE UK LEADS WAY IN INTERNET ACCESS, GERMANY IN IMPLEMENTING INTRANETS, IDC FINDS

In a survey of Internet use in the UK, France and Germany, International Data Corp found that Germany has taken an early lead in replacing X.25 networks with TCP/IP equivalents while more English companies provide Internet access. At IDC's annual European IT Forum, held in Paris, IDC Link vice-president Mark Winther presented data showing that 85% of the 40 UK companies surveyed have Internet access, compared with 60% of 30 German companies and a meagre 37% of the 30 French companies surveyed. Overall, Winther said, 22% of the 100 companies surveyed are using intranets, while another 30% have a strategy for implementing them. He said the main advantages companies sought to gain by putting up an intranet were improved communications (82%) and easy information delivery (79%). To that end, 37% of German companies are using TCP/IP networks, 10% more are implementing them, 20% planning to implement and 26% evaluating. Those figures compared with 20% of French companies using TCP/IP, 3% implementing, 30% planning to implement and 17% evaluating. The UK, in contrast, showed only 13% of companies using TCP/IP nets, 8% implementing them, 15% planning to implement and 38% evaluating. Winther noted that security is a minor concern among users implementing TCP/IP networks.

RDI USES FUJITSU'S TURBOSPARC UPGRADE TO MICROSPARC

RDI Computer Corp's going to incorporate Fujitsu Microelectronics Inc's 170MHz microSparc II-compatible TurboSparc in a new model of its PowerLite notebook. It comes with up to 256Mb RAM, 512Kb L2 cache, 12.1" screen, and 3.6Gb disk. Prices go from \$16,500. Rated at 3.08 SPECint95 and 2.74 SPECfp95, TurboSparc almost doubles the performance of the existing microSparc II+, which Fujitsu itself fabricates. It seems likely Fujitsu is getting TurboSparc on to the market ahead of Sun's own UltraSparc 2i, formerly the microSparc III, manufacture of which Sun has handed to Fujitsu rival, Mips foundry and Hewlett-Packard Co buddy NEC Corp - see front page. Fujitsu says TurboSparc is an ideal replacement for the 110MHz microSparc II+ that SparcStation 5 users are struggling with, especially in CAD/CAM and software engineering markets. The module costs \$1,500.

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Dean Witter remains cautious about **HP**, noting that the transition from 32-bit PA 7200s to 64-bit PA 8000s is "very sluggish" in the workstation line because software upgrades are slow. It also says that HP inventories are high, especially printers, and need to be reduced.

IBM Corp is to integrate its acquisitions **Data Sciences Ltd** and **CGI (GB) Ltd** into its services business making what it calls the largest information technology business in the UK. The combined business will cover facilities management, systems integration and project management, consultancy, network management and equipment maintenance. Data Sciences UK Ltd will continue to trade as a defence and aerospace business. Data Sciences in the Netherlands will continue as a separate company and in Germany the operation will become part of IBM's European Finance Group, IBM said.

Software AG, which has been working at **Microsoft's** instigation on porting DCOM to non-Microsoft platforms has put a preview of its Solaris 2.x work on the web. It is determined to have beta versions of Solaris, AIX, Linux and Digital Unix ready by Christmas.

HDS Network Systems Inc is bringing the version 2.0 of its NetOS network computer operating system at the end of the month. Mike Kantowitz, VP marketing said the King of Prussia, Pennsylvania company had licensed NetOS to "some well-known companies" but can't say who just yet (UX No 610).

IBM Corp is evaluating **Santa Cruz Operations Inc's** NC/OS network computer operating system for its NetStations, according to Jeff Ait, SCO'S VP internet (UX No 603). At the moment they're being built by Networking Computing Devices, but SCO doesn't reckon it'll be long before they're IBM built. **DEC** is also apparently looking at NC/OS for its ARM chip work.

Sun Microsystems Inc believes the UltraSparc makeover of its **Cray SuperServer** line will provide a single-system, Unix data center alternative for the even largest of users seeking to migrate from mainframes (UX No 610). The one-to-64 way servers use a new bus interconnect and will be supported in environments of mixed UltraEnterprise servers.

We're sorry, **Unisys Corp** is of course using **Advanced Logic Research Inc's** low-priced Pentium Pro boards in its ClearPath SMP 6400 (UX No 610). Meantime, Unisys' ClearPath HMP models which mix and match the Intel Corp-based NT SMP nodes with A Series or 2200 mainframe processors in one box will be fitted with UnixWare by year-end. Performance of the TCP/IP link connecting the mainframe/Intel nodes will be updated to use a lighter version of the stack initially before memory buses are joined by an unspecified shared memory device next year. Unisys said it gave up trying to implement NetWare networking in its MCP mainframe operating system - it has implemented NT Server Message Blocks and is adding MAPI - because it found what Novell gave it was always a release behind the current technologies.

Sun Microsystems Inc sources say the company's currently benchmarking configurations which they say will whip DEC's 30,000-plus TPC-Cs.

Hyundai Electronics Industries Co Ltd feels confident enough about its UltraSparc-compatible **Axil Computer Inc** unit to reinstate US executive control, promoting VP marketing William Shel-loe to president and CEO replacing IB Johnson who returns to Korea to become senior VP and general manager of Hyundai's memory business group. Shel-loe, former MasPar Computer Corp VP and one-time Pyramid Technology Corp president, joined Axil in January 1994 (UX No 470).

Gartner Group analyst David Smith quipped that while **Netscape** is going around rescuing old standards like LDAP and IIOP from life support, "Microsoft has rescued an entire standards body."

Sun Microsystems Computer Co boss Ed Zander told Unix Expo delegates that Sun certainly wouldn't be doing WinTel products as it's obviously bad for business. He noted that **Compaq**, **DEC**, **HP** and **IBM** have all recently blamed either poor numbers, restructuring or repositioning on the influence of the WinTel market while all have at the same time claimed their Unix businesses are booming.

Data General Corp says it'll lick a finger and test the wind for high-end clustering of its forthcoming ccNUMA AViiONs towards the end of next year. It's currently looking at how it could use **Tandem Computers Inc's** ServerNet to tie the servers together in high-end arrangements, though it's considering other alternatives too, including the **Dolphin Interconnect Solutions A/S** technology that **Sun Microsystems Inc** has picked up for clustering UltraSparcs. DG is implementing Dolphin shared memory technology in its ccNUMA systems.

Naturally the demo of the alpha of Internet Explorer for Unix during Bill Gates' Unix Expo keynote crashed - the application closed itself down.

Sun Microsystems Inc's developing a bunch of Java APIs for use in net-based real-time process control applications in conjunction with manufacturing system and software vendors, including **ABB Systems Control**, **Baan**, **Echelon**, **Elsag Bailey**, **Fastech Integration**, **The Foxboro Co**, **HP**, **Honeywell**, **Intuitive Technology**, **SAP**, **Toshiba** and **Valmet Automation**. The APIs are due in the second quarter of next year.

Meantime, **Baan Co** has spent the last two years re-working its 4GL tools environment to support full object-oriented functionality and n-tier client/server and is doing a whole bunch of the work in Java, including distributed, networked application components. **Sun's** licenced a bunch of Baan technologies to extend Java Enterprise APIs.

Sun reckons the average cost of a telephone line-based transaction is \$2 compared with \$0.20 per web transaction.

Data General reckons the swing towards **Tandem's** ServerNet for high-end clustering could be reversed or at least matched if **Oracle Corp** exerts enough muscle to hawk **Dolphin/Oracle** clustering around. It figures Oracle can't be best pleased that Tandem's scooping up all of these ServerNet wins, and then selling its ServerWare SQL version of the NonStop SQL database into what must all be potential Oracle Parallel Server sites.

The new workgroup products group, which **Sun Microsystems Inc** has created at its Chelmsford, Massachusetts operation (UX No 610), will be responsible for creating LAN server and other high-performance, low-cost solutions that compete against the PC crowd touting multiprocessing Unix servers such as Compaq and Acer.

After selling off its **Level 8** MQSeries middleware technology to **Candle Corp**, and shedding its **Bizware Computer Systems Inc** unit, New York city company **Across Data Systems Inc** has decided to capitalise on the name of its better-known subsidiary, changing its name to **Level 8 Systems Inc** (UX No 601). The company - in which **Candle** holds a 4% stake - will focus on the development of external gateways which will provide message transfer between **Microsoft Corp's** forthcoming Falcon messaging system and other messaging middleware. It will also develop and sell other MQ Series add-on products.

Sun claims the annual cost of ownership of one of its sub-\$1,000 client JavaWorkstation devices will be around \$2,500 - in sites with large numbers of installations - compared with IDC estimates that PCs now cost \$40,000 a year to maintain.

The **Object Management Group's** not gonna take this **Microsoft-Open Group** alliance lying down. It's preparing a white paper to delineate the limits of the ActiveX technology Microsoft's putting in the Open Group and to explain what exactly can and can't be done with it. They said they're going to call it myths something.

UTG chief Larry Lytle has been offered a post at **Santa Cruz Operation Inc** as VP in charge of industry relations starting January, to work with the other Unix players apart from **Hewlett-Packard Co**. He's leaning towards acceptance, apparently.

Sun Microelectronics Inc appointed its former PR agency rep Marge Brea as its new director of corporate marketing a couple of months back following VP marketing Art Swift's departure. Sun Microelectronics' reorganised around volume and high-performance products.

Neither CrayLink or Cray Origin - see page three - contain any technology licenced from **SGI's** Cray Research Inc subsidiary, however the Cray Origin 2000, CrayLink and Cray's T3E supercomputer will be the leaping off point for a single integrated line of future SGI/Cray systems. Irix and Cray Unicos Unices are already being melded.

General Automation Inc, which was out of manufacturing, (UX No 610) seems to be back in again for at least a spell, following its acquisition of **Sequoia Systems Inc's** fault-tolerant systems business. It says the OEM agreement with **Hewlett-Packard Co** is still in place, and that it plans to continue building the systems for the present and plans to see how it all goes.

Ladies, Larry Ellison's looking for a date. The billionaire with the gorgeous house, the gorgeous clothes and the bulging biceps was on Oprah Winfrey last week bemoaning the fact he didn't have a significant other.

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NETSCAPE TARGETS NOTES, ABANDONS STANDALONE BROWSER

Netscape Communications Corp believes integrated email and groupware will be the killer application of 1997, and last week announced new Communicator client and SuiteSpot 3.0 server products which it will pitch against market leaders Lotus Notes and Microsoft BackOffice beginning in the first quarter. Its goal is to win 50% of an intranet market which is estimated to reach \$10bn by the end of the decade. Although Netscape would also like to upgrade its huge installed base of Navigator users to the software, its plan to abandon the standalone browser market - effectively leaving it to Microsoft - is likely to lose it a good deal of its fans too. The intent is to crazy-glye the new 4.0 Galileo release of Navigator on to Messenger email, Composer HTML authoring, Collabra file sharing and groupware, and Conference collaboration components, creating a \$50 Communicator suite. It'll also include Symantec Corp's just-in-time Java compiler. A \$70 version of the client software that adds Calendar and AutoAdmin functions, will also be available. The new components mean Communicator will require more memory than Navigator, but the company did not want to say how much more. It said the strategy had been in place for at least the last 16 months. Netscape figures there's no money or a market left to be made for standalone browsers and is seeking to fry other fish, if it can. New SuiteSpot 3.0 server applications include Collabra 3.0 group collaboration based on the CollabraShare technology Netscape bought last year; Media 1.0 audio streaming and Calendar 1.0 scheduling. There are upgrades of existing Messaging, Enterprise Web server and Proxy server in addition to the recently announced Certificate Server 1.0, Catalog 1.0 and LiveWare 1.0 development suite. Any five of the nine servers plus LiveWire cost \$4,000 - they are \$1,000 individually. Netscape is also offering enterprise licences for large organisations at \$70 per user for SuiteSpot and \$100 for SuiteSpot plus Communicator. Communicator is supported on 17 platforms, including Windows, NT, Mac and Unix - SuiteSpot on Unix and NT. Netscape says under its enterprise pricing structure a \$1,000 user SuiteSpot licence will cost \$57,900 for 1,000 users and \$451,320 for 10,000 users against \$73,590 and \$735,900 for a similarly configured desktop Notes installation (\$279,590 and \$2,795,000 for a full Lotus implementation) or \$182,018 and \$1,820,180 for BackOffice. Netscape claims 45m users of its products, and says a quarter of them are already using its email facilities. It says Communicator and SuiteSpot components will drop in alongside whatever BackOffice and Notes technologies a company may already be using.

Dinosaur

Netscape says some of the Communicator components have been built in Java - though it didn't say which ones - and that its plan is to deliver a 100% Java version of the product as soon as it is able. It says the new products offer full support for Microsoft OLE and COM objects and some support for ActiveX but only where it's required for compatibility with existing BackOffice technologies. It says additional ActiveX support will follow, though asked whether that will mean the end of the plug-in model for adding functionality to the browser, SVP technology Marc Andreesson said that both ActiveX and plug-ins models would go the way of the dinosaur anyway. Presumably that's in the face of the so-called object-signing extension of the Java 'sandbox' that Netscape's making a feature of the new products, which allow downloadable Java applets to carry out operations such as reading and writing arbitrary files to disk. Included in the new products will be tools that let applet developers sign their applets and automatically catalogue the resources an applet requires to run. Applets will carry digital signatures across the net and users will be able to choose whether to accept them by setting up policies on an applet-to-applet basis. The danger a user may face a daunting barrage of dialogue boxes asking whether each applet should have access to the machine's hard drive. Netscape acknowledges the problem and is supposedly working on a user interface to avoid it. The Communicator browser includes a bundled run-time version of the Visigenic VisiBroker for Java ORB which means that when a user clicks on a link to an OMG Corba object or applet they don't have to wait for a run-time ORB to be downloaded from the applet's host server before the object or applet can be displayed. There's an additional development tool called Caffeine developed by Visigenic and Netscape that allows VisiBroker for Java developers to write Corba objects in Java rather than IDL.

SUN FINISHES GRINDING JAVA BEANS EARLY

With the help of its partners, including Apple, Borland, IBM, Oracle and Netscape, Sun's overworked JavaSoft division has published the specification for its Java Beans component architecture a couple of months ahead of schedule. Java Beans define applications programming interfaces for creating software components with the Java language that will run on any platform supporting Java and are focused primarily at the application development market. Java Beans includes the definition of an OCX bridge that will allow Microsoft Corp ActiveX, COM and OLE application components to work alongside Java applets or for Java Beans components to control ActiveX. JavaSoft will build this bridge. Other partners will build bridges linking Java Beans with OpenDoc and Netscape will build a bridge to LiveConnect. Java Beans architect Graham Hamilton envisages Java Beans being used to build drag-and-drop graphical user interface components; invisible components that run on servers; and Java pairs, components that have visual and back-end elements. By keeping those pieces of Java Beans needed for design environments separate from the bits required at run-time, JavaSoft hopes to encourage the creation of a Java after market for components similar to that for Microsoft OCX controls. JavaSoft expects to ship a production implementation of Java Beans in Q1 with early cuts in November and January. Java Beans will support JavaSoft's own remote method invocation scheme; the JDBC Java database protocols; and Java IDL, which will allow Java Beans clients to connect to servers using OMG

IBM DESCRIBES JAVA PLANS

IBM Corp's used JavaSoft's Java Beans announcement as the jumping off point for rounding up its somewhat confusing component object product strategy. Big Blue, one of JavaSoft's partners on development of the Java Beans specification, will be creating a Java bridge to the ActiveX-compatible OpenDoc component software architecture in conjunction with the only other major OpenDoc supporter, Apple Computer Inc. Whether there's a business model to sustain OpenDoc development very much farther into the future when it seems Java can do what most of OpenDoc can do and more seems dubious, though not to IBM which now describes OpenDoc as its high-level object development system. It claims 5,400 members of the Club OpenDoc supporters group and 13 shipping OpenDoc components with another 40 due by year-end. The focus of IBM's effort is the Java version of its VisualAge graphical programming system, customer shipments of which have slipped into the first quarter of next year, though betas will be available in December. VisualAge for Java will go up on Windows 95, NT and OS/2 initially. AIX and other IBM operating system versions will follow, but there's no timescales. The environment will include a just-in-time compiler and a ProjectView partition tool that will update and keep client and server elements synchronised. Additional Java technologies the company has include its Arabica suite that includes Java Beans, IBM's own Java Beans-based components, plus the Java-to-OpenDoc bridge (UX No 592). IBM says Arabica will eat and produce Java Beans components though it hasn't determined how it'll be packaged. The same packaging issue is also true of Tazza, its dynamic Java component assembly environment which is described as a tool which will allow webmasters to create web pages using reusable Java Beans.(UX No 596). IBM's grand design is to get mainframe data onto middle-tier servers that can prepare information for delivery on to Windows and OS/2 desktops via OpenDoc or out to networked environments using Java.

SUN LURES CANEPA

After just two weeks in his new position, Sun's lured Mark Canepa away from the top job at Compaq's recently-created workstation division to run its own brand spanking new Chelmsford, Massachusetts-based workgroup server unit (UX No 610). It's building low-end servers that Sun will pitch against the low-cost Unix-based Intel Pentium Pro-based servers being aggressively marketed by the PC crowd, including Compaq. Canepa becomes an SMCC VP reporting to general manager of servers and storage John Shoemaker. Compaq appointed Canepa GM of its workstation division on October 1. Canepa spent 20 years at HP before becoming general manager of the company's fledgling workstation operation. Sun's got over 1,000 employees in its Massachusetts facilities - Canepa will work out of Chelmsford. His division has 175 employees on both coasts. Compaq's workstations are due on October 29, the same day as Sun's Java clients and servers.

THE INTERNET REPRESENTS HIGH NOON FOR CLIENT-SERVER TOOLS VENDORS: MASSACRE IS FORECAST

By Lem Bingley

The last time anyone felt like counting, there were 148 different tools claiming to support client-server development. Bloor Research, the software industry watcher that did the arithmetic, reckons that's about 125 too many. Quite why there should be room for so many players in the market is a matter for debate, but the arrival of the Internet may well precipitate the shake-out that analysts like Bloor have long predicted, and that tools purchasers would dearly like to see. In recent months, every one of the tools vendors has articulated some sort of Internet- or intranet-based strategy. Some have felt compelled to take immediate action - cobbling together Web extensions to add to their existing development environments. Other vendors have dug deeper and are re-architecting their offerings with the Internet in mind. Others still - principally those without a large user base to worry about - are building completely new Internet-centric tools from scratch. The Internet has divided the client-server industry into two camps. While all agree that the Internet is hugely significant, enthusiasm for the new environment tends to vary in inverse proportion to the pre-Internet fortunes of the vendor. So tools companies that have struggled to show healthy growth and make money in recent years - and that means most - are hoping that the Internet will prove enough of a mould breaker to overturn the existing order. Naturally, these suppliers tend to paint the Internet as a revolutionary change which renders past preferences obsolete. By contrast, today's market leaders - Powersoft Corp, Forte Software Inc, Oracle Corp, Microsoft Corp and others - are more reserved. They describe the Internet impact in less apocalyptic terms, maintaining that the change can be accommodated without a loss of serenity - or profitability. Centura Software Corp is one company that fits firmly into the first camp. In its previous incarnation as Gupta Corp, its SQL-Windows lost out to Powersoft Corp's fierce marketing of PowerBuilder. It is now basing its strategy on two planks - the move to the use of component software that has been inspired by the widespread adoption of object-oriented software techniques, and, needless to say, the Internet.

Client-focused

The company describes the shift to Internet computing in epochal terms: "The Internet is a major paradigm shift in the way organisations implement business solutions and provide access to information," states Centura in a new white paper Bridging the Internet and Client/Server. It adds that the shift is "on the magnitude of the introduction of the personal computer." Centura's Internet-as-lifeboat stance manifests itself further when it comes to Java. "Our eventual aim is to replace the existing Centura run-time with a wholly Java solution," enthuses Dhunji Bilimoria, Centura's product manager for Europe, Middle East and Africa. This is despite the fact that Java is still a relatively untried technology for large-scale applications, and that such a move would result in many of what Bilimoria admits are "non-trivial" problems. Forte, a company in the other category - and one that Centura is chasing - has its own Internet strategy, of course, but it is much more understated. The company has already released a Web Software Development Kit, which is scheduled to gain Java capability before the end of the year, but otherwise, Forte is distinctly reserved in its assessment of all things Internet. It describes the arrival of the Web as a logical progression from client-server architectures, rather than a sweeping change, and has made little alteration to its underlying sales pitch. "Forte is sold on the basis of application partitioning," says Rich Scheffer, vice-president of marketing at the company. "That means breaking the application into pieces, with a middle tier between the client and the database to enforce the business policies so that the client doesn't have to deal with these issues. The Internet has simply taken this idea one stage further. It has made the client even less important." Scheffer acknowledges that much of the excitement surrounding the Internet is a direct result of developments on the client side, but argues that the challenge for business developers is not the Web browser itself, but "how to plug browsers into existing business applications". And that, he argues, is a server challenge. As these remarks highlight, the vendors with a server-side, or at least a distributed application focus, have had an easier time modifying their strategies to embrace the Internet. Browsers are thin clients (although they are getting fatter, particularly with the addition of Java) and client-focused vendors have had to be much more creative in imagining how their tools might fit into a server-centric Internet-dominated world.

JAVA READY FOR PRIME TIME, SAYS SUN

Sun Microsystems Inc execs are on a tub-thumping tour to ram home the message that Java computing will leave conventional WinTel desktop all washed up and that it's now ready for prime time use in enterprise client/server environments. While Sun honcho Scott McNealy's been evangelising down under, SMCC boss Ed Zander's VP-Internet strategy Bud Tribble has been spreading the gospel in the US. He believes Sun Microsystems Inc's vision of Java computing will become real because of two trends: the need to bring desktop computing costs under control and the externalisation of Java-based corporate intranets. The process which Tribble has previously referred to as disintermediation will see internal networks, applications and content gradually opened up to customers and suppliers (UX No 580). Importantly, Sun now appears to have a better sense of how it will make money out of its new weapon. Key is Java's ability to provide a strong pull for sales of Sun's hardware lines, and not just the company's popular Netra internet servers. Whilst Java licensing is now providing a revenue stream for Sun - a dozen or more companies have signed to integrate Java into their system software offerings - Tribble says Java's ubiquity is more important than the licence revenues it provides. Sun's also selling Java Workshop tools for creating and implementing Java, and architecture designs for the Java chips it hopes will power all kinds of network appliances and devices. Of course Sun believes webtops will be the dominant metaphor of Java desktop computing, and further out will be selling its own commercial devices using Java chips. Beyond that there's the potential to participate in the consumer market, Tribble notes. There's speculation amongst some set-top builders that Sun may have written itself out of the market for integrated television/video/internet devices because the lack of a maximum file size limit in Java means manufacturers of these Java-based devices will always need to attach some kind of additional storage to their low-cost configurations to accommodate Java files too big to store in the skinny memory devices. Tribble says the argument's simply not a Java question and that the set-top folk are going to write themselves out of the internet market if they are going ask content providers to restrict files to a certain size.

Components

Tribble agrees that the company's JavaSoft subsidiary is so swamped with work - and suffers a constant loss of staff to Java start-ups hoping to get rich - that it's creating bottlenecks in the development of the company's Java computing vision. But he argues the log jams are now well understood are being addressed as fast as it can get staff on to them. He says there are three distinct industry areas where the company's particularly trying to apply resources. First to and most important is the creation of infrastructure and technologies to enable Java-based client/server computing. For example Sun's working with enterprise ISVs to create Java-based manufacturing software programs, components and APIs that companies will be able to deploy inside and outside of their organisations to run not only their own businesses but to allow suppliers and customers to participate as well. These and other client/server mechanisms are what Tribble believes to be "the critical pieces for use with Java clients in the client/server market." Second there are companies which need support for the creation of productivity applications. ISVs creating spreadsheets or word processors in Java such as Corel Corp need more full featured versions of Java's AWT, advanced windowing toolkit, plus the Java Beans APIs and classes. Of course trying to deploy Java applications in the commercial market also means that JavaSoft must implement common 2D, 3D, video and other multimedia interfaces as soon as it can.

MIPS RISCS TO POWER WORLD'S BIGGEST SUPERCOMPUTER

Seemingly proving itself the most versatile RISC architecture in the business, the Mips Technologies Inc R-series is going to end up powering both of the three leading games machines, and the world's most powerful supercomputer. The Sony Corp Playstation uses a 32-bit Mips core in its single-chip processor, the Nintendo Co Ltd N64 uses a 64-bit R4400-derived part - and now the US Department of Energy has given the Cray Research Inc arm of Silicon Graphics Inc a \$110.5m contract for the world's most powerful supercomputer, with 3,072 processors, to help the government - or rather its Los Alamos National Laboratory in New Mexico to determine whether ageing US nuclear weapons systems are still safe and reliable, now that actual testing is verboten. A second system, about one-third the size, with 256 processors and also built by Cray, is planned for Los Alamos and is expected to cost about \$40m. This is for global ocean and atmosphere models and natural hazards and other non-weapons uses, although the two machines will also be usable in tandem and is due in at the year-end. The monster 3TFLOPS machine is due in by December 1998. The two systems are to combine the Mips microprocessors with clustered shared-memory programming techniques from Silicon Graphics.

INFORMIX FACES STEEP CLIMB TO REACH \$1bn IN 1996

Informix Corp is going to have to go some if it's going to meet CEO Phil White's expectation of becoming a \$1bn company this fiscal year. Last week the company reported third quarter net income up 9.5% at \$26.18m, ~~or \$0.17 cents a share, on revenue which rose 30% to \$238.18m.~~ The results, which came in below most analysts' forecasts of \$0.19 a share or so, were helped by a lower tax rate which added a penny per share. Wall Street shaved \$2.25 off the stock in trading the next morning, leaving the stock at \$24.25. Profit for the nine months to the end of September was up 3.2% at \$63.7m on revenue up 35.1% at \$668.48m. The company has restated results for the year's earlier periods to reflect the acquisitions of Stanford Technology Group and Illustra Information Technologies Inc. Operating income declined for the quarter from \$36.29m to \$35.88m compared to last year. "At 30% overall revenue growth, but with 50% database growth versus the third quarter of 1995, we remain the fastest growing database company," said White. Maybe, but database growth was 61% last time around and tools revenue slowed again, down 18% over the same period last year. Analysts say the shift towards data warehousing and OLAP is generating database revenue that doesn't drag along Informix's tools. The company also blamed currency movements for shaving 2% off its growth rate. North American revenue for the quarter was ahead 32% at \$109.21m; Europe showed a 48% gain at \$93.69m; while business elsewhere actually decline by 5%. For the first nine months of the year North America is up 37% at \$283.58m; Europe is up 42% to \$267.64m; and revenue from other regions is up 19% at \$117.25m. The company has \$254m in cash. Licence revenue for the quarter was up 30% at \$179.61m compared with \$137.44m last time - licence sales for the nine months were up 35% at \$501.22m compared to \$371.39m last time. Informix has shipped beta versions of the Universal Server on which it's hanging its hat out to 20 customers. It has 4,237 staff, up from 4,028 last quarter and \$250m cash, down \$3m from last quarter.

SYBASE SWAMPED BY RESTRUCTURING CHARGES

Leaving aside the \$49.2 m hit it took for restructuring Sybase Inc managed to wring an operating profit of \$0.6m out of its third quarter. Including the restructuring charge and taxes the company reported a net loss of \$52.6m up from the \$0.1m profit it made last time on revenue of \$250.2m up 7.3% on \$233.1m. For the nine months the company's losses rose to \$84.11m from \$25.46m last time, on revenue that rose 7.8% to \$743.76m from \$689.33m last time, which included a \$24m merger-related charge. The third quarter restructuring charges included \$17m for the 700 jobs it eliminated, \$15.7m for closing facilities, \$13.9m for discontinuing its interactive TV, New Media Division, Intermedia video server, Media Splash program and EMS wireless products and \$2.6m for other items.

SCO DEFINES ITS 64-BIT UNIX AS GEMINI 64

Santa Cruz Operation Inc has officially identified Gemini 64 as its first 64-bit operating system that'll incorporate 3DA technology from the next generation Unix architecture it's defining with Hewlett-Packard Co. Gemini is the forthcoming mid-1997 merger of its 32-bit UnixWare and SCO OpenServer Unixes - Gemini 64 is its vehicle for Intel Corp's 64-bit Merced. Gemini will include automated configuration, remote-control management, integrated internet services, clustering, failover, auto back-up/restore, mirroring and hot-swap, and will be offered also as an embedded operating system, with support for ccNUMA configurations and 1Tb files and 2Tb filesystems. SCO and HP will publish the common API spec for their next generation Unix for Intel Merced by year-end. It's currently out for review under NDA and includes some 4,283 APIs now. The 3DA work will feed into HP's mid-1997, 64-bit HP-UX 11.0 release, its 11.x 1998 iteration and the 1.0 full-blown next generation Unix thereafter. SCO won't have a full 64-bit offering until 1998.

BLENHEIM MERGES WITH MILLER FREEMAN

In the event troubled UK show organiser Blenheim plc merged with United News & Media plc's Miller Freeman publishing arm rather than accept a reported \$772m bid from Reed Elsevier NV (UX No 610). A combined Blenheim and Miller Freeman will be responsible for some 250 events and 260 magazines and business directories. Only a few days earlier another Dutch publisher VNU NV paid £5 a share to acquire a 15% stake in Blenheim. The group will be reorganised into Europe, USA and Asia regions. Blenheim managing director Staffan Svenby will head up Europe and will be responsible for integrating Blenheim and Miller Freeman worldwide. Don Pazour will run the US from Miller Freeman's San Francisco office and Asia will be run by Gerry Marshall from Hong Kong. Rumours that Reed has turned its attention to Reuters and Bloomberg wire services were unconfirmed.

SUN'S PARTY SPOILED AS IT REPORTS BEST-EVER Q1

Sun Microsystems Inc's fiscal first quarter gross margin was the "highest level in many years," chief financial officer Michael Lehman told analysts after the figures were published late last Tuesday - but this was one where ~~for once the analysts got it about right. The 62 cents a share the company~~ recorded was only slightly better than the consensus, and so profit-takers crawled out of the woodwork in droves, sending the shares down in after-hours trading, an effect exacerbated when the market opened Wednesday morning, when the share price fell more than 10%, or over \$7.00, in early morning trading to reach \$62.75. Worry about the impact of the new breed high-performance Intel-based workstations running NT on Sun's future business sent the stock down further the following day to the \$61.00 mark. Compaq Computer Corp is set to announce its first workstations aimed directly at the market in which Sun holds a 45% share on October 29th, the same day Sun is set to unveil its first Java client desktops and servers - see below. Sun reported first quarter earnings of \$123.4m, up 45% from the same period last year, on revenue up 25% at \$1.85bn on last year's \$1.48bn. Sun said its first quarter pre-tax operating margin of 9.5% was a record level for the company's typically seasonally-weak September quarter.

More JavaSoft staff

"It was our strongest first quarter ever," said CEO Scott McNealy. The nearly one percentage point of gross margin advance to 47.7% in the first quarter was down to memory chips. Sun also completed an "opportunistic buyback" of shares during the quarter, spending \$236m to buy in nearly 4.4m shares in the quarter, which implies an average price of under \$54, still a bargain even after the shares started tumbling last week. Lehman said some of the Asian markets are growing at 2x the company's overall rate though the impact of the dollar has masked some of those improvements. Lehman also said the company had increased its expected levels of employment for JavaSoft - "With the increased focus on Java, we also will be attempting to ramp up the head count to as many as 500 employees in JavaSoft by the end of fiscal 1997" in June, he said. "That's up from the 300 to 350 or so that we've been targeting for our last couple of quarters." Although Java may be gaining in momentum throughout the industry McNealy said he didn't know how the company could quantify the contribution of the technology to its bottom line "because Java is a part of everything we do." McNealy said users are clearly moving to the network model and that with the introduction of its Java computing clients at the end of the month Sun would be upgrading its enterprise computing message to enterprise Java computing. He noted that the introduction will not just be about network computers or other point products but about delivering Java as a system. Analyst Merrill Lynch figures the stock is good for \$75. Sun's 52-week high is \$70.25.

SGI REPORTS A BLEAK FIRST QUARTER

Still trying to swallow its Cray Research Inc acquisition and now also having to replace faulty R10000 chips in some of its computers, Silicon Graphics Inc turned in a first quarter net loss of \$21.6m compared with a profit of \$58.3m last time. The company warned a few weeks back that first quarter revenue would only be slightly ahead of the pro forma combined revenue of SGI and Cray in the same period last year (CI No 3,007), and so it turned out to be with revenue at \$765.5m, just a shade ahead of the \$758m pro forma number. An operating profit of \$18m was swamped by \$10m charges for the refit program, \$21m for merger-related charges for the Cray acquisition, \$18m for accounting for the writing up of inventory and services, and \$3m for other merger related expenses. The company claims a backlog of some \$473m in orders while SGI chairman and CEO Ed McCracken attributed much of the shortfall to customers delaying orders in anticipation of its new product lines announced a couple of weeks ago (UX No 610). The US accounted for 56% of revenue, Europe 23% and other regions 21%. 58% of sales were servers, 42% desktops. The New York Stock Exchange banned after-hours trading in SGI stock on the news which came after the markets closed. SGI's shares stood at \$21.50, down \$0.50 on the day. The 52-week range is \$20-\$38.75.

PRISM MAKES HEAVY WEATHER

Although data warehouse Prism Solutions Inc's business is expanding rapidly, it's still finding it hard going in what's supposedly an industry gold mine. Last week it reported a third quarter net loss of \$1.59m on revenue of \$6m compared to a profit of \$55,000 on revenue of \$4.78m in the same period last year. Losses for the nine months were \$1.93m on revenue which nearly doubled at \$21.12m compared with a loss of \$2.81m on the \$11.43m it did in the same period in its fiscal 1995. Licence revenue declined 5% to \$3.5m in the period compared to last year, though service revenue was up to \$2.5m from \$1.1m in the same period. The fast-growing company's still sitting on \$30m cash and equivalents following its IPO which got away at \$17 per share back in March (UX No 582).

SUN ACCUSES DATARAM OF PATENT VIOLATIONS

Sun Microsystems Inc is alleging that some of Princeton, New Jersey-based Dataram Corp's memory boards violate five patents issued to Sun. Dataram says it will file counterclaims seeking appropriate redress from Sun for its current program of "marketing through product disparagement, its abusive misuse of its patent portfolio and its interference with Dataram's existing and potential customer relationships." It also asserts that three of the five patents alluded to by Sun do not even involve Dataram memory products. "Sun is well aware that these patents are useless in the production of quality memory boards," it says, adding that the "remaining two patents are invalid as they merely restate prior art in the field, including Dataram's own prior art;" it believes the boards do not infringe any valid patent.

THOMSON GOES TO MATRA-OWNER LAGARDERE

The French government had been expected to sell Thomson SA to Alcatel Alsthom SA, so it sold it - for a nominal one franc - to Lagardere Groupe, the publishing giant that also owns Matra SA. The sale rockets Daewoo Electronics Co of Seoul, South Korea onto the world consumer electronics stage with such blue chip brand names as RCA, Ferguson and Thomson itself, because Lagardere had already agreed to sell the loss-making Thomson Consumer Electronics - with its Sun Microsystems Inc video on demand alliance - on to Daewoo. Lagardere plans to merge its Matra Defense Espace unit with Thomson-CSF to create Thomson Matra and has offered to buy out CSF minorities - 42% remains traded on the Paris Bourse. Thomson Matra will be 60% owned by Lagardere but will also be a quoted company. Thomson-CSF will shed its 20% stake in SGS-Thomson Microelectronics NV under Lagardere.

NETSCAPE, PROGRESSIVE RALLY 40 ON MULTIMEDIA STREAMING

In the latest challenge to Microsoft Corp, Netscape Communications Corp, Progressive Networks Inc and 40 other companies have signed up for a proposed open standard governing delivery of real-time multimedia information over the Internet. With Apple Computer Inc, Autodesk Inc's Kinetix unit, Cisco Systems Inc, Digital Equipment Corp, Hewlett-Packard Co, IBM Corp, Silicon Graphics Inc, Sun Microsystems Inc and Macromedia Inc in the Netscape gang, Microsoft is about the only company among the industry's great and the good to hold out against joining. The proposed Real Time Streaming Protocol is a standard for governing the flow of multimedia content that can be displayed as soon as it arrives rather than the user having to download the entire complex file before watching and listening to the material. The RTSP evolved from work done at Progressive Networks, based in Seattle, and at Netscape. It incorporates aspects of the International Telecommunications Unions H323 videoconferencing standard - which is supported by Microsoft - and runs on top of standard internet protocols such as TCP/IP and UDP, while taking advantage of Internet and intranet infrastructure improvements such as the IP Multicast, RTP and RTCP real-time control protocols. It can be implemented across multi-platforms. The first draft was submitted to the Internet Engineering Task Force on October 9th. The standard will be especially useful for vendors of low-cost, low-memory Internet devices and Network Computers. Progressive says that it is still possible that Microsoft will adopt the technology for the new protocol. Last week, Progressive Networks announced its own RealMedia architecture, a framework of client and server application programming interfaces for developers of streaming multimedia applications, with support from 13 toolmakers.

ESKER ROLLS OUT TUN PLUS 8.5

PC connectivity house Esker has introduced the latest incarnation of its Windows to host product Tun Plus 8.5 with added support for three new modules, which include internet and intranet, SQL and emulation functions. Tun Net can be used for a wide range of functions including remote printing, printer sharing, NFS and FTP. It can also be used, using the firm's own NIS Browser (Network Information Service), as a mechanism to store all available network resources in NIS tables on a server. The Browser comes into action when users want to access these resources (such as configuration files, printers and mounted files). The browser of choice for Esker is Netscape Navigator. Meanwhile, Tun SQL comes with several key features. They include: database revamper, a virtual ODBC driver that enables the database administrator to create an adhoc database for any one that needs one; and SQL middleware, a layer to enable RDBMS access from ODBC-compliant front ends such as Excel, Access and Word. Finally, there is Tun EMUL, which targets the host emulation world, providing connections for Unix, DEC, HP and IBM hosts.

MSU AIMS TO RULE TELEVISION SET-TOP WITH INTERNET CHIP

Specialist chip designer, MSU Corp showed off a pre-production version of its Slipstream Internet Box to analysts in New York last week and outlined its future strategy, supported by major partner Zilog Inc. Zilog signed a development and marketing agreement with MSU for its Internet Service Processor chip at the end of last month, and says it plans to combine the MSU technology with its own chips and peripheral equipment in the consumer television, infra-red remote and set-top controller markets. The intent is to produce consumer Internet access devices for under \$300 that replace the need for a computer altogether, or which can be built into existing television sets. The prototype was shown working with a Zilog-designed remote control unit for Internet surfers, though Zilog also has an infra-red remote keyboard for those who want to use electronic mail or other computer functions through their television sets.

Advantages

The MSU approach claims a number of advantages over technology used by rivals such as Palo-Alto-based WebTV Networks Inc, which was due to launch its service in San Francisco yesterday, and whose set-top boxes are being produced by Sony Electronics Inc and Philips Consumer Electronics Inc. One is the flicker-free graphics produced by MSU's three-dimensional graphics engine that works with PAL and NTSC television standards. Another is the full parallel printer port that enables personal computer peripherals such as printers and Iomega Corp Zip storage drives to be plugged into the box. MSU also reckons its custom ASIC chip, at base a signal processor using Very long Instruction Word techniques, is both faster and cheaper than competing offerings, and says its boxes require less than 1Mb memory for the operating system, and 2Mb for video storage, half the usual minima. With no operating system compatibility problems to worry about, Zilog reckons the lowest-cost box will win. Zilog says it is talking to another of its set-top box partners, Belmont, California-based Diba Inc, about using MSU's technology. Separately, MSU has a manufacturing deal in place with Mitec International Corp of Taipei for volume fabrication, along with a \$34m OEM deal from Fairfield, Ohio-based Vision Link Telecommunications Inc and another from American Interactive Media Inc of Medford, New Jersey. Others are in the pipeline, the company says. MSU, which floated on NASDAQ last year, is bullish about its revenue prospects.

ORACLE PLAYS CATCH-UP WITH E-COMMERCE SERVERS

Oracle Corp added to last week's crowded net agenda with a raft of electronic commerce announcements, in an attempt to catch up with Netscape Communications Corp, Microsoft Corp and other vendors that already have similar server offerings. The dramatically-named Project Apollo is Oracle's forthcoming merchant server for small businesses to get a presence on the Internet. The Oracle Payment Server, which comes either with Apollo or on its own, offers a variety of electronic payment methods, including CyberCash, VeriFone and First Data. All three have Web cartridges - objects that comply to Oracle's Network Computing Architecture. VeriFone's vPOS merchant software is also to be bundled with Oracle's Project Apollo and its vGate Internet gateway product will work with Oracle Universal Server. Oracle's Security Server 1.0 authentication software will be out by the year-end. Meanwhile, Oracle has also inked electronic commerce-related deals with Hewlett-Packard Co and Quark Inc. Quark and Oracle will integrate QuarkXPress and QuarkImmedia - the recently released multimedia delivery package - with Oracle WebServer and Universal Server. The first project, code-named Martini, is a database connectivity tool to link QuarkImmedia to Universal and WebServer. Martini is then expected to be joined with the Project Apollo merchant server so transactions can be performed from within the QuarkImmedia Viewer. Oracle and HP will integrate WebServer and the Web Request Broker API with HP's VirtualVault security package by early next year. The Oracle software will then be the platform for e-commerce applications to be built on top of VirtualVault. Finally, Oracle promised that its entire applications line will be Web-enabled and integrated with Project Apollo by the end of next year.

OMG MYTHOLOGIZES ACTIVEX

While they sort things out over at the Open Group, the Object Management Group, rival to the Active Group, appears to be rousing itself to do battle. It's got a draft of a white paper it calls "Debunking the ActiveX Myths" that it's getting ready to put out, ~~though it's going to wait for some of the sabre rattling to die~~ down. There are six. Myths, that is, and it's hoping to shore up, if not invigorate, its Corba base by pointing them out. The first myth is that ActiveX is a well-defined object technology. OMG figures the simple retelling of how OLE got to be ActiveX by way of COM and DCOM and their various recastings should disabuse anyone that we know what ActiveX actually is - which, if truth be told, we don't. Myth Two is that it has cross-platform support. OMG points out that the only ActiveX-DCOM implementations are on Windows 95 and NT and it claims that no matter what else happens Windows will always be the reference implementation. Corba of course isn't like that. Myth Three is that it has cross-language support.

A heavenly union

OMG says COM and DCOM are married to C++ and it fails to see how Microsoft will support Java or even good old-fashioned still-dominant Cobol like Corba does let alone Ada, Smalltalk and Eiffel which Corba also supports. Myth Four is that it's a mature technology. COM and DCOM specifications are still only available in draft form. Myth Five is that ActiveX controls are a viable alternative to Java. ActiveX, it says, is based on binary code which means every browser platform - and they will be legion - telephones, televisions, NCs are only a few - will need its own version of the ActiveX control. Which will mean that Microsoft's thousands of ActiveX controls will have to be recompiled, possibly into some sort of "fat binary" format that contains a separate code segment for each supported platform - a heavy criticism up against Java's simple elegance. Myth Six is that it will scale to support Internet applications. ActiveX-DCOM, OMG contends, was never designed to work across large-scale networks such as the Internet. That's why it uses reference counts and keepalive messages for resource control. OMG says "simply adding a DLL for DCE RPC to COM does not create an architecture for distributed applications, but rather a recipe for disaster. Distribution cannot be retrofitted onto an existing product in this way. Unfortunately Microsoft will be learning this lesson at their customers' expense over the coming months and years."

MICRO FOCUS LAUNCHES OBJECT COBOL DEVELOPER SUITE FOR UNIX

At Unix Expo Micro Focus Plc announced its latest Object Cobol developer environment for its Unix user base. Object Cobol Developer Suite v4.1 for Unix, an integrated client/server programming environment for both procedural and Object Cobol developers, gives Cobol access to Corba version 2-compliant Object Request Brokers and Cobol to CGI Common Gateway Interface access. Micro Focus has provided a ready-made connection to ICL's DIAS object request broker. CGI code can be executed using standard Cobol syntax, allowing Cobol business logic to be extended onto the corporate intranet or the Internet. The new suite allows access to indexed files greater than 2Gb, which previously required application changes to be made. There are four elements to the suite: the Object Cobol Compiler v4.1; the integrated development environment suite of Unix tools; the user interface design and development environment; and the Application Server, a set of common APIs and utilities for client/server application distribution. The Suite is priced at \$2,350 per user and runs initially on SCO OpenServer v5.0 and IBM's AIX v4.1, from mid-November, though an HP/UX version should follow. The company's Visual Object Cobol tool is already out for Windows 95 and NT platforms. Cobol 97, ANSI/ISO's fourth edition of the Cobol standard which includes object-oriented features is, of course, still evolving, but that hasn't stopped Micro Focus - along with competitors such as Hitachi America and IBM - from updating their tools to support objects and the Internet. Micro Focus says it is now developing technology that will allow Cobol to interoperate with Java.

BACKWEB OFFERS BACKGROUND DATA FEED

The trickle of companies with Marimba-like server-push/client-pull software looks like turning into a flood. Now San Jose, California-based BackWeb Technologies Inc, is offering software that supposedly delivers news or other type ~~of information in the background without interrupting a~~ client's work. Information providers install the BackWeb Channel software on their servers - Ziff-Davis, the Wall Street Journal, Mecklermedia's iWorld and General Motors and others have done it - and the client software is downloaded free from the Web. The user at the defines the information that he or she wants, and the server software sends down alerts in the form of animations, screensavers, wallpapers or software upgrades as so-called BackWeb InfoPaks. BackWeb alerts the user of the presence of new InfoPaks, which can then be viewed. If the browser isn't open, clicking on the InfoPak will do that. BackWeb reckons the clever bit is its so-called Polite Agent protocol. It's a UDP protocol that sits underneath the IP layer and uses the idle time between the users' Internet connections to download the InfoPaks, pausing as necessary when the user requests something from the Web. It then resumes from where it left off. BackWeb's initial investor was Jerusalem, Israel-based BRM Technologies Ltd, which also has a stake in firewall specialists Check Point Software Ltd. Softbank Holdings Inc - hence Softbank's Ziff-Davis involvement - and Broadview Associates LLC also have stakes. BackWeb Channel server is available now for Sun Solaris 2.4.x and later, on Sparc or Intel. A Windows NT version will be in beta by the year-end. The BackWeb client is only available for Windows 95 right now, but betas for Windows 3.1, NT and Macintosh are again planned by the year-end.

PERSONAL ORACLE LITE STILL NOT NETWORK COMPUTER-READY

Oracle Corp may try to give the impression that it is only Microsoft Corp that failed instantly to spot the extent of the revolution represented by the Internet, but its Personal Oracle Lite pocket object-relational database only now has the features it needs to play a leading role in a Network Computing-centric world - and the thing is up to release 2.3. The new release adds bi-directional replication to enhance the thin-client database's integration with corporate workgroup and enterprise databases. But it still fits the Network Computer model in requiring less than 1Mb of memory and less than 5Mb of disk space, making it feasible for use on a Network Computer with one of the new 120Mb floppy drives. Two-way replication means mobile workers get access to the most current corporate information to perform their jobs - but while it runs under Windows 3.1 and up, and under Mac OS, it's not actually ready for NC/OS or Personal Digital Assistants yet. Personal Oracle Lite is \$200 per user and is available at <http://www.oracle.com/>.

CA CLAIMS OPEN SYSTEMS MANAGEMENT WITH 7,000 UNICENTER CUSTOMERS

Computer Associates International Inc reported a second quarter net profit of \$223.4m against a loss last time of \$627.2m, which was after an \$808m charge on acquisition of Legent Corp, on turnover that rose 21.9% at \$990.1m. The mid-term net profit was \$343.2m against a loss last time of \$548.6m, on turnover up 28.2% at \$1,782m. Net per share was \$0.59 in the quarter, \$0.90 in the half. Mainframe revenues were up 10% in the quarter with the midrange up 56%. Product licenses rose 27%; maintenance was up 4% in the quarter. North American revenues increased 47% and international fell 5%. CA's stock price fell 4.4% on news of the lower overseas sales. The company believes it has 7,000 sites for CA-Unicenter now which would make it the leading open systems management vendor. From a platform perspective sales on Sun and Windows NT have been strong while HP has been weaker. CA recently revamped its relationship with HP so that platform could rebound in coming quarters, analysts say. Unicenter/TNG, the release with a real world interface, is supposedly out at 100 beta sites - product should ship in the first half of 1997.

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Not stopping at clustering, **Compaq Computer Corp's** set to use MeshSP parallel hardware and software from privately-held MIT Lincoln Labs spin-out **Integrated Computing Engines Inc**, Waltham, Massachusetts, to create supercomputer configurations out of its Intel/NT engines, and has taken an undisclosed stake in ICE to cement the deal. ICE's briefcase-size Desktop RealTime Engine uses a MeshSP interconnect to join up to 64 Analog Devices Inc Super Harvard Architecture Computer (Sharc) signal processors in a system supporting a variety of programming models which can be attached to EISA/PCI Digital Unix and NT hosts (UX No 565).

Announcing third quarter figures last week, **AT&T Corp** said **NCR Corp** returned to an operating profit of \$29m in the third quarter from a year-ago \$196m loss before \$1,600m of restructuring charges, so getting out of personal computers did the company good. Quarterly revenues fell 18% to \$1,660m. It also said volume growth in its consumer telephony business picked up in the third quarter over the second, and wireless services rose 17.7% to \$892m.

Memco Software Ltd, the Tel Aviv-based security software company that last year managed to wriggle free from **Platinum Technology Inc's** acquisitive grasp is coming to Nasdaq with an initial public offering of 3.4m shares, all new, at a target price of \$15 per share. After the struggle, Platinum made do with a small stake in Memco.

We don't know what the result was, but **IBM** recently tested out its latest incarnation of the Deep Blue chess program at a hush hush game in France as part of the build up to its 1997 rematch against Gary Kasparov. IBM's supposedly going to cash in on Deep Blue's reputation by creating lite Blue software for PCs.

A bunch of Valley companies, including **Sun**, **Apple**, **HP** and **Intel** were without Internet access for some hours recently because rats supposedly chewed through power cables leading to a switch at Stanford University, according to a report in the *San Francisco Examiner*. Apple had backup, which meant that outsiders could still get on to its Web sites, but Apple employees were unable to send e-mail or get access to the Web outside. Sun, however, did not have any back-up, and was cut off, with only the internal network operating. The switch had battery backup, but it ran out during the outage. Stanford chooses to generate its own power, but the switch failure prevented Stanford from making a back-up connection to the local utility company **Pacific Gas & Electric**.

Applix Inc's bought Warren, New Jersey-based real-time developer of OLAP software **Sinper Corp** for cash and stock valued at \$11m.

Sequent Computer Systems Inc's product transition to the NUMA-Q technologies is taking its toll and the company last week reported third quarter net income of \$1.4m down 81% on \$7.4m, on revenue that rose 12% to \$148.8m from \$133.2m last time. It's still predicting revenue shipments of the new systems in December.

Object Management Group says it's had 22 replies to its Business Objects RFP - first submissions are due November 15 (UX No 578).

Microsoft Corp planned Windows NT as its first multi-platform product, but it hasn't turned out too well beyond the Intel heartland and Redmond last week abandoned the Mips RISC. NEC, the largest customer for NT 4.0 on the Mips platform, said that from 1998 it will use Pentium Pro only in its Express 5800 NT server line.

In March, **Apple Computer Inc** will launch Deep Dish, a rack-mountable Internet server capable of accepting up to 50m hits per day. The stripped-down machine will be targeted at Internet service providers that trade in read-only static data, and will cost between \$5,000 and \$8,000, depending on specifications. The PowerPC-based Dish will run AIX, Solaris and Mac OS, but it's not clear if Windows NT would also make an appearance.

Another **Silicon Graphics Inc** executive has left the roost for more intimate surroundings: Kirk Loevner, the former SGI VP and general manager of applications has joined **The Internet Shopping Network**, a wholly-owned subsidiary of **Home Shopping Network Inc** as its president and CEO.

How do you as a user feel about the **Intel Inside** sticker on your new computer? Intel is very proud of the sticker, which for the vendor is good for significant co-operative marketing dollars, and it reckons it is so valuable when used in an advertisement that those dollars are going to be cut by a third if the logo appears in print ads that also include logos from the likes of **Microsoft 3Com** publishing companies and others.

Although **IBM Corp's** RS/6000 division appears to be trying to cover its lack of high-end SMP or shared memory clustering by targeting its SP shared nothing arrangements down into the SMP server space, the company claims that users don't want and in any case can't utilize systems with more than the eight processors that are housed in its high-end SMP servers. IBM claims linear performance falls down after eight-ways and that eight-way SMP processing is adequate even for data warehouse and enterprise data users.

The high-availability version of Tuxedo that **BEA Systems Inc's** creating for Solaris will ship in January priced from \$88,000 (UX No 510).

Oracle Corp will unveil the **Intel Corp** x86-based version of its network computer at Oracle Open World in San Francisco, on November 4. It is likely to cost about \$700 and be aimed at business users. It'll come with 8Mb RAM, keyboard, CGA monitor and a 33.6Kbps modem but no hard disk. The ARM RISC version will be around also, but it's "Larry's thing," according to the company, so there's no knowing quite what he's planning for the show.

OneWave Inc's now supporting Java and Kanji in version 2.2 of its Enterprise development system. The company - formerly known as **Business@Web** - says the new release allows organisations to integrate data from existing applications such as SAP, Baan and Peoplesoft with Java interfaces. OneWave Enterprise ties back-end applications to multiple front-end clients over the Internet by creating customisable components, the company says.

Object Design Inc's won a considerable filip from **Borland International Inc**, which is going to bundle a copy of the Burlington, Massachusetts-based company's ObjectStore PSE for Java datatore with its forthcoming Latte Java application development environment. Using the database will supposedly allow developers to make their Java objects persistent. ObjectStore PSE for Java is a 250Kb lightweight Java-based data store compatible with the programming interfaces to Object Design's full-fledged C++ ObjectStore DBMS.

IBM Corp now says it'll introduce a 64-bit version of its AIX Unix at the same time as its 64-bit RS/6000 hardware during the second half of next year.

Candle Corp's going to start selling Sunnyvale, California company **Unison Software Inc's** Unix and NT-based Maestro, Load Balancer and Road-Runner management products. Candle says users will be able to add scheduling, balancing, backup and restore functions to Candle management software and provide alert recognition between Candle Command Center and Unison products.

Invincible Technologies Corp plans to follow the introduction of its first application-specific failover file servers for Pure/Atria, Parametric PDM and Network File System environments (UX No 610) with a new Lifeline Symmetric Fault Tolerant (SFT) package fitted for web commerce. The company expects to do \$25m to \$30m this year.

Hewlett-Packard Co says the extensions that will provide binary compatibility for running PA-RISC applications on Intel's Merced processor will be revealed at a developer conference next year. It's not saying whether any of the extensions are to be found in the 3DA architecture for next generation Unix it's defined with **Santa Cruz Operation Inc**. All it will say is it's got "the right to build stuff around specific characteristics of some of the chips." It claims results from prototypes it's had back show there's not a massive performance hit.

We've been trying to interpret **IBM RS/6000** division general manager Mark Bregman's recent claim that RS/6000 sales "will, if nothing extraordinary happens between now and then, surpass the AS/400 [in value] next year." Although that includes processors, software and storage across both lines, it doesn't take into account AS/400's on-going leasing revenue. Analysts we spoke to say AS/400 revenue is around \$14bn to \$15bn, \$2bn to \$3bn of which is accounted for by sales of new processors. Meantime, NT does not yet account for 1% of RS/6000's business. With some distributors already assembling RS/6000s from components, Bregman's already said his aim for next year is to have 60% to 70% of the division's sales going indirect.

The **Addamax** antitrust against the **Open Software Foundation**, **DEC** and **HP**, which was to start - finally - on October 15 has been delayed again. The judges attempts to get them to settle have apparently failed, but they are going to try the case backwards now, establishing the extent of the damages Addamax can claim before they get to whether the defendants are responsible. The earliest it could start now is Tuesday October 29 to give the attorneys time to prepare but as we went to press we were hearing it could slip into November.

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SUN FIRES NETWORK COMPUTER SALVO AGAINST WINTEL

Sun Microsystems Inc duly announced the JavaStation Network Computer at its self-styled 'Independence Day' event in New York last week, together with Netra j servers and software necessary to run it. And for the time being only Sun servers can support the JavaStation, at least until a common boot protocol for NC devices is agreed upon by the companies behind the original NC Reference Profile: Sun, IBM, Oracle, Netscape, Apple and their followers. No-one of course would venture when that might be, and everyone we spoke to passed the buck, however Gene Banman, VP and general manager of Sun's desktop systems group which birthed the device needs it to write a spec that third parties will use to configure their server software to boot JavaStations. Not that Sun's hardware unit is in any hurry; it's specifically aiming to grow its server business on the back of the NC. Given, however, that it is out to overturn WinTel's desktop monopoly with reduced cost of ownership NC devices, it will need all the help it can get from other server vendors, including NT types. The JavaStation uses a 100MHz 32-bit microSparc II RISC and starts at \$742 with 8Mb RAM, keyboard and a mouse. There are two models; the desktop "coffee maker," a curious looking affair; "looks like an earthquake doesn't it?" said Sun CEO Scott McNealy. There's also a more conventional brick-shaped design which can be hidden away. \$1,000 buys a model with a 14" monitor and \$1,565 buys a JavaStation with 16Mb RAM and a 17" screen. Being an NC it has no slots, no hard disk, no CD-ROM and no floppy drive, but supports up to 64Mb of memory and 10-baseT Ethernet. Flash RAM will be added around the middle of next year for dial-up and remote users along with 100Mb/sec - 10/100-baseT Ethernet - PPP, plus other networking options. All of the software, including the JavaOS, HotJava browser and customisable HotJava Views user environment - which with email, HTML browser, calendaring and name directory looks almost identical to Netscape's Communicator client announced a couple of weeks back (UX No 612) - is stored on the server. Also included is Campbell, California-based GraphOn Corp's Rapid/X client software for accessing Solaris applications from JavaStation. It can run Windows applications via Insignia Solutions Inc's NTrigue X server and client for Java which is bundled. Currently there are two ways to deploy JavaStations. Either buy one of the existing boxes Sun has pre-configured with new Netra j internet and Java software, or upgrade existing Solaris 2.5.1-based systems with a new internet server supplement which includes a Java virtual machine, WebNFS and a DHCP server. Sun's created Netra j versions of the microSparc SparcStation 4, both uniprocessor and SMP UltraSparc desktops, the model 5000 deskside and 4000 rackmount SMP Ultra Enterprise servers. Netra j software is a superset of the Netra i internet server software - including Netscape Enterprise Server - plus SunSoft's JavaWorkshop development and management tools (a just-in-time compiler is coming), an IMAP4 email client and IBM 3270 terminal emulation and mainframe connectivity software from Open Connect Systems. Netra j servers start at \$7,700 for a SparcStation 4-based package supporting up to 50 devices, rising to around \$200,000 for an Ultra Enterprise 5000 offering, capable of supporting thousands of NCs according to Sun. Shipments to large customers begin in December with volumes due early next year. On the application front Netscape's Navio unit is re-writing Navigator in Java for JavaStation, and Corel's Office for Java and Applix's Anyware will ship in demo form, while Oracle's Java-based business applications suite will ship when it's ready next year. The name and other details of the suite will be announced by Oracle this week. Sun claims more than 450 ISV's writing applications and won support from systems integrators including Andersen Consulting, Cambridge Technology Partners and EDS. Customers include First Union National Bank, Kodak, British Telecommunications Plc and CSX. Sun demonstrated the JavaStation booting from a Netra j and updating the same application across a Sparcstation, Power Mac, Network Computing Devices Inc NC and a PC running Windows NT. While at present no third party server can boot a JavaStation, the Netras can supposedly start any NC. Sun's customary tilt against Microsoft included a version of Apple's famous 1984-inspired commercial for the Mac introduction in which Big Brother was replaced with a Bill Gates look-alike shouting "More is more! Excess is beautiful! Send me a check!" "How about we run it on MSNBC?" quipped McNealy.

NOW PESATORI GETS A CHANCE AT TANDEM

In a bold move Tandem Computers Inc has handed off most of the day-to-day operations of the company to new president and COO Enrico Pesatori, former number two at Digital Equipment Corp, who takes charge of the product business units and field organisation from Roel Pieper who retains the CEO position. Just ten months into the top job at Tandem and Pieper's supposedly completed the job of re-modeling the company in Redmond's image - not bad for a former boss of Unix System Labs - handing Pesatori the job of pursuing product strategy on the basis of his experience in volume markets and Windows NT. Given Pesatori's record and reputation at DEC and his former employers Zenith Data Systems and Ing C Olivetti & Co SpA, it looks like something of a gamble for Tandem, which recently declared a loss on declining revenue for its fiscal 1996. Declaring himself really a "software guy" Pieper will look after partner strategy, finance, international operations and software and gets a vice chairman's post too.

HAL ADDS SECOND-GENERATION SPARC64 RISC

Fujitsu Ltd's Hal Computer Systems Inc this week delivers its second-generation Sparc64-II 64-bit RISC in new HalStation 375 and 385 uniprocessor workstations aimed at MCAD, EDA and web server markets. The 161MHz Sparc64-II drives the Model 385 at 8.4 SPECint95 and 13.6 SPECfp95. Like workstation equivalents of DEC's Turbo Lasers, the Hal systems can accommodate large amounts of RAM, up to 3Gb. They run Sparc64/OS 2.4.6, Hal's implementation of SunSoft Inc's Solaris 2.4 with 64-bit extensions. \$16,000 buys a 141MHz Model 375 unit with 64Mb RAM, 2Gb disk, Fujitsu AG-10E graphics option and 20" screen. It performs 7.43 SPECint95 and 12.2 SPECfp95. The 161MHz version costs from \$19,500. Hal's touting them as cheaper than Sun's Ultra 170E and higher performing than the Ultra 200E. Servers are due in the first quarter of next year.

JAVASCRIPT SPEC SUBMITTED TO ECMA

Fears that multiple implementations of Netscape's JavaScript blend of the LiveScript scripting language and Java are getting out of step and leading to incompatible Web environments, have prompted the creation of a JavaScript reference specification and JavaScript 1.1 implementation, which is now available to Netscape One developer licencees. Microsoft and Borland which created their own versions of JavaScript - Redmond integrating it with COM - are expected to bring their implementations into line in due course. Netscape submitted its spec to the European Computer Manufacturers Association (ECMA) for standardisation a couple of weeks back after W3C and IETF turned the thing down claiming not to be in the language business plus overwork. JavaSoft and SunSoft claim lack of a spec has held up their promised support for JavaScript in their products (UX No 589). This has meant that Java environments such as the HotJava browser which runs on Sun's shiny new JavaStation cannot support Web pages created with JavaScript. While Java is used by programmers to create new objects and applets, JavaScript was designed for use by HTML developers to script - or add interactive features - to the behaviour of objects running on either the client or the server. Problem is that the rise of the intranet has pushed JavaScript into use as a full-blown client-server development product, not just a scripting language, Netscape says. The relationship between Java and JavaScript is described by Netscape as analogous to that between OLE controls and Visual Basic. Netscape says it's now documenting the 300,000-odd Web pages it reckons use JavaScript to figure out what kinds of differences their implementations contain, so it can support them in future versions of JavaScript. Netscape reckons the reference implementation accommodates 98% of existing JavaScript code and is porting it to its server products. Communicator will use a JavaScript 1.2 implementation.

IMM-PERFORMANCE MERGER, CYRANO HAS \$20M 1996 SALES TARGET

French automated software quality supplier IMM SA has acquired Performance Software Inc and the two claim to have gone straight to the number three position worldwide with their newly-merged company Cyrano Corp. The new company will offer an integrated set of software quality products combining IMM's Cyrano and Performance Software's V-Test. V-Test enables modeling of client-server applications with any number of simulated users, to test applications before deployment, or identify where bottlenecks or inefficiencies are occurring. Cyrano analyses precisely where the problems lie, whether in the optimization of the relational database, the structure of the SQL query, or the client front end. It will report on the problem and suggest design changes. Mike Hudgell, former Performance vice-president of corporate marketing and now in the role for Cyrano, says the merger of the two companies was seamless, with no overlapping of staff at all. The new company will be based in Paris, France, and aims to grow its European presence aggressively. Combined revenue this year will be \$20m, in a worldwide market thought to be no more than \$180m at present. However, the company is hoping to benefit from the huge growth in the software testing market which analysts are predicting as client-server systems move higher up the enterprise into ever more mission-critical roles. Cyrano will open an office in Germany shortly, and another in Singapore, from where it hopes to expand its Asia-Pacific operations. Hudgell says the company is building relationships with major applications developers and systems integrators. Customers include major banks and telecommunications companies.

Soccer

Electronic Data Systems Corp is using Cyrano in early development stages of a system it is writing for the next World Cup soccer competition, enabling it to load test the system at all stages of development. Presumably the experiences of IBM Corp with the Olympic Games system fiasco in Atlanta will be good news for Cyrano. The company is also benefiting from US health-care legislation, which decrees that all health care institutions have to implement testing of any software they purchase. Cyrano has signed agreements with health-care software vendors such as Cerner Corp, whereby it bundles specially-scripted modeling and testing tools in with the vendor's software. It also provides consultancy and training. Hudgell says the Internet is also providing enormous opportunity for the firm, since to Cyrano, it is simply one huge client-server environment, and anyone offering transactions over the Internet can benefit from the firm's quality and load testing products. The Cyrano suite is currently out for Sybase Inc and Microsoft Corp architectures. It supports Visual Basic or Powerbuilder at the client end, Unix, VMS or Windows NT on the server, and Sybase or SQL Server database. Oracle Corp architecture is coming in the next six months.

TANDEM BACKS INTERVAL FOR INTERNET METERING SKILLS

Its experience with Anamartic Ltd, the wafer-scale memory chip designer that didn't quite deliver on its promise, has not put Tandem Computers Inc off new companies with challengingly new technologies, and Tandem has taken a shine to Interval Inc. The McGuffin or unique selling proposition at Interval is the concept of Internet metering, and the company is working on software that will meter usage and on that basis take care of intelligent digital asset and content rights management and electronic payments, including micropayments. Banker's Trust Inc is equally impressed, and joins Verity Inc and Tandem in contributing to Interval's most recent venture capital round, in which Tandem tossed \$1.25m into the pot. Tandem will work with the Austin, Texas company in an alliance that aims to create a mutually-beneficial business environment on the Internet for consumers and businesses. The two plan to deliver a product architecture enabling metered consumption of information, software and any other form of digital content while ensuring appropriate payment is received for its use. Pay-per-use capabilities will be supported via a micropayments system. The products will address administration of usage rights, protected redistribution, and assured receipt of payment, automating copyright, contract and licensing compliance for customers.

3COM CHOOSES UNIX FOR 3COM PARK KIOSKS

3Com Corp, which paid \$4.1m to get Candlestick Park, the home of the San Francisco 49ers NFL team renamed 3Com Park for four and a half years, thought a good way to help get the company name even more well known would be to offer free Internet kiosks at the ground for fans to use, according to Investors Business Daily. It put Dell Latitude Pentium machines with 64Mb RAM in stainless steel and lexan cases to withstand even the most pumped-up fan. When it came to the operating system 3Com considered it a no-brainer: it had to be Unix. It opted for Solaris over NeXT Step and SCO Unix and NT was never really seriously considered. 3Com said it didn't want to have to keep a person on site just to re-boot the machines all the time.

TANDEM, INFORMIX, SLY, ARNIE, BRUCE AND DEMI GO ONLINE

As part of its quest to turn itself from an online transaction processing company to an Internet transaction processor and raise its profile in the burgeoning Internet world, Tandem Computers Inc has set up a new company with Informix Corp and unlikely bedfellow, celebrity-owned restaurant chain Planet Hollywood. The new company, Planet Hollywood Online Inc, will look at the distribution of Hollywood-style high value content such as movies and music, over the Internet. Details of the company's offerings are as yet unclear, but it would appear it will be launching a Hollywood-style Web site, details of which are still under wraps. It is also talking about helping film production companies to use the Internet as a distribution vehicle. Planet Hollywood, owned by movie stars Sylvester Stallone, Arnold Schwarzenegger, Bruce Willis and Demi Moore, is also said to make two thirds of its revenue from merchandising, and only one third from the food and drink side. It therefore looks likely that it will use the new company to further expand this side of the business.

ORACLE ADDS RDB7, TRAINING

Among a string of announcements and alliances, Oracle Corp last week announced the availability of Rdb Release 7.0 for Digital Equipment Corp's Alpha and VAX systems under OpenVMS and Digital Unix. Rdb7, the first all-Oracle release of DEC's cast-off database, is claimed to provide major advances in non-stop computing for business-critical applications, significant improvements to transaction processing performance, and "easy" client-server application development. It is also the first full 64-bit release of the old DEC database. It adds record caching, table pinning in memory, and vertical partitioning to the features of previous releases. A Hot Standby Option enables users to locate a fully consistent standby system in any location across a wide area network. Oracle also announced the Oracle Learning Architecture Internet-based series of education products, including server software for distributing and administering on-line educational courses over the Internet, and a library of 75 training courses. The first Internet-based products, to be ready in December, will include the 75 training titles, which come from various software vendors and consultants. Oracle will also offer a system for on-line administration, tracking, billing and security over the Internet of electronically distributed educational programs. The launches are the first fruits of a major new initiative by Oracle to turn itself into a major player in the educational and training markets.

NEW TI TECHNOLOGY PROMISES LAN SWITCHING ON A CHIP

Texas Instruments is promising to shake up the networking industry with its new 0.18 micron Timeline technology, which allows up to 125 million transistors to be manufactured in a single chip: the Dallas, Texas company says that Timeline is so powerful that all local area network switch, router and wide area network uplink functions can be integrated onto a single chip, and that a Timeline-based switch the size of a Coke can could carry and switch all of the traffic on the Internet. TI also claims that Timeline technology can be used to provide Gigabit - and even Terabit - networking in silicon, as well as advanced management and flow-control techniques. Indeed, the company says that a joint project with Stanford University is currently involved with developing Terabit-speed Ethernet switching, and that through unique scheduling algorithms for unicast and multicast traffic, the switch will have maximum throughput of "close to 100%". Testing of the technology will take place at a new Networking Technology Center. TI says it is currently in talks with OEM manufacturers, and that it hopes to begin work with beta customers during Q3. The technology will be available in sample quantities next year, with full production slated for 1998. There is no word on pricing.

SPYGLASS AIMS TO GET YOUR DOOR CHIMES ONTO THE WEB

Mosaic browser pusher Spyglass Inc is remaking itself on the Diba Inc model, doubling its research and development efforts this fiscal year to come up with the software and technology equipment manufacturers will need to put things like cellular telephones, cars and television sets on line to the World Wide Web. The goal is to create a software environment that - like Java - will mean that applications are device-independent, so that a user could access an electronic mail account from the cellular phone in his car, or discover the copier back in the office was not working and put it in touch with the engineer. The Naperville, Illinois company already just licensed software to WorldGate Communications Inc for its Internet access service via cable television. The reasoning is that while only 3% of the world has a personal computer, many more use telephones, cars, manufacturing and office equipment, and Spyglass wants to Web-enable them all.

IBM, SUN TURN TO PLANETWORKS FOR JAVA MIDDLEWARE DEVELOPMENT TOOLS

New York city OLTP integrator Tangent International Inc has created a Java-enabled version of its Distributed Computing Integrator (DCI) front-end development tool called Interspace which IBM Corp and Sun Microsystems Inc will sell packaged with additional middleware tools following their cross-licensing deal on MQSeries, CICS and Java (UX No 604). In fact IBM and Sun are part-funding the development of Interspace through a new Tangent unit called Planetworks which will carry the company's Java product lines. Effectively they're turning Java front-end application development for their shared middleware components over to Tangent. DCI is a PowerBuilder extension for creating CICS, MQSeries, Tuxedo and Top End applications built in conjunction with Powersoft, IBM, Novell, and AT&T, which has been extended to support Netscape, Visual Basic, SQLWindows front-ends and now Java via Interspace. Developers can use their Java programming tools of choice with Interspace, including Symantec or Borland; Interspace plugs the middleware services into the application. IBM, Sun and Planetworks will ship an Interspace bundle by year-end which includes Sun's Java development software; Interspace; CICS and MQSeries clients for multiple platforms; CICS and MQSeries server software for Solaris; and the CICS Gateway for Java. A two-user license starts at \$5,000 on Solaris, AIX, NT. IBM MQSeries architect Robert Drew says that without Interspace developers have to write a server component in C, develop Java applications and create CICS and MQSeries class libraries or write applications that can access CICS and MQSeries from C on the Web server. Planetworks thinks that between them the three companies can ship 30,000 copies of Interspace in six to nine months. IBM's VisualAge toolset will provide similar features to Interface for C++, SmallTalk and Visual Basic developers. Planetworks will create a version of Interspace for use with Microsoft Corp's forthcoming Falcon message queuing system. Level 8 Systems Inc is now beta testing its Falcon-to-MQSeries gateway.

NETSCAPE AND ORACLE MAKE UP; INFORMIX "NOT THE LOSER"

Netscape Communication Corp last week appeared to flip-flop on its 1995 choice of Informix Software Corp as its preferred database supplier, saying it'll create new versions of its Livewire Pro and SuiteSpot volume server products bundled with Oracle, and that Oracle will be the only database it bundles with its Merchant, Publishing and Community Systems application-specific servers. It was barely a year ago that Netscape forged a wide-ranging agreement with Informix on product integration and packaging (UX No 549). At the time Netscape Co-founder and SVP technology Marc Andreessen said that "it is clear to us that Informix is the technical leader." Caught a bit off guard, it took Informix a while to get its wits about it, but it responded later the same day claiming the agreement was little but posturing, packaging and repositioning. Netscape sells Informix versions of SuiteSpot and LivewirePro in both development and deployment configurations; the Oracle implementations will be development products only and the customer will have to go back to Oracle for additional deployment licenses, Informix claims. Moreover while Oracle may be the exclusive database offering for the current Netscape Application suite - Merchant, Publishing and Community Systems - Informix says it's working with Netscape on future Netscape Application servers and that it has 10 engineers on-site at Netscape compared to Oracle's one. Moreover Informix is used underneath Netscape's AppFoundry applets - of which there will be more announced within the next 30 to 60 days - not Oracle. Informix hit back saying Oracle's decision to bundle Netscape Navigator 3.0 on its forthcoming NC is clearly an indication that "Oracle has failed with its PowerBrowser" web browser. Oracle says it sees a \$2bn market for database/internet products rising to \$4.8bn in 1998. Its agreement with Netscape is seen in many quarters as an attempt to heal a rift which opened when CEO Larry Ellison was quoted questioning Netscape's chances for survival in the browser business. Netscape CEO Jim Barksdale responded by saying Ellison may have been trying to drive down Netscape's stock to make it easier for Oracle to buy Netscape. Both executives say they were misquoted. "We decided to prefer one another," said Oracle. Confusingly Netscape later told us it was still working to integrate Informix with Community System, Merchant and Publishing and that it will supply Informix to customers for use with Netscape Applications if required, which seems to fly in the face of the Oracle announcement.

SUNSOFT BUYS-IN JAVA APPLLET BUILDER; READIES JIT AND PERFORMANCE TOOLS

SunSoft Inc's contribution to the JavaStation festivities include details of additional Java application development, compilation and deployment tools that'll feature in a new version of its Java-Workshop programming suite, plus Java management tools and Java-to-Corba connectivity. New in a revised Java WorkShop product will be the anticipated drag and drop Project Studio development software which can be used to create Java applications from pre-built Java Beans-based components (UX No 613). The technology, which is not Sun's own but licensed from a company it declined to name, includes a visual assembly tool with charts, graphs, forms-based database access and spreadsheets, plus an HTML authoring and publishing tool. It's got shared white board and chat components too. Ice Tea, the Java-to-C/C++ middleware for connecting Java clients, applets and objects to back-end legacy applications over TCP/IP networks will also be included. The idea is that users will click on HTML links on a web page, Ice Tea will go off and get Java classes that will open TCP/IP connections back to the server application. Project Studio and Ice-T are due by mid-1997. The new software will go up on Macintosh as well as Microsoft and Solaris environments. Project Speedway is a set of tools and compilers for tuning Java application performance on Solaris, Win32 and Macintosh. SunSoft's own JIT compilers and a new version of the JDK Javac compiler claimed to compile one million lines of code per second are due by year-end. SunSoft claims its JIT will be faster than Softway's Guava - see back page. Native server-side Java compilers that will turn machine-independent Java byte code into persistent machine code, presumably for Sparc microJava processors, are due second half of 1997. There will be additional Java virtual machines with improved garbage collection, synchronisation, locking and exception handling. Tools will allow developers to see how much time an application spends interpreting and therefore whether a JIT is the right way to improve performance. Joe 1.0, Sun's Java object request broker which ties Java clients to back-end object environments is now also available. Solstice Enterprise Manager is being re-written in Java and will support the Java Management APIs (JMAPI) by summer next year. Version 2.0 of the IMAP4-based Solstice Internet Mail Server supporting email clients such as HotJava Views on the JavaStations and other NC devices costs \$500 and is due in 60 days.

COMPAQ PITCHES LOW-COST NT WORKSTATIONS AGAINST UNIX

While "Independence Day" was playing in New York last week, Compaq Computer Corp snuck into Sun Microsystems Inc's backyard to announce its foray into the workstation market. It believes that by using off-the-shelf Intel, Microsoft and other parts it can offer workstations which can do the same job of work as Unix equivalents but at a fraction of the price. It's positioning the Windows NT-based boxes squarely against what it calls the "proprietary Unix" boxes - in other words, Sun. Compaq is targeting what it believes are the three most significant chunks of the 1.4m unit workstation market: financial, CAD and interactive content development. Compaq admits it has some work to do in order to establish itself as a player in these markets and is spending big to attract ISVs, VARs and staff. Compaq's pitching a \$6,700 200MHz Pentium Pro Compaq Professional Workstation with 64Mb RAM, 2Gb disk, Matrox Millennium graphics controller and 21-inch monitor against Sun's Ultra 2 Series 1200 at \$30,000 and Hewlett-Packard Co's B160L at \$20,000. The six Professional Workstation models come with one or two 200MHz Pentium Pros and up to 128Mb RAM. A 2D entry-level box for CAD and modeling is \$4,300. A midrange model for content creation is priced between \$8,200 and \$10,200 and uses Elsa Inc's Gloria graphics accelerator. Additional high-end, 3D graphics technologies will be sourced from Unix CAD workstation pioneer turned NT adherent Intergraph Corp, with which Compaq will also be in competition. Compaq says that some similarly-configured Unix workstations would cost up to \$75,000. It claims to have "thousands" of workstations on order following beta testing. Interestingly, SunSoft Inc's currently in the process of certifying Solaris for Compaq's new workstations.

LOTUS PLAYS ITS DOMINO HAND WITH NOTES IN THE BACKGROUND

IBM Corp's Lotus Development Corp is finally getting its act together regarding its Web-enabled Notes. It has decided to combine its Notes and Domino server offerings as a single product to be released next year called Lotus Domino 4.5 Powered by Notes, in an attempt to emphasize its Internet capabilities and simplify the marketing. **Some options that were previously available separately will now come with Domino, and the price will increase as a consequence. Lotus is also making clustering and partitioning software generally available, having sold it to telecommunications customers for two years.** Finally, Lotus will introduce a client product called Weblicator that works with browsers, adding agent functions so users can fetch selected pages, categorize and index them and work with them off-line. It's essentially a lot of the Notes and Organizer technology unbundled and put into a standards-based client. The Domino 4.5 server will cost \$1,000 for a single processor version, up from \$500, and \$3,000 for the SMP version, up from \$2,300

SUN WINS MAJORS FOR FIBRE CHANNEL ARBITRATED LOOP

There is no agreement on what should be the next high-speed disk interface, but Sun Microsystems Inc is sticking firmly to the Fibre Channel and is proposing an evolution it calls FC-AL, for Fibre Channel Arbitrated Loop - and has won some heavy-weight support. Hewlett-Packard Co, Quantum Corp, Seagate Technology Inc, Silicon Graphics Inc and Unisys Corp have stepped up to lend their names to the development effort. Sun claims Fibre Channel offers up to 10 times the performance of SCSI storage high availability, and robust configurations. FC-AL is intended to meet demand for much higher data bandwidth from larger disk arrays and provides redundant data paths, hot-pluggable components, multiple host connections, and dual ported drives, and provides a full-duplex data rate of 100M-bytes per second, compared with a typical 20M-bytes per second SCSI data rate. Sun claims to have installed well over 1Pb - Petabytes - of Fibre Channel-attached storage that is currently in use around the world. It notes that the Fibre Channel Loop Community will be offering technology demonstrations at Comdex/Fall this month.

TANDEM BETS FUTURE ON INTERNET TRANSACTION PROCESSING

Tandem Computers Inc, seeking to transform its business from online transaction processing to Internet transaction processing, has put the seal on its commitment to Redmond and hit the ground with the promised ServerNet versions of its Mips-based Himalaya parallel processors running NonStop, plus the ServerNet-based Intel/NT boxes all of which can be clustered together. There are six iTP Solution Server software environments; Commerce Server, Media, Messaging, CTI, Intranet and Matrix. iTP Commerce Server enables secure business to consumer transactions on the Internet, with high bandwidth to support interfaces such as virtual reality and real-time video. Media server enables distribution of digital media such as electronic catalogs, music, and large databases, including pay-per-use, or micropayment capability. Messaging includes secure movement of mail, fax and paging messages. CTI, computer telephony integration, enables companies to run Internet-based call centers, Intranet Server is for internal corporate intranets, and the Matrix Server enables integration of legacy, off-the-shelf and custom applications, based on message switching technology.

Protocol

The iTP servers support Secure Sockets Layer protocol, and use the Tandem Atalla subsidiary's Websafe2 hardware encryption and management for RSA and DES digital signatures and certificates. The S-Series is the first deployment of the company's ServerNet connectivity product in its NonStop architecture, which still accounts for 70% of the company's revenues. Tandem says S-Series incorporates the first departure from its basic Non Stop architecture since 1976. The series includes two Mips RISC-based NonStop Himalaya servers and Intel-based Windows NT servers. Both families incorporate ServerNet and can be arranged into the promised System Area Network arrangements, or SANs. The NT servers - S100 and S1000 - initially include Tandem's own CAS cluster availability software but will migrate to Microsoft's Wolfpack clustering when it is available next year. The company is also introducing the S100FT and S100FTm, a fault tolerant, two-node version slated for delivery in early 1997. The Himalaya family, the S7000 and the S70000 said to be fully compatible with the previous K-Series servers. The S7000 uses the R4400 150MHz processor and S70000 200 Mhz R10000s. The NT S-Series uses 200Mhz Pentium Pros processors, S100 providing one or two-way symmetric multiprocessing, the S1000 one to four way. They are available immediately. The S100 low end NT server starts at less than \$9,000 and the entry level Himalaya will cost \$69,500.

VMARK PUTS OBJECTSTUDIO INTO CINMARK VENTURE

Vmark Software Inc has finally decided to turn future development of the unwanted ObjectStudio application development system from its Easel Corp acquisition over to a venture called CinMark Inc, based in Stuttgart, Germany, which will be jointly owned by Vmark and Cincom Systems Inc. Cincom, which incorporates ObjectStudio in its Total Framework development environment, will do all sales marketing and support worldwide except in Germany, Austria and Switzerland, where it'll be provided by Vmark's German subsidiary and its distributors.

previously. It's available from January 1. The Advanced Services option, which adds clustering, server partitioning and usage tracking and billing costs a further \$1,000 per server, and will be available with Domino 4.5. With Domino Server 4.5, Lotus will also make available licenses for its Domino Mail Access, whereby mailboxes can be hosted on Domino servers and accessible via any standard e-mail package supporting MAPI or POP3, as well as Notes. It will charge \$35 per mailbox. The prices will increase, but so will the functions. Domino.Action, previously know as Net.Action will now come as standard. It comprises a set of Web design templates, the ability to integrate graphics, video and sound, workflow for the creation of site content, client access for the creation of Web sites and the integration of the Notes search engine into Web sites. The SMTP message transfer agent will now come as standard also, as will POP3 support and calendaring and scheduling software, largely derived from Lotus Organizer. Lotus Weblicator brings a lot of the functions previously available in standard Notes clients to standard browsers. This includes persistent storage in a database, creating local copies of Web pages, maintaining the links and full functionality, rather than merely caching them. Web agents are also included with built-in monitors to retrieve and update pre-defined pages and do off-line HTML forms authoring. Weblicator also supports bi-directional IP-based replication between a Domino server and any browser. It will be available on Windows 95 and NT in the first quarter 1997, with a beta up on www.lotus.com before the year-end. It will cost \$30.

GENERAL MAGIC ENTERS THE TWILIGHT ZONE

General Magic Inc continues to bleed and gave out another 80 pink slips last week to leave just 200 at the Sunnyvale, California one-time star. It also reported ugly third quarter figures and warned of a fourth quarter charge between \$2m and \$4m to cover the job losses. General Magic is fortunate to have raised \$95m from its flotation back in February 1995, otherwise it could have all been over. Yesterday it turned in third quarter net losses of \$12.4m, after a \$1.5m hit, up from \$5.1m losses a year ago. But worse still, revenues plunged 77% to just \$754,000 in the quarter. Founder and CEO Marc Porat finally fell on his sword in September. Cash and equivalents were some \$79.6m on September 30, down \$25.1m in nine months, but the interest on what's left is the only source of income the company has right now. At the time of flotation the company had already spent \$53.1m developing and promoting its Magic Cap PDA operating system technology and, against revenues of only \$2.5m. The company also developed a language called Telescript, that AT&T was using in its Personal Link messaging service. But Java came along, AT&T scrapped PersonalLink and it all started to go horribly wrong for Porat and friends. Nine month losses were \$31.1m, after the same charge, up from \$15.2m losses a year ago, on revenues that fell 49.7% to \$4.7m. The revenue plunge is due to a lack of licensing revenues as the company looks to so-called intelligent Web agents to get it out of its hole. Magic Cap for Windows 95 was released just after the quarter ended and combines Magic Cap and Telescript. Porat's replacement, Steve Markman reckons he can see ways to conserve what money is left while growing once more. Porat always said that the company wouldn't make money until 1997, but that too looks unlikely now, and he's not around to do anything about it any more.

SYBASE HAS EXCEL-COMPATIBLE SPREADSHEET FOR JAVASTATION

Sun Microsystems Inc's JavaStation announcement will be only as convincing as the applications that support it, and the Visual Components subsidiary of Sybase Inc has rushed out Formula One/Java, a Java version of its Excel-compatible Formula One spreadsheet. It claims Formula One/Java provides Excel read-write compatibility and more than 130 worksheet functions in a framework that exploits Java's cross-system support - it is available as an ActiveX, Navigator Plug-in and Lotus Notes-Ready Component. It should be ready early next year, but the firm has not yet priced it.

BRIO ADDS BROWSER-BASED VIEWING

Brio Technology Inc, the Mountain View, California-based decision support tools vendor will begin deliveries of the promised web-enabled on-line analytical processing scheduling server this week. It's designed for use with the BrioQuery Enterprise integrated query and ~~on-line analysis tool, allowing users to schedule query processing over~~ the net. It'll include viewer and analysis client plug-ins and can be implemented either from Netscape Communications Corp's Navigator or Microsoft Corp's Explorer browser. The viewer plug-in will enable simple access to static Web pages, while the analysis plug-in will allow users to control the drill-down process from their desk-tops. The tools don't support browser-based querying, but they allow documents created from queries to be downloaded to clients and used off-line. That's the competitive advantage, if it can be called that, which Brio is touting over rivals Information Advantage and MicroStrategy which are also web-enabling their decision support/OLAP tools. The server's up on Unix next quarter - NT only until then. It supports Microsoft, Mac and Unix clients. Brio claims 1,900 licences.

AUTOCAD ON UNIX PUT ON HOLD AS AUTODESK MAJORS ON 32-BIT MICROSOFT

Always a personal computer company at heart, Autodesk Inc is giving up on the Unix version of its best-selling AutoCAD computer-aided design after the current release. Instead, the company will concentrate on 32-bit Microsoft Windows and Windows NT software, leaving its Unix, DOS, and even its Windows 3.1 customers (even those with Win32s extensions) marooned on the current Release 13. The move stems from a "strengthened partnership" with Microsoft, announced at the company's worldwide value added reseller conference in San Rafael, California during the summer, just as Autodesk announced support for NT 4.0. A message from Microsoft chief Bill Gates assured those assembled that Autodesk's customers were "rapidly moving to 32-bit Windows platforms". The company said it would continue to sell and support Unix, DOS and Windows 3.1 versions of AutoCAD Release 13 "as long as the demand continues", and said that some products it might develop or acquire in the future might support dual NT/Unix servers. It also said it would be introducing a migration program to help customers move over from other platforms to Windows. Autodesk's Unix efforts, initially on Xenix, the short-lived Sun 386i, and later on SCO Unix and Sun Sparc, were always marginal to its main volume desktop interests. But earlier this year, it finally managed to get the Unix version of AutoCAD Release 13 in synch with its mainstream product line (UX No 578), and shipping on Sun, Hewlett-Packard, Silicon Graphics and IBM Unix boxes - its widest ever range. Release 14 of AutoCAD may be out in the summer of next year.

SYSTEMS UNION PICKS UP MIDDLE GROUND LEFT BY SAP AND OTHERS

Privately owned, Hammersmith, UK-based Systems Union is looking more and more like an acquisition target for the likes of Dodge or SAP. It's proving very successful at tapping what it calls the medium-scale financial software market, a market which the bigger fish have to date been unable to capture with their high-end offerings. Its SunSystems financial software package is available in 22 languages and claims to have 13,000 customer sites around the world. It runs on PC networks, most Unix, Windows NT, Oracle and SQL Server. Systems Union reckons that as SAPs of this world realise that fewer and fewer large corporations are still without financial software, they are sure to look to new markets for revenue: namely the medium and small enterprises. But Systems Union Group Chief Operating Officer John Paterson says that they won't find it easy: "You just can't sell that level of product to the medium-scale. It's very hard to rip functionality out of a product...and you can't re-engineer R/3. SAP would need a new product." He also argues that the big boys a la PeopleSoft and SAP would need to change their sales organisations to attack the new market. An easier strategy would of course be to acquire a company with all the necessary knowledge of the medium scale market. That includes JD Edwards, Coda, Lawson, Financial Objects, Great Plains, Systems Union and others. But all of these earn the majority of their revenue in their domestic markets, with the exception of Systems Union, which earns just 40 per cent of its revenue in the UK. It also sells its SunSystems financial software into 170 countries, and claims that it will be number one in the medium-scale market by the year 2000. The company has just partnered with Florida-based Citrix to enable users to access its software over the Internet, a corporate intranet or a WAN. The company is also re-architecting SunSystems to enable systems administrators to vary how much processing is carried out on the client, and how much on the server. Systems Union calls this granular client/server, and says it will be ready in December 1997.

SPEEDWARE BUYS ESPERANT FROM SOFTWARE AG

Toronto, Canada-based software house Speedware Corp Inc has picked up Software AG's Esperant end-user SQL access and reporting software division, paying \$3m for rights to the product, including Esperant's existing customer base. Speedware also gets the 21 software development and marketing personnel, who will remain at Esperant's New Haven, Connecticut centre. Software AG will act as a distributor of Esperant through its affiliates worldwide. Esperant enables users to transparently query and join data from two heterogeneous databases and includes report formatting, integrated charting and graphing, a batch scheduler and the ability to create and store queries as icons. It can be used to write queries that address most relational databases 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. Esperant can also read custom-written SQL queries and ships on Windows for \$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 is generally well respected for its heterogeneous joins and ease of use - it doesn't require knowledge of SQL or database structure - although security and administration is said to be a little weak.

LAPland

Speedware will meld Esperant with its Media business intelligence software after the next rev of Esperant, expected by the end of the year. Speedware says it wants to see exactly what it's got on its hands before saying what features the next rev will include. Media includes a multi-dimensional, multi-matrix database, which Speedware describes as OLAP (On-Line Analytical Processing) /ROLAP and MOLAP all rolled into one. It's supposed to provide graphical drill down and analysis of data stored in corporate databases. The combined products will be aimed at the querying and reporting PC and client/server environments. They'll be integrated with Speedware's EasyReporter, a client/server product for midrange systems that extracts text reports from corporate databases. The Media family came to Speedware by acquisition, when the company purchased Info Innov of Quebec City in 1994. That company became Speedware's Media Division, which continues to be based in Quebec City.

SOFTWARE AG REVS SOURCEPOINT MIDDLEWARE FOR THE WEB

Software AG has Web-enabled its SourcePoint 2.1 automated data warehouse manager which sucks data out of relational and mainframe databases and migrates it into data warehouses built with Oracle7 or Software AG's own Adabas relational database. It's the first step in the Darmstadt, German-based company's Enterprise Web Data Warehouse program to extend its technologies to the web. The data migration process is managed from a Windows desktop with SourcePoint mapping data collected to an SQL-based database. It then places information in the format required by the end user. Sourcepoint generates metadata (information about information), fills in gaps and pulls things together. It performs regular updates, ensuring that all users have access to information which is uniform and accurate, says Software AG. SourcePoint includes subscription services, a choice of updating methods (periodical or event-driven) and supports the security of the contributing sub-systems, thus guaranteeing only authorised access to sensitive data. Software AG claims SourcePoint can be integrated into any existing environment and is able to adapt to changing requirements. SourcePoint comes as three functional components, Administrator, a Windows-based control mechanism for setting up data extractions, transport and loading; Agent, a Unix or NT based component co-ordinating the process and SourcePoint API for extraction programs including Carleton's Passport. SourcePoint is up on HP-UX, AIX, Digital and NT.

PLATINUM READIES Q1 POEM

Platinum Technology Inc says its first Platinum Open Enterprise Management System (POEMS)-enabled products will ship in the first quarter of next year, and will number around 30. They are due to come as both new products, which are still to be named, and some existing products like Enterprise DBA (an administration tool for DB2 and other databases). Platinum's also gradually POEMS-enabling a bunch of its middleware stuff. POEMS-enabled products will come with bundled 'hooks', which the company claims will enable them to talk to other POEMS-enabled products seamlessly. But will they talk to other vendors' products seamlessly? When asked whether customers are likely to experience any vendor lock-in as a result of the POEMS system, Platinum said that it is looking to standards bodies, to make a POEMS standard for developers to write for.

STEPPING UP THE SEARCH FOR MANAGEMENT TOOLS

Vendors are moving towards enterprise systems management architectures. Is this what users want? Our sister publication, *IBM System User* investigates.

As the volume of mission-critical applications hosted on Unix and NT servers increases, the need for effective monitoring and performance management has become a priority. As a result, IT managers are now stepping up their search for systems management tools which can help manage all of a company's computing resources. "Many corporates want to unify the management of their enterprise IT infrastructure and consolidate mainframe, Unix and NT systems under a single management framework," says Paul Mason, director of enterprise systems management at IDC. As a result, he predicts that the market for systems management tools will double by the Year 2000 to be worth \$12.7 billion.

Maintenance costs

According to analysts, the Gartner Group, companies that buy such tools enjoy multiple benefits. Systems management tools, it says, not only simplify the systems management process but help reduce the overheads involved in managing heterogeneous server environments. These costs have spiralled - its studies suggest that, for the average company, the cost of maintaining systems and supporting users has risen by 153 per cent over the last seven years. Smaller systems management vendors have found that delivering products to meet all the demands of a distributed enterprise has proved beyond their means. These companies have become acquisition targets for the larger players. For example, Platinum Technology has bought 13 companies to flesh out its systems management offerings, particularly in the open systems management arena. "Platinum is the dark horse of the systems management vendors. It is quietly putting together a suite of applications for enterprise system management POEMS (Platinum Enterprise Open Management Systems) that will make it a threat to IBM and CA," says Mason. IBM acquired Tivoli (supplier of the Tivoli Management Environment) to broaden the scope of the largely mainframe-based SystemView systems management suite to cover Unix and NT environments. Similarly, the objective behind Computer Associates' acquisition of Legent was to integrate the latter's XPE (Extended Processing Environment) client/server-based open systems management environment with CA-Unicenter. But even the organizations that dominate the systems management market admit that they cannot satisfy users' needs on their own. Instead, they are actively courting third-party software vendors, encouraging them to develop add-on applications which can be managed by their respective management frameworks. "Third-party product integration is fundamental to our strategy," says William Bock, executive vice president at Tivoli. In August, Tivoli launched the 10/Plus Association, a group designed to persuade third-party software vendors to write applications that can be managed by the IBM/Tivoli framework, TME10. Association members include BMC, Compuware, Peregrine Systems, Sun, Candle, Sybase, Boole & Babbage and Legent. CA has adopted a similar strategy. By the time TNG (the new version of UniCenter) is released at the end of the year, CA says that there will be 250 proprietary management systems which users will be able to integrate into the product. To date, most of these systems management partnerships have been at the enterprise level but, this month, Tivoli announced a partnership with Intel under which it will include Intel's LANDesk server software in TME10. LANDesk enables network managers to manage desktop work groups through a bi-directional management integration gateway. The software monitors the status of each Intel server by sending reports back to the client, and enabling IT managers to rectify any problems from the client console. "Users will be able to keep their investment in LANDesk and snap it into TME 10's management environment," says Bock. CA announced a similar partnership with Intel two months ago which will enable network administrators to gauge the status of their Pentium servers using Intel's LANDesk server monitor software. The CA and Tivoli products will both ship at the end of the year.

Divided opinions

Opinion is divided as to how well these products will be received in the market place. While vendors may be moving towards an enterprise systems management architecture which includes the desktop, some analysts question whether corporates want to have centralized control of their desktop systems for two reasons. First, they argue that LAN managers are unlikely to want to relinquish control of their departmental systems to a centralized IT department. Second, they believe that IT departments are ill placed to make decisions such as the frequency of server back-ups for branch offices. Rival desktop systems management vendors, such as Seagate Software, argue that the high level of manual integration needed to make these desktop products interoperate with TME 10 and CA-Unicenter will deter users. There are also questions over how effectively the integration will work.

PHILIPS SCHEDULING COMPILER MAKES MULTIMEDIA VLIW EASY

Philips Semiconductors Inc, which has just begun shipping production samples of its Trimedia multimedia processor and its surrounding software development environment, has been talking up what it views as the core component in its multimedia offerings - a Very Long Instruction Word C and C++ scheduling compiler. The compiler will be available first as part of the company's TriMedia Software Development Environment. The VLIW technology was first prototyped in 1989 by Gerrit Slavenburg, who is now chief architect for the TriMedia Product Group at Philips research labs in Sunnyvale, California. VLIW maps well with the characteristics of media processing and streams of media data, which tend to be easy to parallelize. The key breakthrough, says Philips, and the differentiation from other VLIW media processors from the likes of Chromatic Research Inc and Samsung Electronics Co, was the decision to take instruction scheduling off the hardware and into the compiler. This enables the single-chip TriMedia to be smaller, faster and fabricated at a lower cost, and developers can write multimedia applications entirely in C and C++ rather than machine-level code that's usual in the world of single function digital signal processors. The development kit also includes a real-time operating system - pSOS from Santa Clara, California-based Integrated Systems Inc - and application development libraries with algorithms such as MPEG-1, MPEG-2, V.34 modem, H.32x video conferencing, audio synthesis, two- and three-dimensional geometric modeling and rendering. The Trimedia TM-1 chip, initially at 100MHz and 0.5 CMOS, will begin volume shipments in the first quarter of next year. It should reach 166MHz within a year, and with software tweaks Philips reckons there's room in that timescale for a four times improvement on current performance, said to be four billion operands per second. The Trimedia will run as a dedicated CPU for consumer devices, or as a PC co-processor connected via direct PCI bus, and chips are expected to cost around \$50 each in large quantities. The software carries license charges from \$15,000. Apple Computer is rumoured to take the Trimedia technology for its PowerExpress line, due in mid 1997, and Microsoft has mentioned the chip in conjunction with its Talisman graphics software architecture. Philips is also looking for others to license its core technology.

SUN OPENS IN MALAYSIA'S MULTIMEDIA CORRIDOR

Sun Microsystems Inc has become the first company to take the bait in Malaysia's special multimedia zone: Sun will set up a centre in the new Multimedia Super Corridor to promote Java and foster development of software technology for Malaysia and the South-east Asian region. Malaysia's Multimedia Super Corridor will stretch some 30 miles from Kuala Lumpur City Centre, home to the world's tallest buildings, the Petronas Twin Towers, south to the city's second international airport at Sepang: it will be 10 miles wide and will also encompass a new central administrative capital called Putrajaya; the airport should be ready by 1998, Putrajaya by 2005.

OPENVISION ADDS HIGH-AVAILABILITY

Privately-held OpenVision Technologies Inc has launched Axxion-HA for automated restart services and high performance failover. It offers the kind of failover capabilities that the Wolfpack API is only promising, claims the company. Compatible with Sun and Solaris systems such as the Cray CS 6400, and Windows NT, it eliminates single point of server failure ensuring continuous operations of critical systems, applications, databases and services, says the company. Using AXXiON-HA, administrators are able to restart any service from the user interface, as well as decide how to apply business rules in response to failure: when to restart services on a primary server or initiate an automatic failover to an alternate machine. In all cases, administrators are supposed to be able to implement an HA solution with no kernel changes. By logging errors and events as they occur, AXXiON-HA will also improve system administration, claims OpenVision. Databases, NFS and NIS servers, and file systems are among services where organizations may apply the new product. An extensibility feature adds a custom application kit that allows administrators to create agents for client/server applications such as Oracle Financials, SAP R/3, and PeopleSoft HRMS, as well as for mail servers, worldwide web servers, security servers. Organizations can also choose to failover multiple primary servers to one backup server. Features include; restart and failover services for databases, applications, servers and file systems, multiple server failover to a single secondary server. No prices.

JAMES CLARK TAKES SCO REINS IN ASIA/PACIFIC

James Clark is now Santa Cruz Operation Inc's SVP for Asia Pacific. Based in Tokyo, he will look after the operations of two units. Nihon SCO is the 100% subsidiary of SCO formed from the group of people originally in Unix Systems Laboratories Pacific, then Novell, which under Jiro Monden, is responsible for the Intel-based UnixWare business and the Unix source code licensing business, as well as Japanese functionality in the upcoming Gemini operating system. SCO K.K. is SCO's joint venture with Tomen trading company, which through distributors sells SCO OpenServer and former IXI products XVision, VisionFS and SCO Merge. It's a return to Japan for Jim Clark; until the sale of USL to Novell he was president of Unix Systems Labs Pacific during the period of the distribution of Unix SVR4.2 MP. He spent time with the Information Communication Institute of Singapore, a research institute jointly established by AT&T Bell Laboratories and the Singapore National Computer Institute. He has never been far away from the Unix business however; son Greg Clark is a founder of Dascom (ex-CP Labs). Nihon SCO and SCO K.K. could be merged in the future.

DIGITAL SIGNATURES - DON'T TOUCH THAT DIAL

By Gary Flood

Digital signatures form a major plank of the 'code-signing' strategies being adopted by the major Internet browser companies (Microsoft with Explorer and Netscape with Navigator), and by Sun, the largest backer of the Java interpreted applet language. The investment is driven by what vendors claim is widespread concern over the possibility of getting a "potentially malicious piece of code" (in Microsoft's words) off the Internet. "If the idea of using and downloading software on an as-needed basis from repositories on a network or the Internet is to work, the user will want to be sure the copy really is authentic," claims Tom Carty, Director of GTE's CyberTrust arm. Given that some Java applets have already been identified as possibly created with malevolent intent - though so far only in the sense of making the user's PC make bear noises or such juvenilia - this is not so far-fetched. Microsoft believes it is credible that a user could download code that, without warning, reformat a hard drive, or reboots the PC. On its Web site it highlights a piece of software that can do this (the Exploder control). "Without knowing who published the code, the user wouldn't have a way to contact or pursue recourse against the software publisher," it says.

Meddlers

More sinister is the possibility that bona-fide products could be intercepted by meddlers, resulting in a legitimate spreadsheet program trashing a user's computer. "In the event that this code had been tampered with, the user or software publisher wouldn't know [this] had occurred." The solution may be to adopt the practice of software authors and publishers signing off their code or products with unique digital signatures. Microsoft has been quick to claim competitive advantage over head-to-head browser rival Netscape by offering this service through a component of Explorer called Authenticode (although both Netscape and Sun are hot on its heels). Although few products carry such signatures today, Microsoft claims Authenticode can already search for a signature, verify it has not been interfered with, and if necessary block the transfer. Microsoft notes that this does not mean the code is perfect or bug-free; merely that there is a mechanism that offers the same degree of quality control to a customer over the Internet that buying shrink-wrap through the channel offers. Although some will be reassured, there is an undeniable 'big brother' aspect to this posture: We're going to control what you can download. And is there a sub-text that only Microsoft-signed code is recommended? Acknowledging such concerns, Explorer does allow for the accessing of unsigned code, but the user has to give the OK first. Turning Authenticode off and letting all code be downloaded is, says Microsoft, allowed but "not recommended under any circumstances". Tom Carty, director of electronic giant GTE's digital signature division CyberTrust, perhaps not surprisingly, agrees with Microsoft's stance. "It could just as easily not be a software vendor's latest product as a new novel being distributed electronically - where it'll certainly be in the author's interest to ensure people get the real thing," he contends. What is certain is that in the increasingly heated browser wars the issue of code signing is bound to become a bone of contention between Microsoft and Netscape as each seeks to out-compete the other.

D G SHOWS BIG BROTHER IN MAYNARD HOW A RECOVERY SHOULD BE DONE

By Tim Palmer

Once the dust settles on the current turmoil in the computer industry, it's an even bet that Digital Equipment Corp and Data General Corp will present a fascinating case study for business schools on how to turn a computer company around and how not to do it. Five years ago, if you were to ask which of the two minimakers would ride the rough time ahead more successfully, 99 out of 100 people would have picked DEC for recovery, Data General for oblivion. Yet the figures alongside show that, in a quarter where DEC plunged back into the red, Data General made modest but real profits, and has even begun to grow again. Moreover this is nothing to do with a beneficial product cycle - the company is actually on the cusp of the switch to a new chip for its AViiON servers, the sort of switch that causes customers to pause. Rather it is a function of the fact that the company has remade itself not to become no more than a handmaiden of others, but as a purveyor of genuinely new products, notably its remarkably successful CLARiiON disk arrays. And from here forward, Data General looks much more likely still to be around in recognisably the same form than does DEC. What has been the difference in approaches to recovery? The most important was that where DEC went for a Big Bang approach of a kind that would unquestionably have killed Data General and looks likely to kill DEC, the Marlborough, Massachusetts company went instead for a patient steady state approach that must have driven more hysterical shareholders mad, but which has worked. Instead of trying to sell everything that moved, regardless of how valuable it might prove in the future in order to raise cash and make the books look better, it settled for a wrenching five years of trundling along at a steady breakeven plus or - usually - minus a few million dollars, but never recording losses so big that its future was called into question. At the same time as it managed the decline of its minicomputer business, it started building new businesses for the future, first the AViiON servers, then the storage products. And rather than rush the design of the AViiONs, it designed them in such a risk-averse way that even if it had picked the wrong chip (it had), it would not create any serious problems because the software was totally isolated from the hardware. By contrast, DEC appeared to be in a state of abject panic to get back into profit as quickly as manifestly possible, and every other activity was ruthlessly subordinated to this end, so much so that the recovery was hopelessly botched, and if you start to examine the DEC of today, you only have to peel away a couple of layers before you start to realise that there is no there, there. Data General reported fourth quarter net up 560% at \$9.9m on turnover that rose 7.5% at \$336.2m. Net for the year to September 30 was \$28.1m against a loss last time of \$46.7m, which was after a \$43m restructuring charge, on turnover that rose 14.1% at \$1,322.3m. Net per share, up 500% to \$0.24 in the quarter, was \$0.68 in the year.

MAPINFO CREATES SPATIAL DATA MIDDLEWARE FOR ORACLE

Former Unisys Corp VP client server marketing David McCann has turned up at Troy, New York geographical mapping software company MapInfo Corp as VP and general manager of a new spatial technology division the company's creating in Laguna Hills, California. McCann is charged with taking the company's new SpatialWare technology to market, which combines MapInfo technology with the Oracle database. MapInfo claims SpatialWare is middleware for storing and integrating any type of complex data, including MapInfo objects, with Oracle databases. MapInfo says that adding two tables to a database table enables the storing and sharing of large databases of spatial data. The company's created a MapServer DB version of Spatialware for MapInfo desktop users which supposedly gives transparent on-line connectivity and data conflict resolution between the MapInfo desktop and shared Oracle server. SpatialWare is up on Solaris and UnixWare running Oracle V7.1.6 or V7.2.3 from \$25,000 to \$200,000.

LEGATO CREATES GEMS STORAGE MANAGEMENT FROM OEM COMPONENTS

Legato Systems Inc has gone and licensed software from a bunch of companies and created a Java-based command and control center for managing distributed storage systems and is calling the thing GEMS for global enterprise management of storage. GEMS provides a browser-based view of storage management and nodes are managed by a set of Java applets. GEMS 1.0 is targeted at defining common storage management policies; allowing applications to share different storage media; and the distribution of storage management software and upgrades. Legato has 15 OEM partners which will offer GEMS on Unix and NT. GEMS includes SunSoft's Java management APIs, RedCape Software's Policy Manager, Silicon Graphics Inc's OpenVault media manager, and MTT's remote library manager. GEMS is out second quarter of next year.

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The **Addamax Corp** suit, which must be on record as being the most delayed in the industry is now supposed to start on November 18. It's being done backwards with the damages part being heard first before discussion of who's responsible. The jury's been waived and the judge will make a decision on what damages are due.

Anyone that thought Andy Grove's number two Dave House was a fixture at **Intel Corp** got a bit of a shock last week when it was announced he's just been appointed the new chairman, president and chief executive over at **Bay Networks Inc**. Dave House is not the only senior vice-president leaving Intel: Carl Everett, senior vice-president and co-general manager of the Desktop Products Group, will manage the transition of DPG through to the end of the year, and then retire.

Softway Pty Ltd, based in Sydney, is offering betas of its Guava just-in-time Java run-time compiler, for Solaris 2.5 and 2.5.1. The Guava 1.0 beta is a drop-in replacement for Sun's JDK 1.0.2 interpreter, and it's free to download for 30 days from <http://guava.softway.com.au/>. Guava compiles Java bytecode into native Sparc machine code as it is executed, with compiled code cached so that future uses of the code run at full speed. As a result, claims the company, Guava runs Java programs between two and 20 times faster than the Sun interpreter on the same hardware.

Veritas Software will ship a third version of its application-specific ServerSuite disk and management suites for Oracle on Solaris in January.

Visigenic Software Inc will release a Corba-to-DCOM bridge it's calling Visibroker for ActiveX Bridge later this quarter that it's been testing for a few weeks. Work is underway on making it bi-directional, and that will be ready by February, in time to submit to the OMG for its COM/Corba inter-networking part B spec, for which submissions are due next Valentines Day.

Rich Sevcik, VP and general manager of **Hewlett-Packard Co's** Systems Technology Group is ticked-off we mentioned PA-8200 and DEC's Alpha 21264 in the same breath last week (UX No 513). He said we should compare PA-8200 with DEC's existing 21164. The 220MHz PA-8200 does 15.5 SPECint95 and 25 SPECfp95 compared to DEC's 500MHz 21164 which goes to 15 SPECint95 and 20.4 SPECfp95. PA-8200 systems are due by mid-1997. By the time DEC ships 21264-based systems - at the end of 1997 - HP will have the PA-8500 to pitch against it.

Version 2.1 of **Iona Technologies Ltd's** Orbix object request broker is now multithreaded and supports Corba IIOP and an OrbixNames implementation of Corba naming services. Prices start at \$2,500.

Sequent Computer Systems Inc's going to have its NUMA-Q servers on show at **Oracle Corp's** OpenWorld bash this week where the companies will demonstrate enterprise-to-NUMA-Q migration using Oracle. Sequent's now claiming up to six times SMP performance for NUMA-Q systems running at one third capacity.

SunSoft Inc claims it's got Embedded Solaris out at a small number of customers.

Information Advantage Inc has revved its DecisionSuite Web-enabled data warehouse package to version 3.6 with the addition of report prompting and the integration of PC tools. Report promoting means the reports can be changed dynamically on-line, and the company's WebO-LAP browser front-end has now been integrated with Windows so the same report can be shared across both environments. www.infoadvan.com

suck.com reckons that **Time-Warner's** sitting on the web's future only Gerald Levin doesn't know it. If **PointCast's** the model to beat then Time-Warner's NY1 channel format - the 24-hour news, sports and weather channel for New York city - could clean up if the company wakes up. What is New York 1 but a screensaver for your television? If you're not in New York go see http://pathfinder.com/@dLi*hwUAYjwedJrJ/NY1/

According to Paul Maritz **Microsoft Corp** will this week "lay out the next generation of Windows and NT" including distributed computing, multimedia and graphics.

Sun had 60 ISVs supporting JavaStation's roll-out and claims 450 applications being written for it.

Sun Microsystems Inc's JavaStation can run Windows applications via **Insignia Solutions Inc's** NTrigue X server and client for Java which is being bundled on the devices. Co-developed with Network Computing Devices Inc NTrigue 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 or Mac, and now Java clients too.

Windows source holder **Mainsoft** is offering version 2.0 of its Windows-to-Unix translation software which supports OLE, Win32 Internet and Microsoft Foundation Classes 4.2 technologies on Unix. Prices go from \$8,000 on Solaris and Irix.

Sun Microsystems Inc has created a Java Card API which will enable smart card developers to write Java applications for their devices. **Schlumberger Ltd's** electronic transactions unit has already committed to developing a Cyberflex line of Java-based smart cards for early next year.

Valley folk have dined out for years on the escapades of Larry Ellison, Larry Michels and, before marriage reformed him, Scott McNealy. Now they're tittering over **Silicon Graphics Inc** CEO Ed McCracken, who's the far side of 50, and his new 18-year-old lady love. Meanwhile, Ellison has reportedly been deluged with offers from ladies interested in a little romance following his complaints on Oprah Winfrey that he currently has no significant other.

Visigenic Software Inc - which is trying to turn Java developers on to its VisiBroker for Java object request broker rather than have them use Sun's Joe - says Sun's HotJava browser and HotJava Views environment is a solid and reliable front-end and privately thinks Java developers should target that rather than the Communicator and cut-down Navigator browser environments, being created by its investor **Netscape Communications Corp** and the Navio NC spin-out.

Let's not get carried away: **SunSoft's** still advising developers to program large, mission critical applications in C++ rather than Java.

JavaSoft says HotJava and HotJava Views aren't really designed for URL-intensive Web browsing.

Sounds like **SunSoft's** Internet Server Supplement for Solaris 2.5.1 - which includes enhancements for speeding performance of hosted Web servers, WebNFS and DHCP server - is laying the foundation for the company's own Vishnu Web server. A whole bunch of other technology is due in the 1997 Solaris 2.6 cut.

Sun was showing off a **Mitsubishi** PDA running a Java virtual machine which is being touted as mobile device for systems management.

Is it just us or do the groupware and web tools included in HotJava View and the next version of Java WorkShop look incredibly similar to the Netscape Communicator environment unfurled just a couple of weeks ago in the same building

There's no understanding of how many JavaStations **Sun** expects to make and sell, what other channels it will pursue or whether its already strained manufacturing resources will be able to meet demand. It claims it will make money on every \$742-and-up JavaStation sold. The JavaA1 NC model spec'd out by Sun Microelectronics on which JavaStation is based (UX No 591) used a microSparc IIep, 4Mb to 8Mb RAM, audio I/O, a network port and display, a browser and downloaded applets (plus a keyboard and mouse on a desktop device) and came in with a tag of \$615.

Sun's got Netra j's running a bunch of third party NCs in the labs.

Sun CEO Scott McNealy believes computer industry battlelines are drawing up around the ability to supply web tone/dial tone devices and reckons there are only three contenders in the picture; **Sun**, **WinTel** and **IBM**. It's similar to the battles being fought in cellular, cable and other television and telco markets. McNealy says it's impossible to say where Sun will be in five years time as "500 days ago we didn't even have Java."

Santa Cruz Operation Inc reported fourth quarter net profits at \$4.1m from losses of \$2.6m before on turnover up 17.1% at \$55.2m from \$47.1m. Net losses for the year to September 30 were up at \$22.4m from \$6.1m last time on turnover that rose by 4.3% to \$207.9m. Net earning per share rose to \$0.11 in the quarter. The year-end figures include a \$38.3 one-time charge associated with the acquisition of Unix from **Novell Inc** in October 1995.

Netscape acknowledges that its PR machine and **SunSoft** flaks are working to position Netscape's support for Sun's WebNFS, but says it hasn't actually put any commitment to WebNFS in writing yet. WebNFS provides file transfer over the Web via Sun's Network File System NFS, rather than just HTTP. Files can then be edited or managed from within a browser. Netscape says it hasn't even been approached about supporting Microsoft Corp's rival NT-oriented CIFS mechanism.

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SGI DEFINES TWO-STAGE PLAN FOR CRAY INTEGRATION

The assimilation of Cray Research Inc's parallel and vector processing engines into parent Silicon Graphics Inc's new ccNUMA architecture will be complete sometime after the year 2000 with the release of a second generation scalable node system sporting Mips RISCs plus what the company calls a next-generation high-bandwidth vector processor. The machine may even run a single operating system, though that's not clear yet. The roadmap SGI has defined for migrating Cray MPP customers to its new ccNUMA architecture calls for them to move applications from the Alpha-based T3E line to new Mips-based scalable node (SN1) systems due after 1998. SN1 will employ a more scalable version of SGI's S2MP distributed shared memory architecture introduced a few weeks back to replace existing SMP systems. SN1 will be an evolution of the 128-way Mips R10000-based Cray Origin2000 unveiled last month (UX No 611) supporting thousands of CPUs. SGI says it'll provide source code compatibility with SN1 for Cray T3E customers, meaning applications will have to be recompiled. At the same time SGI will offer additional Alpha upgrades for T3E series users beyond 1998. By then the lines should be running a single, highly-scalable Unix based upon the Cellular Irix currently being blended from SGI's 64-bit Irix Unix SVR4 kernel, Unicos/mk and Stanford University's partitioned Hive architecture. Certain Irix and Unicos/mk programming APIs have already been exchanged, point product releases are due early next year and other kernel work is further out. By mid-1997 Cray expects to have merged Unicos/mk with Unicos, the monolithic release on its T90 and J90 vector processors. The post-2000 SN2 line will be the migration route for customers of a next-generation T90 now under development - as well as J90 users - which is expected to house a new vector engine alongside Mips RISCs.

IBM NC DIVISION READIES NETWORK CENTERS

IBM Corp will demonstrate a PowerPC 603e-based NC reference platform for building network computers at Comdex this week, although Big Blue's newly-created NC division under Bob Dies doesn't expect to ship what it will call Network Center products based upon the design until the end of next summer at the earliest. IBM Microelectronics will market OEM kits using the design and running Microware Systems Corp real-time OS/9 or Sun JavaOS operating system software. Until the Network Centers debut, IBM will sell PowerPC 403-based Network Stations built by Network Computing Devices Inc to a design enhanced with drivers supporting AS/400 5250 and 3270 mainframe sessions plus booting software. They run a Network Station Manager environment - including NCD's ACTware system software - and presumably include the Java Virtual Machine and browser the NCD software currently lacks. Network Stations will be demonstrated at Comdex being served by a raft of new Java applications, including Lotus SmartSuite re-written in Java. The Network Station ships next month with 8Mb RAM but no local disk and is expected to cost from \$700. Network Stations can access Windows applications running on Intel servers across NCD's Wincenter software and support Unix applications. IBM's NC Comdex plans were still changing as we went to press, but it's also expected to demonstrate technology conforming to the Microsoft/Intel NetPC specification for which it has also announced support. Although Dies doesn't rule out eventually providing an Intel-based device through his NC division, Phil Hester, now Dies' technology lieutenant, says the group's work is PowerPC-centric for the moment. Hester says Intel processors are still too expensive to meet NC requirements and that the IBM PC Co will provide Big Blue's NetPC and other WinTel product requirements for the time being. IBM's third desktop product line is the high-end RS/6000 AIX workstations. Hester was most recently general manager of IBM Microelectronics' integrated product solutions group - before that head of IBM's Systems Technology and Architecture Division - and has apparently been co-ordinating the company's NC initiatives behind the scenes for sometime. All IBM's NC technologies are being poured into the new division which supposedly has up to 400 staff spread around several locations. The PowerPC 603e-based Network Centers will be offered in configurations from low-end devices supporting AS/400 and mainframe sessions, to models with some groupware and browsing functions to others with more expandability and peripheral options. In addition IBM will create the promised NCs for vertical application markets, such as kiosks, reservation and check-in systems using the design (UX No 591). The NC division will offer packaged solutions, including client and server hardware and software, though much of the server-side software that'll push Java and other applications down to clients will remain on the bench until next year along with other Java work including accelerators and additional security features.

NC REFERENCE SPEC TO ACCOMMODATE CONSUMER NCs

IBM Microelectronics Division (IMD) will sell board-level solutions conforming to the NC Reference Profile with the Microware OS/9 or JavaOS operating system. It'll use PowerPC 603e generation embedded processors running at 200MHz and above plus S3 graphics chips. Although the newly formed NC division will create commercial Network Center products using IMD components, IBM also expects the technologies to be used in consumer devices. Supporting conventional Unix and Windows-based development tools and applications the Microware-based OEM kits will be targeted at vendors creating smaller, enhanced versions of existing devices such as Web-tops. JavaOS solutions are expected to end up in new purpose-built devices such as wireless and fax/modem/telephone products. IBM says the NC Reference Profile will be extended in several areas to support additional types of devices, including MPEG graphics, wireless and multiple screen types and sizes. It also expects embedded PowerPC designs to be enhanced with additional on-chip functionality including MPEG graphics, and will come to resemble a system-on-a-chip.

BULL ADDS ESTRELLAS, CUTS SAGISTER TAGS

Compagnie des Machines Bull SA's pushing its low-end PowerPC-based Estrellas further down into the Wintel space, offering 12 new models configured and priced to compete for desktop, graphics and workgroup business. Estrella's use the guts of PowerPC partner Motorola Computer Group's PCI bus Black Hawk desktop architecture - with a server flavour. There are three Estrella 100 PC Desktop uniprocessors. The 110 uses a 200MHz 604ev, the 120 incorporates a 200MHz 604e and adds graphics, and the 150 file and print server runs a 200MHz 603ev. All three are NT-only. The 120 starts at \$2,600 with from 232Mb RAM and is positioned against Compaq's Deskpro 6000 200MHz Pentium Pro box. The 200 series includes a Model 604-100 minitower with a 100MHz 604 and a 604-133 which sports a 133MHz part. Both run AIX and NT and are priced from \$5,000. There are 166MHz 604e and 200MHz 604e machines in the 300 workgroup series with greater expandability options which also run AIX and NT. Bull puts them up against HP's 100MHz PA-7100LC D210, IBM RS/6000 43P and Sun Ultra 140 boxes. They're priced from \$6,000. Estrella series 500 systems are one- or two-way 166MHz and 200MHz 604e NT-only devices for Internet servers, groupware and database serving. They're rated at 1,500 tpm as a two-way and priced from \$9,000. The \$11,000 Estrella 700 is for departmental or workgroups of up to 100 users and uses one or two 166MHz 604e CPUs running AIX or NT, rated at 1,700 tpm as a dual-processor. The Estrella servers come bundled with various workgroup software options plus a stripped-down version of Bull's ISM/OpenMaster network and systems management suite called WatchWare Server Monitor. Meantime, in an effort to get sales of its Sagister PowerClusters clusters moving Bull has torn up the price list, cutting entry-level tags by up to 50% and adding three new models. Prices now start at \$260,000 compared with the previous \$700,000. It's now possible to cluster eight nodes together, each with eight processors.

BO CHECKS DATA MINING BOX

Business Objects SA is using ISoft SA's Alice AC interactive decision tree tool to enable users to mine data created using its OLAP and other query tools for undiscovered relationships. BO is taking the data mining metaphor even further down the chain, claiming its BusinessMiner tool will provide desktop data mining at \$500 per seat when used in conjunction with BusinessObjects, well below the \$2,000-odd mark set by Datamind. We suspect it's really going up against desktop analysis products such as ComShare and SAS rather than the enterprise data mining gang. The idea is a user such as a bank lending manager uses BusinessMiner to determine which attributes make for best customers and predict whether a customer will be a good or bad credit risk. The user runs BusinessObjects to get a slice of data from a data warehouse - which maybe no more than a megabyte - and copies it into BusinessMiner, which ships next quarter.

CHERRY PICKING OR CANNIBALISM?

Gary Flood struggles to see synergy in Seagate Software's plans - though he does see some one-way movement.

When the owner of a \$4 billion company decides he wants to do something, it tends to happen. So in 1994, when Al Shugart, head of disk drive powerhouse Seagate, reckoned the way to become the leader of a \$10 billion company in short order was to buy a bunch of companies and go hell-for-leather for that old "sum is greater than the parts" line, things duly happened. Shugart and his lieutenants have been on a shopping spree the past two years that rivals networking queen Cisco Systems and data management specialists Platinum technology. The theme has been to both broaden the core corporation's strengths and quickly build a \$1 billion software-specific company, with an eye to sell it or bring it public at breakneck speed. For Al's self-imposed deadline is the end of 1999. With less than three full years of business activity, the focus has been on Seagate Software to achieve synergy with its buys to create a standalone force with a distinctive voice. Shugart began with the May 1994 buyout of Canadian company Crystal, followed in August the same year with the \$69 million swoop on Palindrome Corp, a maker of back-up software for Novell NetWare. In June this year, Seagate plucked London-based privately-held high-end Executive Information Systems/Decision Support specialist Holistic Systems Ltd for \$84 million. That sum was generous over three times Holistic's then sales, \$25 million. The reason offered was to meld Holos with Seagate's existing business intelligence tool, the much more homespun desktop reporting tool Crystal, in its Information Management Group. Crystal began life as very much a VBX level tool, but had already inched up the evolutionary ladder with Crystal Info, its three-tier enterprise level big brother. "The combination of the analytical capabilities of Holos with the open architecture of the Crystal product line" would create a "complete line of Enterprise Business Intelligence systems for desktop- to large-scale deployment," gushed the contemporary account. This sounded like a fine idea to some observers: "The high-end, technically adept Holos product meshes well with Crystal's low-end OLAP tool Info Reports," huzzahed Meta Group. Not that that isn't true, or won't happen: but there are still a couple of questions users of both products are doubtless asking, the articulation of which points to some interesting challenges ahead.

The big ticket

Since the acquisition, for example, there have been some perhaps ominous signs of an identity crisis in the newly acquired Holistic Systems. Over the summer a third of the entire London based sales staff of 12 hopped ship for fellow UK (but now NASDAQ-listed) OLAP player Planning Sciences. And a quick look at the Seagate Software World Wide Web site still shows almost no mention of Holos - but a lot on Crystal's existing partner, that other OLAP-er, Arbor. In June Seagate also reorganized Software into three divisions, IMG (Information Management Group), Storage Management and Enterprise Management. IMG is where Holos and Crystal live now. Matt Dion, Product Strategist for IMG and formerly a Crystal guy, says Software is now up to \$50 million a quarter and looking therefore at a yearly runrate of \$200 million. A five-fold increase is still sought, it would seem, but then again OLAP is a fast growing area - consensus estimates from various market research houses suggest the client/server OLAP market is worth between \$300 million and \$500 million a year, growing at more than 30%. But that growth won't come from Seagate Software aggressively selling the big ticket Holos item in the repertoire, but apparently concentrating on expanding the Crystal base. But these two markets are very, very different. Holistic claims 1,100 customer sites in 30 countries, predominantly "Global 2000" firms, and a typical configuration may be as high as \$3 million. Crystal has two million users, but they have almost always come from channel/OEM sales. To bridge the gap it seems Crystal gets to cherry-pick the "pieces that make sense to put on the desktop" from Holos, and thus OLAP enable the lower-end product rather than attempt a merged soup to nuts product. Both Dion and Holos' VP marketing Elvin Monteleone are adamant no merged Crystal-Holos product is planned or contemplated - "There will be no merger of the two code streams." Instead, in January expect a "pre-integration" release of Crystal tagged "Redback" (Windows NT only) that offers Web functionality and a more open architecture, then, in June, "Black Widow" (Unix and NT), a version of Crystal that will have a slicer-dicer button and be multidimensionally aware. In combination, the added functionality will mean that the \$395 desktop customer can access that OLAP data structure called a "cube" on the server from their PC, and perform some manipulations of that data along another "dimension" than that offered by their current reporting tool.

Carnivorous

This combination of OLAP awareness and near ubiquity is confidently targeted straight at the business intelligence market now dominated by Cognos (Powerplay) and BusinessObjects' eponymous product. This all seems great from Crystal's viewpoint, not so hot from Holos'. Though Monteleone protested that this was not a "carnivorous" relationship, when pressed on what benefits this merger was bringing to his outfit he could merely talk about the opportunities presented by

being not so cash-constrained as previously ("We used to just do D(evelopment), now we can do some R(earch) as well.") The phrase "bring down the pieces that make sense" sums up the current Crystal-Holos Zeitgeist, with the accent on the down. Holos will continue its own development path (more platform support, extended analytical functionality, more data mining functionality) and there will be a separate press tour for the next version of Holos. Of course, Shugart's people are doing something quite sensible: beefing up a better known product with good stuff from a lesser one. But with radically different product philosophies and capabilities and no merger of the two mindsets, the "synergy" posited at merger time seems illusory, at least so far. Holos users will continue to talk to their Holos salespeople, Crystal ones to their OEMs, and somewhere, presumably in British Columbia, a middle manager is having a heart attack figuring out the Grand Plan to make the two choristers sing the same song. Is this the way to make Seagate a \$1 billion company? It would seem to require an awful lot of \$395 sales to do so.

VIPER'S BITE TURNS CLIENTS INTO INSTANT SERVERS

Last week, reports our sister publication *Client Server News*, Viper, Microsoft's transaction processor, crawled out from under the rock where it's been hiding and unexpectedly showed two sets of fangs - TP functions and the ability to turn virtually any client application into a server. The beta of Microsoft's still-unnamed transaction processor - which will probably be called Transaction Server or Active Transaction something - has what was described as all the server plumbing needed for any application to work as a server. Redmond predicts that thousands of the ISVs who have been writing ActiveX-based client apps instead of grappling with the complexities of servers will jump at this chance to wade into the server market. It claims 80 companies who've played with Viper alphas have signed up to endorse it. Redmond has kept Viper internals more secret than most of its programs lately, but with the beta out they become public immediately. It turns out Viper combines thread pool connection management, transaction management, context management, state management, ODBC security and load balancing across servers. When multiple ActiveX-based apps or ActiveX controls are dumped into Viper, what's supposed to emerge is a coordinated transaction processing package.

Client app to server

At first we thought some bright programmer had suddenly noticed that when a single application is dumped into Viper it's instantly transformed from a client app to server. But Viper program managers claim it wasn't happenstance, that Viper was planned that way from the start and that that's the secret they've been keeping for lo these many months. Meanwhile, the Viper team and its TP pal Tandem claim that rival industrial-strength transaction systems such as Top End and Tuxedo don't work very well over the Internet. Existing two-phase commit standards such as X/Open's XA spec and IBM's LU6.2 Synch 2 are not net-friendly, Redmond says, and it's up and written its own idea of a standard. Two-phase commit is the mechanism that ensures both servers involved in a transaction are ready, and that both sides of a transaction actually take place. Without two-phase commit transaction processing becomes a guessing game. The Microsoft-Tandem spec is called the Transaction Internet Protocol or TIP. They've done a reference implementation in Java, written 12 pages of documentation and sent it to the Internet Engineering Task Force. Tandem and Microsoft are also working on a TIP interoperability demo they plan to unveil some time in Q1. Both companies have posted the TIP proposal on their web sites and on the IETF site at <http://ds.internic.net/internet-drafts/draft-lyon-itp-nodes-00.txt>.

IDE AND THOMSON MERGE AS AONIX

The little-publicised merger of Thomson-CSF's Thomson Software Products group and long-time object application development Interactive Development Environments Inc was completed last week with the creation of Aonix Inc. The companies signed a letter of intent to merge back in May, and although they say the new venture will create one of the world's top 50 software companies with revenues of around \$75m. Thomson Software Products, the San Diego, California-based unit of Thomson-CSF's information products division based in Paris, was created in early 1995 from the acquisitions of Must Software International and Alsys Inc and specialises in object-oriented Ada application development and Unix graphical user interface tools. IDE, based in San Francisco, California, whose intended market for object application development has recently been gobbled up by the likes of Rational Software Corp has been seeking routes into other markets by adding Java and OMG Corba capabilities to its Software through Pictures development environment. Thomson Software said last year it would grow the operation through acquisitions and mergers in 1996 and claims the San Francisco-based Aonix will give Rational, Cayenne Software, Select Software and Platinum a run for their money, though to outsiders it looks like a last ditch attempt to resurrect the fortunes of the unit. Following the acquisition of Must and Alsys Thomson said its new Software products group alone would turnover \$75m (UX No 520). Aonix says it will target new application development and data warehouse solutions and will create a new end-to-end object development solution by integrating IDE's software, including its repository crown jewel, with the Thomson Ada tools. Former IDE CEO Chris Kenber gets the reins, Thomson Software Americas boss Ben Goodwin becomes COO. Aonix starts life with 450 employees - it's got NT versions of the TSP products coming.

IBM FORMS NC DIVISION

IBM Corp decided it has missed so many buses of late that last week it created a Network Computer division to co-ordinate network computing efforts throughout the company and help set industry standards in the area. It will likely mean cannibalising some sales at the Personal Computer Co - hardly any great hardship IBM-watchers observe, since the business at best does a little better than break even. The new Network Computer Division will be headed by Bob Dies, general manager of the AS/400 division, who will report to Robert Stephenson, senior vice-president and head of Personal Systems. The AS/400 passes to William Zeitler, vice-president of software development for the Asia-Pacific region. IBM says it's not a demotion for Dies, but an opportunity to lead a new business unit in what's expected to be the fastest-growing segment of the industry. Dies gets former IBM Microelectronics Division executive - and one-time Systems Technology and Architecture Division honcho - Phil Hester as his technology lieutenant. Although Dies is moving from a \$14bn business to one that hasn't turned over a cent yet, there'll be a fair amount of synergy for Dies early on, as the company's first NC, the Network Station, has plenty of AS/400 bells and whistles to support its millions of green screen users. Pretty much all of IBM's NC hardware and software is being poured into the division which starts life with some 400 staff located in Rochester, Austin and some of the Lotus locations. The formation of the new division will cast renewed doubt on the maligned PC Company, which has at various times been seen merging with the RS/6000 business, being sold off, or having it's work farmed out to OEMs including Acer Inc.

REPORT POOH-POOHS DATABLADE CONCERNS, BUT WARNS INFORMIX COULD "WIN THE BATTLE BUT LOSE THE WAR"

Morgan Stanley's software-watchers don't make much of the flap over whether Informix Software Inc datablades corrupt Universal Server data; it thinks the issue will go away once the product is on the market. The issue was raised in our sister publication *Computergram International* and other trade titles as a result of Informix CTO Mike Stonebraker's comments at a recent conference stating that improperly written datablades could corrupt data which can be said for most all improperly written software (UX No 613). Morgan Stanley says Illustra had 1500 servers in the market before the Informix acquisition and could find no data corruption issues. "In our view, the Informix development staff is too conservative and enterprise-aware to release a product that corrupts data." However the bank warns that Informix risks winning the battle but losing the War. If it can't jump-start the sales engine - which it thinks is Informix's major headache - in the next two to three quarters, the technology innovation isn't likely to matter. "Oracle is likely to declare victory on the high end by virtue of market share gains and becoming the safe buy for enterprise customers. We're already starting to hear a few customers say Oracle has won the database war and that it's time to move on to other issues. Moreover, Microsoft should be on the scene with release 7 of SQLServer in mid to late 1997, which probably changes the game in midsize accounts."

SUN CUTS TAGS TO FEND OFF WINTEL

To keep Compaq Computer Corp and other Wintel wolves from its door, Sun Microsystems Inc's cut the price of its entry-level UltraSparc workstation engine, the Ultra 1 Model 140, by a further \$2,000 to \$8,000. The server version is \$7,500. It now costs less than half what it did when the box was introduced a year ago (UX No 564) and also ships with twice as much RAM as it did then - 64Mb - in the basic configuration, which has a 17" screen and 2Gb disk. Sun says the unit matches Wintel workstation system prices - although Compaq claimed its new Pentium Pro workstations outpace Sun, HP and SGI offerings - and that it wasn't impressed with Compaq's pricing or configuration options. It said Compaq had just plugged a few third party graphics, Ethernet and other cards into standard Pentium Pro boxes. Sun's now also offering its 2D Creator and Creator 3D graphics across all of its UltraSparc workstations: a new Ultra 1 Model 140E Creator 3D with 64Mb RAM, 2Gb disk and 17" screen costs \$14,000 - \$10,000 in volume. It's aiming the new model and re-priced entry-level device at HP and SGI products in the same area. The \$8,000 Ultra 1 Model 140 pricing comes right down on top of the price point currently held by the rather lacklustre microSparc II-based SparcStation 5; Sun says it'll pep that line in around six months though it's not clear what it'll use given the UltraSparc i isn't due until late next year. The \$4,300 microSparc II-based SparcStation 4 remain Sun's entry-point workstation. For heavy duty workstations users like the oil and gas industries - and to match similar offerings from HP, IBM, DEC and SGI - Sun has gussied-up its Ultra Enterprise servers with Creator 3D graphics and support for multiple screens, and is offering them as technical compute servers. The six-way Ultra 3000 supports up to six 167MHz UltraSparc processors and costs from \$60,000. The 14-way Ultra 4000 starts at \$90,000. It'll continue to ship its 75MHz SuperSparc II- and 150MHz HyperSparc-based SparcStation 20s for a further eight months. Sun says its best selling workstation is the 167MHz Ultra 1 Model 170 workstations. The Ultra 1, Ultra 2 (server versions of the uniprocessor and dual-processor workstations) and Ultra Enterprise 150 tower form factor workgroup servers now under the charge of Mark Canepa will ship with Solstice SyMon systems management.

TEKNECOMP BUYS MAJORITY STAKE IN DYNASTY FOR \$20M

Milanese conglomerate Teknecomp SpA has stepped in for three-tier application development company Dynasty Technologies Inc, spending \$20m for a majority stake in the Lile, Illinois company. Dynasty has made no secret of its search for additional funding (UX No 599) but had little stomach to turn itself over to rivals such as Texas Instruments or Seer Technologies which were amongst those who had reportedly bid for its business. What Dynasty is most upset about is that it didn't get to write its own press release: rival Forte Software Inc has been on tour trumpeting betas of its Forte 3 development system and dropping, "by the way, did you know Dynasty's been bought?" into their conversations. Teknecomp's European Technology & Finance venture capital unit has actually put up the money, which almost equals the amount of VC funding Dynasty has attracted since its founding in 1991. Chairman Mike Lyons and CEO Mike Wilson remain in their respective roles for now although it is unclear what kind of control Teknecomp will exert over day-to-day operations as ink was still drying on the deal as we went to press. Dynasty's crown jewel is its rules-based code generator which is embedded in the Dynasty Development Environment for developing partitioned applications. Problem is it's had trouble executing product plans, creating channels and mindshare and generally getting its message across, even though the technology is well-regarded. It'll use the \$20m to execute those plans on the back of Version 3 of its product which is currently in beta and due to ship next quarter. The Dynasty engine is based upon an aborted Softlab repository project which the German Case vendor tried to build using technology from code generation outfit Trimarend. Teknecomp supposedly houses at least 26 other companies, some of them technology concerns, and has former Ing C Olivetti & Co SpA executives at the helm.

Persistence Software Inc's 3.4 release of its object-relational link includes support for abstract data types - customised object groups or supersets; data "knitting," said to enable the transfer of large relational data sets into a network that eliminates the usual redundancies found in traditional "joins" of objects; a new Unix GUI; SQL Server on NT; and multithreaded libraries.

MOTOROLA CUTS PRICES ON EMBEDDED POWERPC's

Motorola Inc's Microprocessor & Memory Technologies Group has slashed the price of its PowerPC-based MPC860 PowerQUICC microprocessors for internetworking and telecommunications applications. The MPC860 family, introduced in September 1995 at \$68 for the MPC860DC version, is now available from \$36.30 in 10,000-up quantities. Motorola also introduced its sixth MPC860 family member, the MPC860DH, for bridges and routers. The PowerQUICC family is aimed at applications such as Asynchronous Transfer Mode ATM line card controllers, branch office and multiprotocol routers, cellular base-stations, main telephone exchanges, Internet applications, PABX controllers, primary rate ISDN protocol termination, remote access routers, smart Ethernet hubs, T1 and E1 line card controllers and wireless access points. Motorola said that the MPC860DH is a dual-channel equivalent to the MPC860MH four-channel part, with Serial Communication Controllers to handle either Ethernet or Multichannel HDLC for applications such as Ethernet to T1, E1 or ISDN bridges and routers.

INSIGNIA GETS NTRIGUE OUT TO WIDER AUDIENCE WITH NEW DEALS

Insignia Solutions Plc, the High Wycombe, UK SoftWindows company, has been busy getting its Ntrigue Windows-on-X application server out to a wider audience, and has announced deals with Sun Microsystems Inc and Motorola Inc, and corporate licensing agreements with Hewlett-Packard Co and Texas Instruments Inc. Launched last year Ntrigue was co-developed with X terminal company Network Computing Devices Inc. It includes Citrix Systems Inc's Winframe and a Microsoft Windows NT server, and enables users to access Windows applications from whatever personal computer or workstation they have on their desk, including Unix, Macintosh, X terminals or network computers. The Sun Microsystems deal adds Ntrigue support for Sun's new JavaStation network computer, enabling it to run Windows applications via an Ntrigue server. Sun is bundling Insignia's X client for Java on the JavaStations at no extra charge, so that users can run Windows 3.x, Windows 95 and NT applications, thus eliminating a major barrier to the network computers. Insignia says the Java client is optimized for local networks, intranets and the Internet. Sun will also reference sell Ntrigue to its JavaStation and Sparcstation customers that want to run Windows applications. Meanwhile, Motorola Computer Group has signed an agreement with Insignia that will add Windows 95 to the applications customers are able to run on its PowerPC-based PowerStack II systems, alongside NT applications.

Internal systems

As well as the Sun and Motorola deals, Insignia has licensed Ntrigue to both Texas Instruments and Hewlett-Packard for use throughout these companies. Insignia has concluded a corporate licensing agreement with Hewlett-Packard, for use in its internal systems worldwide. Texas Instruments also says it will deploy Ntrigue at its locations around the world. Project manager Gilbert Hu said Texas Instruments will integrate Ntrigue within its overall network, to enable all users to access Windows applications such as Microsoft Office. Insignia says Texas is one of an ever increasing number of companies moving to integrate Windows NT with their existing systems. The company said it doesn't believe Unix will go away, and companies will continue to want to integrate legacy systems with new NT applications for the foreseeable future.

SOFTWAY SYSTEMS HEADS INTO EUROPE WITH OPEN NT, EYEING GOVERNMENT SALES

Softway Systems Inc has signed up a fleet of followers to shower its OpenNT software into Europe - OpenNT enables you to run Unix applications on top of Microsoft Corp's Windows NT. Microsoft has endorsed OpenNT as it lends Posix 2.0 compliance to the Windows NT operating system, giving it credibility so Microsoft can bid it into lucrative government contracts that demand Posix compliance. Distributors that San Francisco, California-based Softway has signed up include Arena Data A/S of Norway, Omicron Software Systems AB in Sweden, ComputerLinks GmbH in Germany and the UK's Lasermoon Ltd. While good for Microsoft's NT, OpenNT could stifle the niche Linux operating system, a freeware variant of Unix favoured by technical users. Linux champion Lasermoon expects revenues from OpenNT to bypass its own sales of Linux "by several orders of magnitude very quickly." Lasermoon admits that Linux isn't going to make the company's fortune, because major applications, for example SAP AG's high end business system R/3, will never port to it. Director of Wickham, Hampshire-based Lasermoon Ian Nandhra said he hopes to sell OpenNT across every industry sector. He added: "People we thought were Linux diehards have gone for OpenNT in a big way." He concedes that Linux is destined to stay in its technical niche in university laboratories. Lasermoon favoured Softway's product over a similar product, NuTracker, from DataFocus, since Softway has Microsoft's endorsement. Up until now, Lasermoon has made its money selling a fully-tested version of Linux on CD-ROM, which makes the iAPX-86-based operating system easier to install than downloading 300Mb of software free off the Internet. A port of Linux to Digital Equipment Corporation's Alpha processor did not take off. Lasermoon is a privately-held company.

HITACHI HAS WEB-ENABLED OBJECT REPOSITORY FOR C, C++

Hitachi Software Ltd has introduced a Web-enabled version of its object repository ObjectReuser. Named WebReuser, the tool has been completely re-written to enable developers to browse automatically generated Hypertext Markup Language documents of their C and C++ developments. It includes documentation facilities to enable quick and easy access to existing reusable components. This, says Tony Jones, Hitachi Europe's business manager, provides a much easier way to classify reusable components, because all you need to store in the object repository are URL universal resource locator references. WebReuser enables the creation and reviewing of reusable object libraries. These are displayed on a classifier application, which is connected to a Web browser such as Netscape's Navigator and Microsoft's Explorer, enabling reusable components to be stored and accessed within the intranet and internet. WebReuser comes with an integrated browser tool providing a visual representation of class relationships. It can be used with existing tools including Pure Atria Corp's Clearcase software configuration technology. The next version will support its team-based development environment ObjectIQ. WebReuser is up on AIX, HP-UX, Solaris, Windows NT and 95. Shipping this week, prices go from £100 for a PC, £300 for Unix systems. Tera Computer Co, Seattle, Washington now has its first customer for its Multi-Threaded Architecture supercomputer (hope it's a real sale, not a loaner - but the school does have a \$4.2m grant from the National Science Foundation machine) in the shape of the University of California at San Diego. The machine will be installed at the San Diego Supercomputer Center early next year as part of a multi-year evaluation.

PEOPLESOFT PREVIEWES VERSION 6 OF ACCOUNTING, MANUFACTURING AND HUMAN RESOURCES SOFTWARE

Pleasanton, California-based PeopleSoft Inc previewed Version 6.0 of its accounting, manufacturing and personnel package in London last week (UX No 587). Version 6.0 gets its official lift-off next week, but a few new functions of the software were revealed last week. Accountants will probably be pleased to know they will be able to have an unlimited number of currencies, and use a multibook architecture, as well as draft processing for bills of exchange. PeopleSoft says they will also like the debit-credit visibility and value-added tax processing features that have been plumbed in. Multinational companies can enjoy more places after the decimal point for exchange rate calculations. Customers can also tailor the package to more finicky local regulations with Peoplesoft's tool-kit. Version 6.0 comes out on Windows95 and Windows NT for the client, and NT, several variants of Unix, AS/400 and MVS on the server side. For a database, you can choose from Sybase, Oracle, Informix, Microsoft's SQL Server, DB/2 and DB/400. Analysts forecast the company's revenues will double this year to around \$400m from the \$227m PeopleSoft did last year. Roughly 85% of sales are from the US, and only 15% outside. Growth in the UK is 200% a year. The average-sized deal in North America is up to \$700,000, from \$450,000 a year ago. This time next year, deal size is expected to hit the magic million dollar mark. PeopleSoft desperately wants to give its long-time arch rival SAP AG a bloody nose, and claims it is now going head-to-head with R/3 in deals such as its recent win at UK life insurance company Prudential. Just announced is a win at a second insurance company, Standard Life, which has its headquarters in Edinburgh.

HP BRINGS OUT A STRING OF UNIX AND NT WEB SERVERS

Hewlett-Packard Co's pulling no punches about its NT intent these days and last week came out with a comprehensive package of new products aimed at helping customers get their businesses established on the Internet and to develop their own intranets. It claims the \$10,000 HP NetServer Web Master is the industry's first integrated Internet personal computer-based server package based on Microsoft Corp's Windows NT - but the price makes it clear that if you want to do a comprehensive Web Server, NT does not have much of a price edge over Unix. The company also added five Unix-based HP Domain Enterprise Servers combining hardware and software for up to 1,360 users ranging from \$9,500 to \$85,000. The Domain Servers come bundled with HP Domain Business Suite software, Netscape Communications Corp SuiteSpot or Enterprise Server software, a 100-user HP OpenMail licence, the HP Domain Server Management System, a Java Developer's Kit and the Java Virtual Machine. They range from a 100MHz unit with a PA7100LC RISC processor, 32Mb memory, quad-speed CD-ROM and 2Gb disk to a 180MHz PA8000-based server with 128Mb and 4Gb disk. The offerings also include professional consulting and support programmes and resale channel activities: a partnering programme will help develop Internet and intranet systems across Windows NT and Unix environments.

SGI "PREPARES TO WOO CONSUMERS"

The R-series RISC from MIPS Technologies Inc is king of the hill in the games console market, so it makes sense for Silicon Graphics Inc to form a consumer products division, and *Investor's Business Daily* hears that that is exactly what the Mountain View company is doing. The ~~new group is intended to rush Silicon Graphics's three-dimensional~~ technology into the mass market and will be charged with defining and building graphics boards to go into personal computers, as well as Network Computers - or Web Terminals - with three-dimensional graphics for the home, and also portable computing devices, where plans are very vague.

SGI CREATES STUDIO FROM NEW O2 TO SEDUCE MAC DEVELOPERS

Now that all the market leaders are selling essentially the same range of products, the way you present them has become all-important, a lesson that IBM Corp has totally failed to learn. No-one has ever understood key announcements from IBM at first reading, but when IBM led the market, everybody had to make the effort to work out what the Dickens the company was trying to say. Today, everyone is selling Internet commerce and Unix-based Web servers, and if customers have no trouble understanding what Sun Microsystems Inc or Hewlett-Packard Co is trying to sell, they won't waste much time trying to fathom what IBM, in impenetrable prose unaltered from its turgid verbiage of 1985, is failing to explain. That is not a mistake Silicon Graphics Inc is going to make with its hot new O2 workstation launched in October, and rather than adopt the "there it is, see what you can do with it" attitude that ensured that promising products going all the way back to the Series/1 mini and the 5100 (IBM's very first personal computer back in 1976) never achieved their potential, Silicon Graphics has already helpfully created the O2 Studio bundle, billing the package as a cost-effective high-performance system for entertainment, publishing and Web content creation. It combines the workstation with two-dimensional imaging and video and compositing software, and complete systems start at \$11,000. O2 Studio comes configured with Alias/Wavefront ComposerLite 3.5 for video compositing, Adobe Systems Inc PhotoShop 3.0.1 for two-dimensional imaging, Adobe Illustrator 5.5 for illustration, MetaTools Inc's Kai's Power Tools 2.0.1 for advanced imaging filters and Network File System 3.0 for local area networking. The machine is aimed at smaller design and production facilities that can't get the performance and finish they need from Windows- and Macintosh-based design systems. Silicon Graphics has also rallied a string of companies to offer O2 Studio buyers special deals on their three-dimensional animation software. The O2 Studio bundle replaces the IndyStudio bundle and will be available with either a 180MHz MIPS R5000 or 150MHz MIPS R10000 processor, both with secondary cache, 64Mb memory, 4Gb disk, the professional audio and video option, CD-ROM drive, 32-bit double-buffered colour display with 17" high-resolution monitor, keyboard and mouse, OpenGL three-dimensional graphics with z-buffer and texture mapping, 100Base-T local network interface, AppleTalk and TCP/IP protocols, PCI 32/64 expansion, and the software suite - which itself has a combined value of \$10,000 bought separately. They cost \$11,000 with the R5000 processor and \$15,500 with the R10000.

SUNRIVERS OF BLOOD

SunRiver's major stockholder SunRiver Group got its way and ousted SunRiver chairman and CEO Gerald Youngblood, installing in his place an old computer hand, reorg specialist Len Mackenzie as president, chief exec and chairman. Youngblood's downfall also took out John Osborne, president and CEO of SunRiver's Boundless Technologies subsidiary, a Citrix licensee and maker of NCs, as well as SunRiver's CFO Roger Hughes. Two other Youngblood cronies have resigned from the board including Ron Brittan who used to be CEO of Citrix back years ago. Mackenzie was head of General Automation, a company he was brought in to repair, from 1980 until 1993. He is still on its board. He pledged to bring in new managers and said the company is considering acquisitions to broaden its base in NCs and related software. It is deferring an IPO of its TradeWave subsidiary until next year and will go with interim financing because of the softness in the market for Internet-related stocks, it said. TradeWave sells virtual private Internet security and e-commerce software. Apparently what put the hex sign on Youngblood was TradeWave's \$1.8 million Q2 loss. SunRiver is talking about the entrepreneurial days being over and it being time for more mature management. SunRiver lost \$1.2m on revenue of \$29.7m in its third quarter.

INFORMIX TOUTS UNIVERSAL WEB ARCHITECTURE AGAINST ORACLE NCA

Informix Software Inc has revealed its dynamic Web page builder as Universal Web Connect which will ship for OnLine database users next month, and for the forthcoming Universal Server next quarter (UX No 581). ~~The module allows developers to create Web pages that work against~~ Informix databases and is one element of a Universal Web Architecture the company has created that rivals Oracle Corp's Network Computing Architecture. The Universal Web Connect includes HTML Application Pages into which developers can embed SQL statements, JavaScript and Java applets (via support for Netscape One). App Pages access Informix databases and construct HTML documents for display by browsers. It includes a Microsoft Visual C++ App Page builder API enabling HTML pages, App Pages and their associated content to be exported to the database automatically. Third party tools - such as BlueStone, FutureTense, Haht Software, NetDynamics and Wallop - can be integrated with the API to provide Web site management and application services. Additional interfaces provide state and connection management for deploying applications and it is through these interfaces developers can plug in Corba IIOP-based object distribution products, including ORBs, support for which Informix announced a couple of weeks ago (UX No 613). There are also security drivers for use against Netscape and Microsoft Web servers enabling users to create database-driven authentication services. Subscription and notification services allows users access to specific information and be automatically notified when the information changes. Additional Java classes - Informix's extension of the Netscape Internet Foundation Classes in the Netscape One development environment - enable developers to retrieve information from Informix databases via a dedicated Java API or JDBC connections. Of course the company is also providing a raft of new Java development tools that utilise these classes. Its Java offerings now comprise an Informix-specific Java API, JDBC support and JWorks development tools. Collectively they enable developers to write applications in Java that access Informix databases and other services. JWorks is a drag and drop Java development tool said - unlike rival database company offerings - to support SQL3, come with pre-built (Java Beans-compliant) components and enable developers to create and customise database forms using Java. Informix claims it's the only database vendor with a Java API enabling users to access the database directly from client or middle tiers, and claims resulting Java application code is stored in the Informix database so applications don't require a runtime plug-in for their browser. JWorks application code can be integrated in new DataBlade modules by re-using components. JWorks is due mid-1997. JWorks connects to the database over an Informix-specific Java API or JDBC, both of which will be available by year-end. Developers can also write DataBlades for Universal Server in Java. A Web DataBlade is used to store content and application logic in the database and provides the basic Web application development and deployment environment. The Web DataBlade Module is available now.

RATIONAL SCOOPS UP SQA

Gathering steam as a full-service code modeling, design, analysis, and testing shop, not just an object methodology and Ada house, Rational Software Corp is merging with recently-quoted SQA Inc, the Burlington, Massachusetts-based provider of automated Windows application code testing tools. SQA shareholders get 0.86 shares of Rational for each of their shares, valuing SQA at around \$313m, or around 15 times projected 1996 revenue. SQA reported a \$1.3m profit on revenue of around \$7m in its fiscal third quarter. The valuation made competitive stocks, such as that of Segue Software Inc look undervalued and its shares rose nearly 10% on the day in response. Software-watchers say the merger is further evidence of a maturation and shakeout in the hotly-contested automated tools market in which Rational wants to be the next Pure/Atria. They're still scratching their heads over Rational's curious acquisition of Microsoft Corp's Visual Test software quality automation tool for \$23m a few weeks back (UX No 610). Visual Test isn't very well-regarded, we're told. Maybe it paid up just for the flip side of the agreement under which Rational's analysis and design products will be tightly integrated with Microsoft's future enterprise development tools. The SQA tools will be combined with the Visual Test tools. Rational will take a one-time charge against its fourth quarter to cover the cost of the merger. The combined company will employ 680 people after the merger completes next quarter with revenue of around \$141m. SQA will retain an office in Burlington and Rational will continue to be based in San Diego; SQA CEO Ron Nordin becomes a Rational SVP. Meantime, Rational's unveiled version 4.0 of its Rational Rose graphical-based application modeling and design tools which now include support for the company's Unified Modeling Language. The tools allow programmers to create programs from building blocks of code, or objects, rather than individual lines of code. Rational's expansion is credited to a growing demand for object-oriented software. The tools cost from \$6,000-up on most Unixes from January - \$2,400 on Windows next month.

DEC LAUNCHES 200MHZ PENTIUM PRO PRIORIS PC SERVERS

Digital Equipment Corp launched the latest in its line of Prioris personal computer application servers last week, including the Prioris HX 6000 Series with one or two 200MHz Pentium Pro processors. The servers, with a starting price of \$6,000, include Digital Clusters support for Windows NT Server, so that two machines can be coupled together via a shared SCSI for high availability with full use of each server, and a turnkey RAID Cluster kit. There are four variants: single or dual processors with 256Kb or 512Kb level 2 cache options. They come bundled with DEC's ServerWorks local area network systems management tools, and, despite the focus on Windows NT, come with a choice of operating system that also includes SCO Unix, OS/2, Novell NetWare and Banyan Vines. Oh, and like the recently launched Digital Personal Workstations they come in "frost white" rather than the usual magnolia. DEC said it was willing to play in the cut-throat, cut-price NT server market, along with the likes of Compaq and Dell, and said it had responded within 24 hours to the price cuts Compaq made to its server range on October 14th, matching them processor by processor. DEC also launched a 200MHz Pentium version of its entry-level Annex file and print minitower server.

SOFTWARE AG, MAINSOFT TO SHARE TECHNOLOGIES

Software AG, which is putting DCOM on Unix at Microsoft's behest, and Mainssoft, who's put Win32 APIs on Unix for it, have gotten together to trade technologies. They promise that their collaboration, which should bear fruit for both of them in the first half, will effect a transparent implementation of DCOM across NT and Unix systems, providing interoperability between ActiveX, Unix and NT applications. Mainssoft is hanging up any not-invented-here notions it might harbor and going to Software AG for its DCOM implementation on Unix. It will appear in Mainssoft's MainWin cross-platform development environment. In return, Software AG is getting Mainssoft's home-made OLE-DCOM automation technology and its structured storage scheme which derives heavily from Sun's work. Both companies are Microsoft source code licensees and Mainssoft described their engineering relationship as unique. Mainssoft will afford Software AG and its DCOM work with a channel to Intel and Windows-based developers. They said the fusion of their technologies will allow developers to build not only portable apps but ones that are immediately network-enabled, meaning a user working at any platform will be able to work with any data file regardless of location. Mainssoft, and presumably Software AG, is in pursuit of the enterprise. Last week it brought in a new CEO and president to advance that cause, Ivor Share, who back a few years ago was VP, sales and marketing at Insignia Solutions. Jeff Elper, the company's long-time VP, sales and marketing though basically a technologist, has departed and Mainssoft's previous CEO Gurshom Rom is now chairman. Share said he intends to move Mainssoft engineering to Israel and focus the US operation on sales.

VISIGENIC BRIDGES CORBA-ACTIVEX DIVIDE

As reported (UX No 615), Visigenic Software last week announced the VisiBroker for ActiveX Bridge, a connectivity tool that enables ActiveX controls implemented in web pages, Visual Basic apps or OLE-enabled apps to interoperate with Corba objects. Users will be able to use Microsoft apps and development environments and access Corba objects. Need we say that VisiBroker is IIOP-based and Microsoft of course is DCOM? The Visigenic development has been expected for some months. Visigenic says there's no need for developers to learn the Corba IDL language. Its product comes as an SDK consisting of a utility implemented as a Microsoft Wizard interface. It takes object definitions, standard Corba IDL files and transforms them into ActiveX controls that are then embedded in the client-side application. These controls actually contain Corba client stubs representing Corba objects. The VisiBroker ORB run-time software, also resident on the client machine, then shuttles the object request via IIOP to the requested Corba object. It can also create a "standalone DCOM Server" running on NT 4.0 that contains the object representations, bridging DCOM with Corba. The Standalone DCOM Server provides centralized control and administration of the ActiveX control objects. Pricing starts at \$1,000 per developer plus a \$100 run-time license per machine. Availability is sometime this quarter. Visigenic is of course partially owned by Netscape and is the source of Netscape's IIOP technology.

HP LAUNCHES WEB VERSION OF PRINTER MANAGEMENT SOFTWARE

Hewlett Packard Co's Internet Solutions Operation has launched the Web version of its JetAdmin printer management software for managing printers from a Web browser. Web JetAdmin can manage all the company's printers that are connected to the HP JetDirect EX print server. It doesn't need any special firmware embedded in the printer. Users set up a custom map of their office, and icons change color depending on printer status. There are three levels of security. The software, available on the Web for free, supports HP-UX, Solaris, SunOS, Windows 95 and Windows NT, with backward compatibility to NetWare and OS/2 Warp.

ENCORE TO BUNDLE DATASHARE TOOL WITH ITS STORAGE PRODUCTS

Encore Computer Systems Corp says it will enable seamless information sharing between mainframes and open systems by bundling its DataShare software with all of its storage products. Encore says DataShare, which was originally packaged separately, provides immediate access to data from mixed environments without the delay of intermediate bulk file transfers. DataShare harnesses the existing mainframe backup and recovery procedures. It presents data from open systems to the mainframe as a single set of sequential data within a single mainframe volume. Using shared data regions on Encore's Infinity SP universal storage processor, the software provides a shared repository for open systems, network server and mainframe data. Each system views the Infinity SP as native storage, which it can access and manage in exactly the same way as any other storage native to its system. Open system data can be accessed directly by the mainframe and vice versa. DataShare is now included as part of the Infinity SP and Infinity Gateway systems. Two volumes will be set up for data sharing at no charge as part of the base system. Additional volumes are available at an extra cost.

BULL'S DATA WAREHOUSING INITIATIVE GETS PRODUCT TO MARKET

Compagnie des Machines Bull SA has announced its Warehouse Initiative, a program through which the company will supply data warehousing products - hardware, middleware and software - as well as systems integration and services (UX No 615). Bull officially entered the data warehousing market 18 months ago, with the launch of its DDW, Distributed Data Warehouse software suite, which comprises Access, Integration and Replication modules. The Warehouse Initiative is heavily reliant upon input from Bull's various partners: Oracle Corp, Informix Inc, and Sybase Corp provide database technology; EMC Corp and Data General Corp's Clariion unit provide data storage; Business Objects SA, SLP Infoware and Oracle bring front-end tools to the table, while IBI and Evolutionary Technologies Inc supply data extraction and data transformation tools. Bull uses its own hardware at the data mart end but also resells NCR Corp's WorldMark servers and the Teradata database at the higher end. The company's strategy is to provide "step-by-step deployment," focusing on the data mart end of the market initially and then working up to bigger projects. Bull also announced two new programs within the Initiative. Business Objectives, is a "first step" package that includes a four-user license of Business Objects tools, enabling the customer firm to input its own operational data into a Business Objects Universe and 10 days of consulting for \$15,000. PowerWarehouse, a prototyping package provides evaluation copies of DDW, Oracle7, an eight-user license for Business Objects and 20 days worth of consulting services on Bull Escala servers for \$20,000. Data warehousing customers include the UK's Channel Four Television company and, on a larger scale, the corporate data warehouse for the US State of Michigan.

WHITECROSS RE-EMERGES TO ATTACK PARALLEL DATABASE MARKET

If things have been rather quiet recently over at WhiteCross Systems Ltd, the developer of massively parallel data exploration systems, then it's for good reason. According to chief executive Chris Barfield, the company has spent the past couple of years perfecting its product line. WhiteCross, a UK firm based in Bracknell developed a new generation of parallel database servers based on the T9000 Transputer. The system uses what WhiteCross describe as 'train-of-thought' processing, where the answer to one question spawns many more questions, and the system responds quickly enough to maintain the train of thought. Customers include heavyweights such as British Telecommunications Plc, Mercury Communications Ltd and Scottish Power Plc. Funding was another issue that had to be addressed, and in April WhiteCross found its backing from Wall Street venture capitalist Warburg, Pincus Ventures. Full terms of the deal have not been disclosed, but WhiteCross said it initially received \$6.5m. Warburg took a seat on the board, and with it a hefty slice of the group's equity - all Barfield would say was that it amounted to "much more than 50%". Warburg's first act was to restructure the ailing firm. A new commercial team was installed; Geoff Squire, who set up Oracle UK Ltd came in as chairman, and Barfield, previously chief executive officer at Metier became the new chief executive officer. And the changes don't stop there. Warburg has decreed that the only way to ensure White Cross becomes a commercial viability is to prove itself in the US market. Jim Suszka has been installed as the new vice president of US operations and sales and support teams are in place on both sides of the Atlantic. The group has secured its first US contract, within the automotive industry, but if Warburg is to continue funding the group, this must be the first of many such deals. The Meta Group believe the firm is on the right track. According to Meta analyst Dr Wolfgang Martin, if complex data queries are your thing, White Cross is the only company that fits the bill. "It has the technical ability to get a headstart in a global market", said Martin, but as to whether that will translate into sales... "who knows".

WYSE USES STRONGARM TACTICS IN NEW WINTERM

Forget the plethora of Network Computer announcements at Comdex this week, Wyse Technology Inc reckons it's got the thing covered. Having sold ~~20,000 of its Winterm not quite so dumb Windows terminals since their~~ launch last Comdex, the company has launched the Winterm 4000 series of enhanced Network Computers. Fully compliant with the Network Computer Reference Profile, the 4000 series run Java applets as well as accessing Windows applications. They run Javasoft Inc's JavaOS operating system and use Digital Equipment Corp's StrongARM RISC chip. Wyse also has a new modular version of the Winterm 2000SE series offering enhanced video due to a flat-panel active-matrix liquid crystal display. An agreement just signed with Cruise Technologies Inc will herald a wireless, battery-powered Winterm for mobile thin clients, and the forthcoming Winterm, code-named Elite, will enable access to HyperText Mark-up Language Internet or intranet data without the need to go through a Windows NT server. Wyse has also launched the JSB ALPHABrowser, which is designed to enable character terminals to browse the Web and retrieve text only. First ships of the Winterm 4000 and 2000SE are due early next year. US pricing will be given at Comdex.

NOVELL TO LICENSE ITS DIRECTORY WIDELY, TAKES WEBNFS AND JAVA FROM SUN

Novell Inc announced last week it will license its NDS Novell Directory Services software royalty-free to hardware and telephone companies, in a last-ditch attempt to flood the market and make it a household name. Directory Services could save the phone companies, Internet access providers and applications vendors from the dirty work of plumbing in their own directory services, and help with provision of value-added services such as telephony over the Internet. Novell vainly hopes Microsoft Corp will license its Directory Services for Windows NT, although, unsurprisingly, Redmond has as yet shown no interest. Novell's problem is that organisations are using the Internet to create their LANs - not NetWare. Microsoft arch-rival Sun Microsystems Inc thinks differently, and has agreed to put Directory Services up under Solaris in the first half of next year. In turn, Novell is licensing several Java based products from Sun - Web NFS, Java Workshop and the Java Just-in-time compiler. Novell has already licensed Sun's Java Virtual Machine. The two companies will collaborate on the development of Java development tools and Java class libraries. IBM Corp is also thought to be interested in Novell Directory Services.

COREL PICKS POWERPC FOR VIDEO NC

Corel Corp, Toronto has now decided on the processor for its Personal Digital Assistant-cum-Internet access terminal, deciding to go with Motorola Inc's MPC821 embedded version of the PowerPC. The Corel Video NC is now described as a multimedia Network Computer, and it is due to ship by the end of the first quarter of next year. It will include Corel Office for Java, and can be expanded to include a floppy or a hard disk via two PCMCIA slots. Corel said that a digital camera can also be added to work with the embedded microphone and speaker.

EXCALIBUR ADDS GRAPHICAL VIEWS, SEARCHING IN FRENCH AND SPANISH

Excalibur Technologies Corp, San Diego, California, a company perhaps much better at coming up with brilliant technologies than it is at making money from them - although it's now bagged the likes of IBM, Informix and Computer Associates for its document management and retrieval software - has announced version 6.0 of its RetrievalWare software. The company says it provides access to real-time, archival and legacy information resources including newswires and Usenet newsgroups, multi-format text documents - including SGML and HTML - word processing and email files, relational data, and groupware information stored in applications such as Lotus Notes or its own EFS document imaging mechanism. 6.0 provides a new graphical view of available information resources and can now search in French and Spanish. There are new wizards to create searching profiles and a Java API allowing developer to create profiling and document handling applications in Java. Excalibur 6.0 is due by year-end on Unixes and NT priced from \$25,000 and up. Excalibur also formally introduced its Visual RetrievalWare software for use with 6.0 previewed a few weeks back (UX No 602). Visual RetrievalWare kit components include colour, shape and texture feature extractors, feature vector indexing and retrieval, image processing library, C libraries and header files, a Visual C++ class library, a Tel/Tk interpreter, sample scripts and programs with source code and HTML reference documentation.

WITH UNIVERSAL SERVERS AT ITS DOOR, UNISQL PICKS UP \$12m VC MONEY AND HEADS FOR DATA MART COUNTRY

With the relational vendors' Universal Server products looking like they ~~will eat its lunch, object-relational pioneer UniSQL is taking itself off to~~ pastures new, heading for data mart territory initially, but gathering up additional investment and a Web story along the way. UniSQL agrees data marts may be a polite way of saying failed data warehouses, but to the Austin, Texas-based company data marts are also disenfranchised data stores looking for a tool with mutli-platform, multi-format features. For those data warehouse projects which fell apart when they got too big and required too much brute force, UniSQL will aim to pick up the pieces with product packages providing tighter integration with third party database and repositories and plug-and-play configuration done up with wrappers and trimmings. The company's picking up an additional \$12m investment along the way with second and third rounds of venture funding due imminently and then in 1997 which will see Japan's NTT Data lay out more to avoid dilution of its current stake, plus other backers opening their coffers. UniSQL says it's still looking towards an IPO or getting acquired thereafter. UniSQL was founded on the back of a \$10m investment from NTT Data back in 1990; its business is premised upon the notion that relational data can be treated as a special case of object data. UniSQL will use the funding to expand its marketing and development programs and push on into the data mart space.

UNISQL ADDS WEB VERSION OF OBJECT-RELATIONAL TOOLSET

Meantime, UniSQL's throwing that promised Web cloak around its current object-relational database products with the introduction of a Website Information Manager which it claims allows developers to create and deploy multi-format applications over internets and intranets (UX No 590). The \$20,000 per-site developer package includes a dynamic load-balancing Web broker which replicates data to multiple databases, and manages the fluctuation of website hits and security levels. For performance and security considerations UniSQL has bypassed the Common Gateway Interface and written its own APIs, which prevent executables from running on the web server which accesses the database. The Website Information Manager supports the major relational databases, plus Web authoring tools, plus an open socket development kit which it says can be used to integrate other data sources. The package also includes the UniSQL object-relational database, its multi-database manager, an extended version of its cache manager and development tools. UniSQL says a typical sale may include a database or multi-database manager but not replication or bundled tools. The Website Information Manager grew out of a proprietary system developed by NTT Data backer to run on the UniSQL database and sold only in Japan. NTT Data is expected to re-work its package over time to include the UniSQL code and UniSQL now says that no NTT Data code is included in Website Information Manager. It's expecting to sell the package to new customers rather than Web-enable the installed base, though it will sell an upgrade option where required. In addition it has a persistent Java front-end for UniSQL due at the end of its fiscal year in March. UniSQL claims 700 users and has 100-odd staff.

TRITEAL SERVES JAVA INTERFACE TO NC VENDORS

Common Desktop Environment shop TriTeal Corp's created a Java interface it's calling SoftNC and is licencing it to a bunch of companies building thin client network computers, including Fujitsu Ltd, Network Computing Devices Inc, Japan Computer Corp and Wyse Technology Inc. TriTeal says SoftNC will run wherever a Java virtual runs and can run in less than 1.5Mb memory while supporting login, window, session and style management capabilities. TriTeal likens SoftNC to JavaSoft's HotJava Views NC user environment, though it currently lacks an integrated browser function which the JavaSoft product includes. The OEM-only product also does not yet include an integrated version of NCD's WinCenter Connect software which enables windowing terminals to access multi-user NT Windows applications running on a server. NCD's software is based upon the eponymous Citrix Systems Inc ICA protocol server software which TriTeal has already incorporated in its CDE-based NTed Unix desktop for accessing Windows applications. SoftPC is TriTeal's fourth desktop product following the CDE-based Ted, NTed, and the Ted for Windows implementation. NCD is currently supplying Network Stations running its ACTware NC operating system to IBM Corp and has already indicated it will support Java technologies in a future release.

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Not long ago Bill Gates was energetically rubbish-ing Network Computers and all Larry Ellison's works, but it's clear that NCs have been giving the young master sleepless nights after all. "We have a number of competitors that are working in concert together there that pose a major challenge to us," he told his shareholders at Microsoft's annual meeting, adding that thin clients and their backers presented "perhaps the largest challenge that's faced us in a long, long time."

Next time some analyst tries to talk to you about **IBM Corp** and Network Computers and insists on discussing the topic in terms of impact on the personal computers business, and the size of the personal computer market, try not to look at him or her too witheringly. Explain as gently as you can that in IBM's book, as it has said right from the very beginning, the primary target market is not personal computers but all those hundreds of thousands, nay millions of dumb tubes - 3720s, 5250s, VT100s - attached to thousands of reservation systems, banking networks, insurance company systems and so forth - and you could also ask gently why otherwise all the surviving ASCII terminal companies like **Wyse** and **SunRiver** would be so desperate to get into the things.

New York City-based **Magna Software Corp** has opened a UK subsidiary in the City of London, having raised \$5m in venture capital to fund its expansion. The company's Cobol-based Magna X applications development environment is targeted at large organisations with heavy transaction processing requirements using transaction processing monitors and middleware including Encina, Tuxedo and CICS.

Novell Inc's canned its December developer conference, pushing the thing back until next March.

Cray Research Inc has come out with a new model of its massively parallel second generation Alpha RISC-based T3E machine. The new T3E-900 is 50% faster than the system it replaces and will be available next quarter from about \$500,000; Cray says T3E orders have reached \$250m since its launch last year.

We're still trying to decipher exactly what Bill Gates did or didn't promise, but he seemed to guarantee that ActiveX and IIOP will interoperate on at least some level. Asked about the issue he pledged, "We'll find a way to see to it you get some kind of interoperability, particularly if people want it." That is, he said, if IIOP survives.

Samsung Electronics Co Ltd reports that it has now successfully fabricated the Alpha 21164 microprocessor and says it will show an Alpha workstation running Windows NT at Comdex/Fall. General sampling will begin in January with speeds ranging from 366MHz to 500MHz. Limited samples of the Alpha 21164 are now available but there are no prices.

Apart from **Novell Inc**, what are **Sun Microsystems Inc's** friends doing with WebNFS? Well, according to **Sun**, **IBM Corp** and **Sequent Computer Systems Inc** have "licensed" WebNFS; they get it through their ONC+ 2.0 licences. The current terminology for **Spyglass**, **Auspex**, **Apple**, and **Oracle** is "adopted." Still all quiet on the **Netscape** front. The one thing that is certain is that nobody is "paying."

JavaSoft says it's still a little too early to talk about Java-in-the-Open Group.

Prism Solutions Inc says it's thrown open the pages of its Warehouse Directory meta data dictionary and it can now supposedly exchange data about data with **Platinum Technology** and **R&O** repositories and **HP** Intelligent Warehouse.

Polling the floor at the recent Java Developer Conference in San Francisco, **Morgan Stanley** found 75% of those represented are, or will be doing non-Internet Java applications. 51% said they were already doing Java-to-relational apps. Better tools - including debuggers - and libraries topped the most wanted list, just 15% prioritize greater security. The vast majority aren't doing browser plug-ins. Most popular development platforms were Windows 95 narrowly ahead of NT, Solaris, then other Unices and Mac. The Java performance overhead was described as "significant" by 56%, "extreme" by 11%, "modest" by 28% and not noticeable by just over 4%.

Unibol Ltd, of Newtownabbey, Northern Ireland, has released Version 2 of its OS/400-based Unibol 400 rehosting software for Unix boxes, and soon Windows NT. The new version includes Query400, enabling users to run existing IBM AS/400 generated queries or develop and maintaining new queries on Unix, and integration with Oracle Corp databases and tools; it runs on IBM, HP and DG Unix boxes.

As we went to press most vendors had either posted patches or declared their systems immune to the so-called "Ping of Death" flaw discovered in TCP/IP. It was found that by sending a large IP packet of 65536 bytes - as opposed to the default 64 bytes - remote Unix, Microsoft and Novell operating systems and hardware could be crashed or forced to reboot. The Linux community got a patch out within four hours of being notified of the problem.

In which goldfish bowl has it been swimming all this time then? **Seer Technologies Inc**, which lost \$31.6m on declining revenues of \$96.9m for the year - \$16.1m on fourth quarter revenue of \$20.9m - says it will start listening to customers, rebuild relationships with customers, reposition the company for growth, and develop a market-driven product development process in an attempt to return to growth and profitability.

Sun Microsystems Inc's lured **Silicon Graphics Inc** VP network systems Jeff Pancontine to head marketing and business development in John Shoemaker's server and storage group. Pancontine hails from the SuperServer business of SGI's **Cray Research Inc** unit which SGI sold to Sun a few months back (UX No 591).

Oracle's not re-positioning Oracle8 as such, just plugging its enterprise and object features, claiming, for example, it's more flexible than Teradata for large data stores.

IBM Corp's devoting 25% of its \$6bn R&D spending to Internet technologies. It reckons the \$800bn market for network computing technologies will be worth 1.2 trillion by the year 2000 and that 65% of that will be spent on services and solutions, 20% on hardware and 15% on software.

Following versions of its ServerSuite of disk and file management utilities packaged for NFS and the Web, **Veritas Software Inc's** created a third version of the software for use in database environments (UX No 614). The Oracle on Solaris ServerSuite is due in January from \$3,500 and will be followed by Sybase and Informix releases on the same platform, then HP-UX variants. The ServerSuite doesn't need Veritas' FirstWatch, Volume Manager or File System products.

Progress Software Corp explains merging the code stream of its PowerHouse 4GL server environment in PowerHouse 8 will allow it to support both command-line and Axiant graphical front-end users from one code base. The 8.0 cut will support green-screen types from early next year, an 8.1 version will support Axiant developers.

Having endorsed all of the NC models it can find, **IBM Corp's** own vision of network computing is a tad more difficult to define, however Irving Wladawsky-Berger, general manager of IBM's Internet division says those kinds of questions are looking back into the past and that the future's all about delivering applications: "beyond the browser is electronic commerce. And Lotus Domino will be the basis of it," he believes.

IBM has also turned against former friend **Netscape** in the run-up to the launch of Lotus Domino, the Web server release. Domino will replace many Netscape products IBM currently ships on its servers. It was only a few weeks ago IBM and Netscape were talking about how they could extend their relationship. **Lotus** president Jeff Papows weighed in by refuting Netscape's recent price comparisons with Lotus and suggested Netscape doesn't have the resources or experience to create and then support products which include Domino-type functionality. He said a uniprocessor Domino licence is \$3,000 cheaper than the comparable SuiteSpot server - \$2,600 less expensive for a two-processor version. As for **Microsoft**, IBM brushed off any enterprise intent Redmond might have as being simply "out of their league."

Informix will formally unveil its Universal Server combine of OnLine Server and Illustra Information Server on December 3 in New York.

Oracle Corp wants its managers to execute a makeover which will repaint the company's image in several key areas: from client/server to net-centric; traditional database supplier to trusted total solution supplier; niche product to broad brush solutions house; and from a collection of independent units to a networked company. It's Network Computing Architecture-with-everything now. Expect new Java and Internet tools at Internet World in New York in December. Look for a new NC division too.

By mid-1997 **Oracle Corp** will have restructured its high-end sales force into four vertically-aligned units targeting consumer goods, financial services, oil and gas, and telecommunications. Industrial, government and healthcare operations will follow if the first four are successful. It hopes to attract the top 20% of companies in each sector. It says it knows it needs to make it easier for people to write it checks and it's going to buck up its internationalisation efforts too.

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