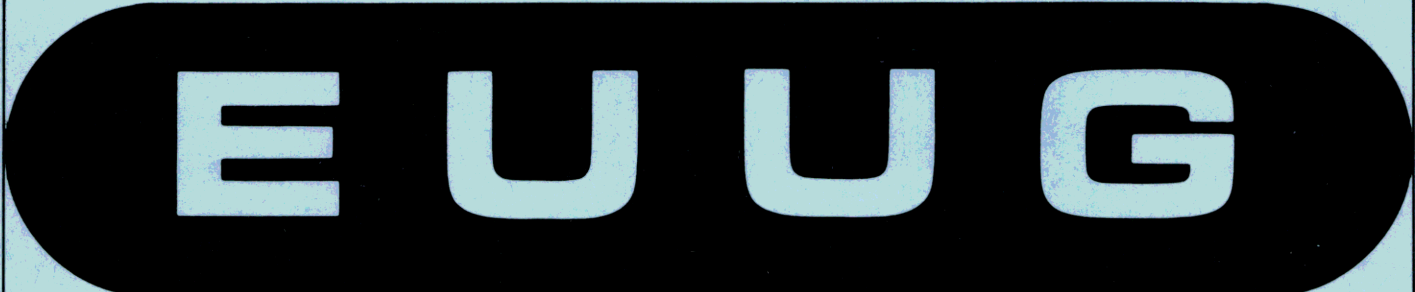


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EUUG

**EUROPEAN UNIX[®] SYSTEMS
USER GROUP NEWSLETTER**

Volume 4, No. 4
WINTER 1984/85

EUUG

European UNIX† Systems User Group

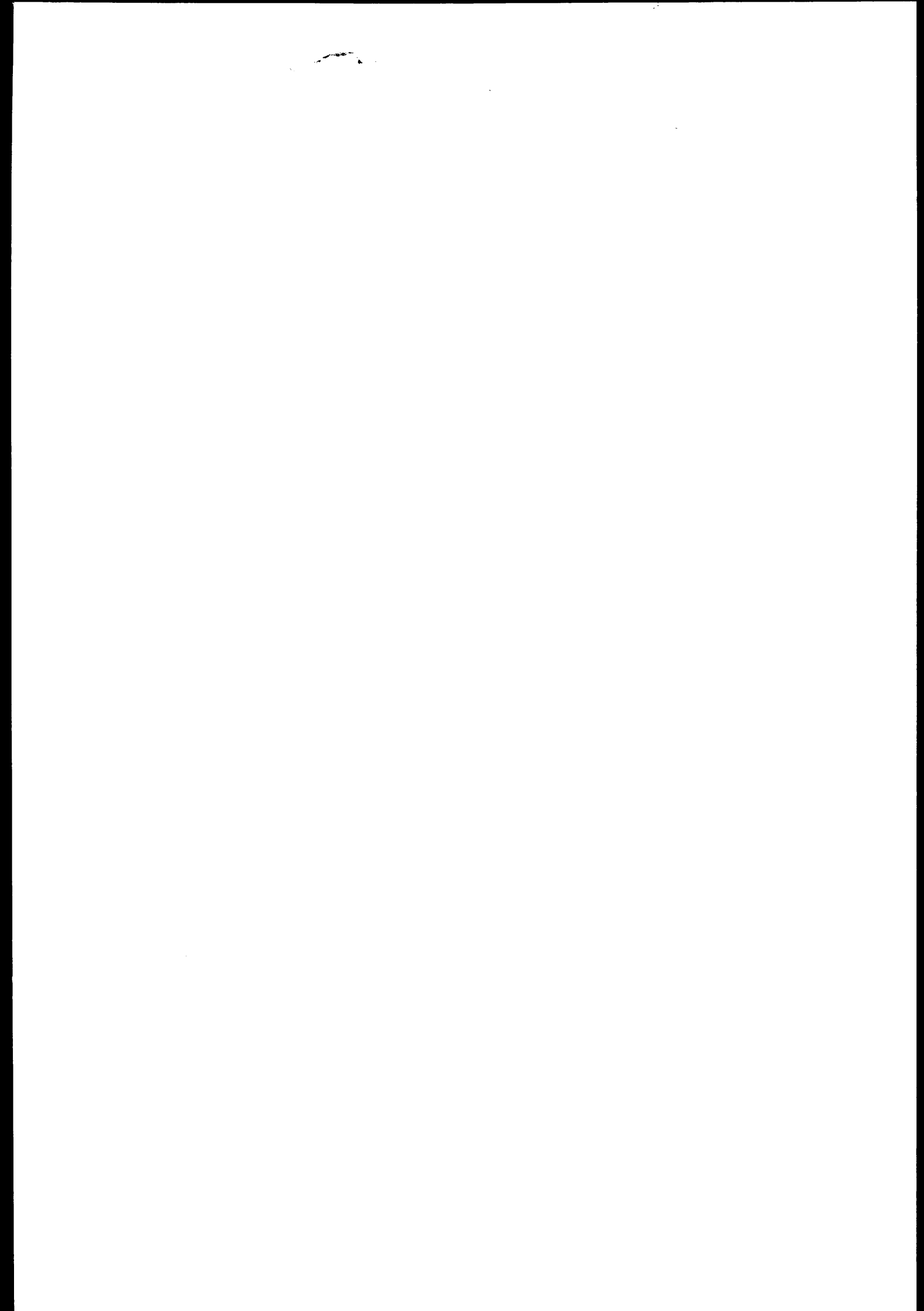
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(A Cold) Winter 1984

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**USENIX Conference, Winter 1985
Dallas, Texas, 23rd - 25th January**

- An Informal Report -

Dominic Dunlop

Sphinx Limited

Dallas, Texas. Where everything is bigger, including UNIX conferences. If you think 2,000 delegates for USENIX is a lot, what about the 20,000 at UniForum, held in the same city at the same time? The division couldn't have worked out better: UniForum attracted all the marketing presentations and put on the biggest trade-show yet, but left USENIX with a solid diet of technical material for UNIX aficionados without three-piece suits.

Dress code for gurus (wear jeans with no more than three holes, but don't bother to buy a tie) featured in the keynote presentation, "Whither the Guru?" by Rob Kolstad of Convex Computer Corp. Explaining that gurus are like cabbage-patch dolls - inordinately expensive, hard to find, and all different (though not, on the whole, cuddly) - Rob described how to build a guru trap. You bait it with lots of money, lots of fast hardware (Convex makes super-computers, so no problem there), and a stock-option. And, to keep a guru once you've got one, make sure that your vending machines are restocked with junk food twice a day. Well, this is America.

But how does a mere programmer get to be such a sought-after commodity, and not a mere initiate, wizard or lama (lama?)? Training, that's how. You need to learn left-handed touch-typing (so you can hold your coffee cup in your right hand). You need to learn about sixth-generation computers (AI will *really* work this time around). And you must be aware of the software Peter Principle: any program will ultimately rise to its level of incompetence. Rob's software University offers all these skills and more, and is open to any student with money...

The first paper, by Lauren Weinstein of Vortex Technology, hardly brought us down to earth: it was a discussion of transmitting netnews by satellite. At a previous meeting, Lauren had rashly volunteered to get a demonstration system going, sneaking netnews into unused lines on satellite TV signals (Hmm, how about it, Sky Channel?). Finding a TV company which understood the concept, but wasn't already selling all the available time to Dow Jones for millions of dollars, proved difficult, but WTBS in Atlanta came to the rescue. The initial hook-up followed netmail tradition by beaming a signal 47,000 miles to get it 8 miles from a network gateway to Lauren's experimental receiver. The demonstration at the conference showed a somewhat longer hop, and those of us with badly adjusted TVs in our hotel rooms could actually watch netnews at the top of the screen!

Ninety minutes into the conference and no word yet from a lawyer. Too good to last? Yes. But, surprise, surprise, Susan Nycum hadn't come to tell us about UNIX licencing. She gave an interesting analysis of five good ways of getting sued over the content of your news item. Using a broadcast medium like a satellite might mean the carrier could get sued too. What makes you think the US was founded by lawyers? By the way, you won't find the paper in the proceedings: Susan said it would be impossible to write any sort of legal statement on just a few sheets. Besides, who would put on the ribbons and seals?

Then coffee and time to skip off. A sporadic but free exhibition of American buses of the past fifteen years operated between the conference hotel and Crystal Palace. Sorry, Infomart, a remarkable building modelled after that of the great exhibition in London 120 years ago. UniForum was the first show to be staged there and, in tribute to the hardware and software on show, construction was almost finished. I dallied several hours among the biggest collection of UNIX hardware and software ever assembled under one roof, and chuckled to myself about the number of thrusting market analysis handouts which AT&T's "kiss and make-up" session with Microsoft, announced two days before, had invalidated.

By the time I'd got back to USENIX, I'd missed all the kernel implementation papers, arriving in the middle of a religious service dedicated to "Modula-2: An Alternative to C for Systems

Programming" by Morris Djavaheri and Stan Osborne of San Francisco State U. In America, the state and religion are constitutionally separated (Reagan notwithstanding) so it was only fair that we should next hear about "A UNIX-based Ada Run-time System" from M.D. Scheer and S. Rajeev of AT&T Bell Labs (whose trademark Ada is not). And, answering a similar need by adding new primitives to the only language we can currently rely on, Gehani and Roome (also of Bell Labs) gave an overview of Concurrent C. An unkind suggestion that this exemplified the software Peter Principle at work was adequately refuted in the ensuing panel discussion.

Another break, this time for soft drinks devoid of any unfashionable substance which might make them palatable. The day's final session dealt with performance measurement. Bill Meyer's graphic alternative to ps and its relatives looks interesting, and may yet pop-up in net.sources. John Saxter discussed "Interpreting UNIX Benchmarks" in a rather lightweight manner. More interesting was a Birds of a Feather session by Gene Droneck, author of the AIM Benchmarks, a commercial suite. Gene is working on defining a "standard VAX" (750 and 780, System V and 4.2BSD) so that we can know what all these comparisons so beloved by advertisers actually mean (he's an optimist). If you can help, I have Gene's number. He also has a program which will degrade your disk performance by 3% for each minute it runs...

During what was left of the evening, we had time to discover two more things that are bigger in Texas: the lack of downtown activity after dark, and the distance to an open restaurant or bar. The USENIX city guide showed where succour could be found.

Friday got straight down to business at 8:30AM (hell, the room was \$80 a night, couldn't I lie in?) with a well presented paper from the University of Maryland. A gift of 30 Xerox workstations (why don't I get presents like that?) prompted them to discover that Berkeley's much vaunted generalised networking kernel isn't really. Making it support Xerox Network Systems protocols as well as TCP/IP across an Ethernet turned out to be quite a job. The code is available free if you're a University Grants Program member. Forget it. You're not.

XNS was a mere hack beside "The Lincs Communications Architecture" described by Joseph Requa of Lawrence Livermore Labs. If you feel like re-writing your kernel from scratch, read his paper. At a much more populist level, Judi Uttal of Locus Computer Corp told us about a Transparent Integration of UNIX and MS-DOS. neat. Your PC just treats the UNIX system (or one of a choice of networked UNIX systems) as another drive. Finally, somebody from SUN (the paper has nine names on it, and I lost track) gave us an Overview of the Sun Network File System. Not as ambitious as (say) the Newcastle Connection, NFS allows transparent operations on remote disk files (but not device files). There is no remote execution. A display of Ethernet-connected SUN, Pyramid and Gould machines working with NFS at the UniForum show testified to the system's practicality.

After coffee time, comedy time. Ian Darwin and Geoff Collier's paper, titled, among other things "Real Programs Dump Core", started off by stating that bugs always happen to the other guy. Which would be fine if there were a kernel call to tell you whether you're running in other guy mode. Then followed a series of horror stories about some real programs, some subtly changed to protect the innocent (well, AT&T's lawyers would plead that way anyway). More amiable flack for Ma Bell (deceased) came from Motorola's Alan Filipiski, describing some fun things they'd found when porting System V to the 68000.

I missed out on the Software Tools and Applications papers, although "Development of a Compiler for the Bourne Shell" by Vincent Kasten and Paul Ruel makes good reading for anybody considering compiling any language designed for interpretation, without a specification, and with lots of weird special cases (example:

case i in
 esac|a)
is illegal, but
 case i in
 a|esac)
is fine).

A discussion of mail closed the conference, perhaps to remind everybody to keep in touch. Mark Horton et al of AT&T Bell Labs et cetera are struggling valiantly to approximate reality as closely as possible with network maps and (600 Kbyte) databases. Peter Honeyman of Princeton discussed how to parse *seismo!cak%purdue@csnet-relay*, and similar valid but problematic addresses on the various US networks (you knew USENET is not mathematically a network didn't you?). The next speaker, Mike O'Brien of BBN, pointed out that his experience was that some mail bears addresses which owe much more to invention than to logic, and described an inverted index system for generating addresses from names. That USENET is an anarchic tangle was shown by Mark Horton's straw poll: almost all those present voted that a system of domains should be put in place, so that in the absence of an efficient address which is known to work, something like *user!site@europe* would be guaranteed to work. Public domain software to supervise this under 4.2BSD and System V should hit the streets soon. Don't worry - your favourite mile-long "!" addresses will still be supported.

And so it ended, leaving the hotel empty but for the few of us who had elected to leave all of Saturday to get through the labyrinth of Dallas-Fort Worth airport, apparently a projection into three-space of a perverse higher-dimensional object. Thanks are due to Chrise Castagnoli of Teknetron Infoswitch for pulling together the programme in record time, and to Rob Kolstad for burning midnight-oil - and the ears of several of the speakers - in order to get the proceedings published before the conference (for copies, send \$35 to USENIX Association, P.O. Box 7, El Cerrito, CA 94350, USA).

The 1985 Winter USENIX Convention Report

Kip Bore

The 1985 Winter USENIX convention was held January 23-25 in Dallas, Texas. The Fairmont Hotel provided an elegant setting, in keeping with the USENIX tradition of outclassing the attendees. At first we feared we had arrived at the wrong hotel — there was no line of eager wizards waiting to check in, no loiterers in the lobby sharing the finer points of sendmail configuration files. We soon found our way onto a bus (UniForum Route #1) and headed for the AT&T bash at the Anatole, by way of the famed InfoMart (housing the vendor exhibits) and UniForum Bus Route #2. Here we found a few familiar faces, many of whom had new business cards to trade.

We hope that the summer 1984 meeting has established an enduring precedent, as copies of the *Proceedings* were again available at the conference. We'd like to review some highlights that we believe won't otherwise be found in print. The talks got off to a promising start, with an entertaining keynote address by Rob Kolstad ("Whither the Gurus"). This topic seemed especially timely as we searched the audience for seasoned veterans of USENIX meetings, and found them lacking. Lauren brought us up to date on the satellite netnews experiment, complete with slides of rural Georgia (home of WTBS) and a live demonstration. Hotel personnel were puzzled at the throngs gathered around a television set that had been adjusted to split its picture by a snowy horizontal line. (For this, they rented a satellite dish?) Nearby, net.physics scrolled slowly by on a VT100. Susan Nycom gave a lucid presentation on the legal issues that cloud the project. The audience was invited to raise non-technical questions at the open board meeting, effectively staving off the expected controversy.

We learned that the 4.2 BSD XNS tools developed at the University of Maryland were first tested a few days before the conference (and they do work). Ian Darwin enthralled the audience with his talk (it's hard to describe the sound of hundreds gasping ". . . oh no, not *init*"). We found it curious that a speaker had prepared a set of hand-written viewgraphs for his presentation on *troff*. In the final session of the meeting, Peter Honeyman cast a spell of confusion on the dwindling audience when he incanted the words "directed graph." We were amused by the results of Mark Horton's query: "How many of you believe that the present form of mail routing (*i.e.*, *machine!user*) is satisfactory?" (A few hands went up.) "How many of you believe that we need something new (*i.e.*, domains)?" (A few hundred hands went up.) Given these results, we were troubled that most of the addresses we found in the attendee roster were of the form "*machine!user*." In fact, a rough count showed that these outnumbered domain-style addresses seven to one. From these data we conclude that "domainists" tend to register on-site, and "bangists" prefer to catch early flights home.

One afternoon we ventured to explore the InfoMart (voluntarily), home to vendor exhibits on a daunting scale. Cleverly, we were issued an embossed plastic badge, and each vendor was issued lots of carbon-layered forms and a credit-card machine. Whoosh! With one snap of the wrist, we were assured of finding ourselves on dozens of new mailing lists. We limited our attendance to a handful of exhibits (hot new machines and a few vendors from whom we really *needed* information). On the positive side, we detected a technical presence at several of the exhibits we sampled. We approached one glowing console, and observed 23 lines of failed login attempts (*e.g.*, "guest"). We typed "root" and were promptly rewarded with "#." Over the years, we have grown weary of "cp /bin/sh /dev/kmem," so we simply cleared the screen and typed "D." It was not an outstanding show for collectors of UNIX memorabilia. Although attendance was rumored below expectations, DEC's supply of UNIX licenses was exhausted early. We saw no jugglers or larger-than-life inflatable gods, but we did notice one "Delilah" in gold lamé.

The social hit of the meeting was a group outing to "Photon," where players donned helmets, battery packs, and LED-studded gear, the better to dart around in the dark zapping one another.

The lobby bar was more empty than not, and we concluded that the hospitality suites (and excitement) must abound at the UniForum hotels. This theory died hard when a UNIX luminary appeared late one night, seeking a room at the Fairmont. His UniForum hotel was dead, and he was emigrating to be "where the action was." Blue ribbons adorned more than the usual number of participants, with "Listeners" outnumbering "Speakers," and in turn being surpassed by "Sleepers." We also noticed an occasional "Bored Member" and the prized "Best of Breed." In all, we spotted only one Bill Joy and nary a Rob Pike badge.

The open USENIX Board Meeting was notable for its lack of controversy. The Stargate project was discussed at great length, but we thought nothing new was said and it all came to no particular end. The separation from UniForum was viewed mostly as a good thing; exception taken by those individuals who can attend only one conference per year. The co-occurrence of USENIX and UniForum (in time and space) is not likely to happen in the future, and that presents a dilemma for some who must choose. The "how-many-meetings-should-we-have-each-year" issue was raised again. The answer is still "two," with emphasis on a broad, long, technical conference in the summer and a specialized, short, workshop-oriented winter meeting.

Before long it was time to board our return flight, where we reflected on Dallas in January and began looking forward to Portland in June.

News from the UK UUG

*Sunil K Das, Chairman UK UUG
(sunil@ucl-cs or ukc!ucl-cs!sunil)*

The UK UUG held a one day Technical Meeting at Glasgow University on the 1st February, 1985. The meeting was a great success, being attended by well over 100 members. (Not bad considering it was Scotland in February!!). In the next Newsletter we hope to include synopses of the papers presented, but for the time being here is a list of titles of the talks:

- * York University's Implementation of X25 under UNIX
- * An Implementation of Rob Pike's layers code for Bit Map Displays
- * UNIX News and Mail for ESPRIT
- * UKNET/EUNET Discussion
- * A UNIX-based System for Software Configuration Management
- * The Persistent Programming Project
- * Multiple UNIBUSes, UDA-50s and System V.2?

The next meeting is scheduled for Monday, 16th December, 1985 to be held at City University, London. We would be pleased to hear from anyone who would like to give a talk. In June 1986, we plan a meeting to be held at Manchester University.

The UK UUG and UKC have called a meeting for Friday 8th March, 1985 at Imperial College, London to formalise and regularise the branch of EUnet in the UK, called UKnet. Any interested parties, whether current net members or not, are most welcome to attend.

If you would like to read a short history of UNIX User Groups in the UK, then see page 11 of February's DECUSER. Sorry about the photograph but the publisher's insisted! By the way the title wasn't mine!!

The UK UUG have appointed a Business Manager, who can be contacted at the same address and telephone number as the EUUG Secretariat. Our affairs are kept totally separate, although having the same address does ease the administration. Please contact UK UUG (information on the back cover) for further details about any of the items mentioned above.

UKUUG chairman hopes to foster relations

HERE IS a short but accurate history of those groups who have shown an interest in Unix since it was first introduced into the UK, writes Sunil Das.

- 1976 The establishment of the UK Unix User Group. Dialogue with Decus UK Unix Sig (which is disbanded later for conflicting commercial interests).
- 1979-82 Chairmanship of Alan Mason (Herriot-Watt University).
- 1980 UK UUG renamed European Unix User Group in recognition of the increasing number of non-UK members.
- 1982 AT&T impose a name change—The European Unix Systems User Group.
- 1983 EUUG restructured to comprise a Governing Committee, an Executive Committee, affiliated National User Groups and Direct Members. The UK Unix Systems User Group, the National User Group in the UK, form and affiliate to the EUUG. /usr/group/uk formed—/usr/group is an organisation in the USA consisting of commercial vendors and users.
- 1984 Sunil Das becomes Chairman of the UKUUG. Decus reforms a Unix Sig at the Amsterdam Decus Meeting.
- 1985 1st Feb—UKUUG holds a technical meeting at Wolfson Hall, Kelvin Conference Centre, Glasgow University. 16th Dec—UKUUG to hold a one-day technical meeting at The City University, London.

In 1983, the EUUG restructured to become the 'umbrella' body to the national user groups of Europe that were interested in promoting Unix. EUUG organises a three-day conference and exhibition twice a year.

The UKUUG, which is affiliated to the EUUG, has identified two objectives of the group: to provide Unix information services (eg membership and installation information, software availability, legal issues); and to provide a forum for discussion.

There are three classes of membership: commercial, academic and individual. Currently, membership is approximately 40 per cent commercial, 40 per cent academic and 20 per cent individual. We have extended the UKUUG's functions to include holding one-day technical meetings for our



UKUUG chairman Sunil Das

membership and attempting to consolidate on a technical basis. The Chairman believes that the UKUUG's primary policy should be the promotion of Unix.

The organisation /usr/group/uk is a commercial organisation intending to serve the needs of the commercial user. The UKUUG's interests differ from those of /usr/group/uk and their membership in so much as the latter tend to be vendors of Unix related products. The aims of the two bodies are not mutually exclusive, but they may need to conduct their affairs in different ways.

The UKUUG chairman hopes to foster relations with /usr/group/uk by encouraging them to hold exhibitions at the same time as the UKUUG one-day technical meetings, at a venue in close proximity to the meeting. Moreover, attempts to hold Unix tutorials at the same time would appear to be worth investigating. We further feel affiliation of /usr/group/uk to EUUG would be worthwhile.

Finally, UKUUG is attempting to co-ordinate the UKNet, the UK branch of EUNet, a European network based on the Unix to Unix copy program—UUCP. Currently, we are examining the funding methods for this mail and news network. It is hoped that a dialogue can be set up with Unix Europe—AT&T's European arm—about this.

Sunil Das, the chairman of UKUUG, works at the City University, London. His network mail address is uke:ucl—cs:sunil. UKUUG's headquarters is on (0763)73039

Decus Unix Sig can be contacted via the Decus office at Dec Park in Reading.

HOW TO ORDER EUUG TAPE DISTRIBUTIONS

If you wish to receive an EUUG Tape Distribution, the following is needed:

- Your address (and institutional order number)
- The tape number (and format identification for EUUG D4)
- A copy of your source license (EUUG D1, D2, D3)

Please do NOT send an exchange tape to the EUUG Secretariat at Owles Hall as this causes delays and additional postage costs

Please do NOT send any money - an invoice for the tape and postage costs will be sent separately

NOTE: Tape distributions are ONLY available to EUUG members

Orders should be sent direct to:

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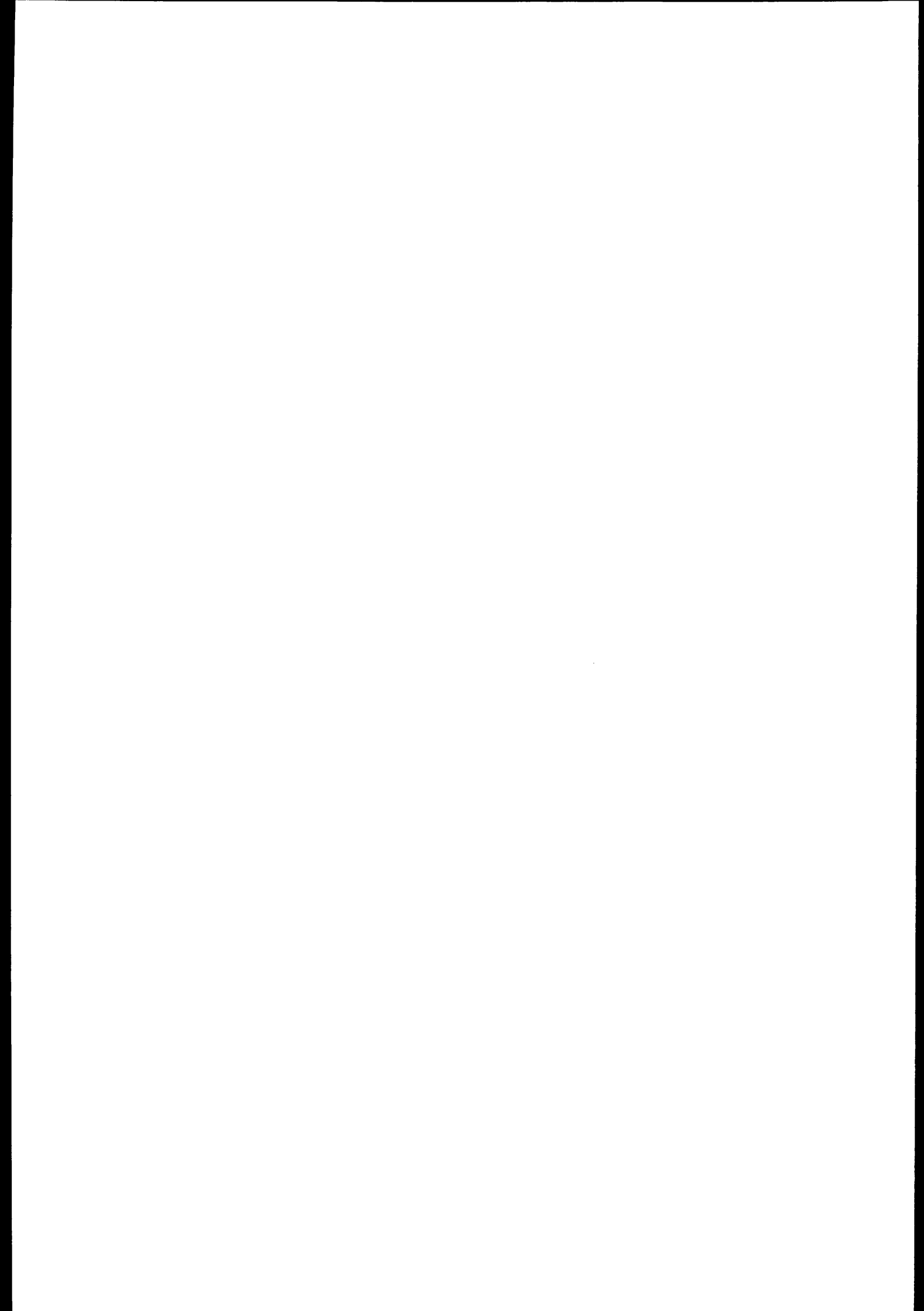
CREATIVE DATEN SYSTEME GmbH

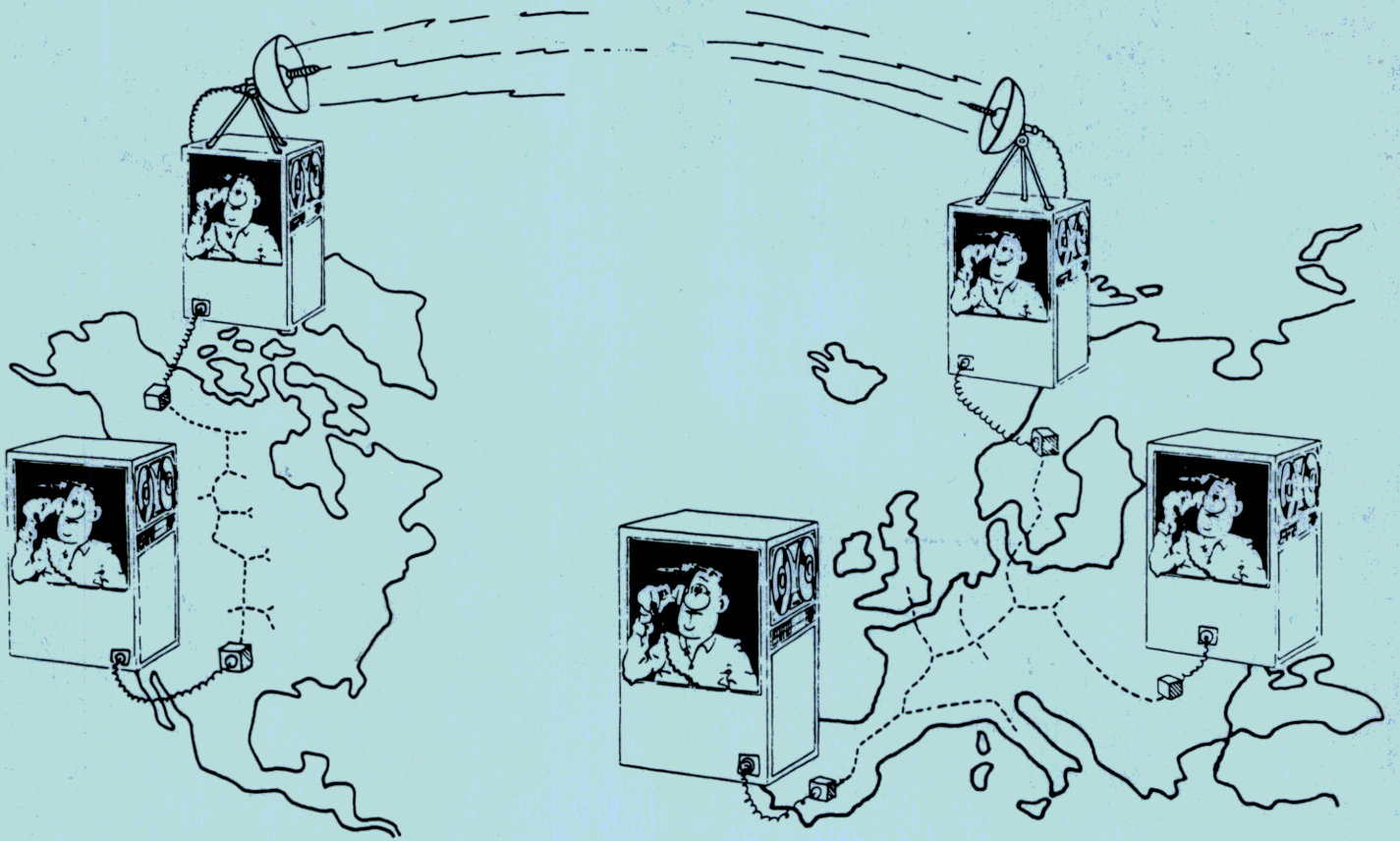
A **TRANSLATOR** program for converting FORTRAN programs to portable C-code.

Users of the UNIX/C operating environment can convert their FORTRAN programs and files to C-code on their system at approximately 600 lines per minute. This translator program will also help users to learn coding in the C-language as they compare their own familiar FORTRAN programs with the corresponding C-language programs automatically generated by the conversion. The translator program is supplied complete and ready to run. Special programs needed to account for different UNIX environments are included in the package. Some of these provide functions of general utility to the more experienced programmers. They are documented for each specific hardware configuration but, in general, include integer-character string converters, space allocators, string parsers, and other string manipulators not available in the standard C libraries.

For further information contact:

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