EUUG

EUROPEAN UNIX® SYSTEMS USER GROUP NEWSLETTER

Volume 3, No. 2
SUMMER 1983

Some Words from the Editor

Here is the second part in this year's continuing saga of 'Let's waste paper!'. However, this one is a bit thinner than usual, so you won't be able to wedge the window open with it on these hot summer nights, use a VMS/RSX† manual instead.

So why is it thinner, I hear you all clamouring to know? Well, the report of the bi-annual EUUG‡ beano in Bonn is still a bit patchy (too much 'alt'), so I've held it over till next time. It is also necessary to get something out before the rest of the civilized world disappears on holiday. And it means the next Newsletter is easy to produce too....

The function of the Newsletter and it's contents must change with the times. It is no longer the only means of communication between the disparate UNIX† sites scattered around Europe, the advent of EUNET has seen to that. When you get hooked up to EUNET, you know what was happening yesterday, not 3 months ago as with the Newsletter. So what's in the Newsletter must change to reflect that. It could even end up as a printed and formatted version of the network news, although that would be a fairly drastic step, but it could happen, unless I get some more articles from you....

There seems to be a hard core of people who write articles for the Newsletter, and it is strange that most of those people are in daily electronic contact with each other, and have no real need to use the Newsletter as a communications medium.

If you have any views on the way the Newsletter should go, or the European UNIX community in general, send me some (preferably electronic) mail.

Jim McKie
Mathematisch Centrum
Kruislaan 413
1098 SJ Amsterdam
The Netherlands

telephone: (020) 5924147
uucp address: mcvax!jim

† VMS and RSX are trademarks of Digital Equipment Corporation

‡ EUUG isn't a trademark of Digital Equipment Corporation, or of Bell Telephone Laboratories either. For that matter, it isn't an acronym.

† UNIX is a Trademark of Bell Laboratories.

EUUG
European UNIX systems User Group
AUTUMN MEETING
To be held at Trinity College, University of Dublin, Eire
on 7-9th September

Booking Form (This form may be photocopied)

Name ..... (Please print)
Company .....
Address .....
.....
..... Post Code .....
Country if not U.K. .....
Tel No .....
EUUG Member ..... Non-Member ..... (Please tick as applicable.)

I wish to book _____ place(s) with student accomodation at the above event

at £ 130 plus VAT @ 15% (per person) for members _____ (Please tick)
or £ 160 plus VAT @ 15% (per person) for non-members _____ (Please tick)

I wish to book place(s) without accommodation at the above event

at £ 80 plus VAT @ 15% (per person) for members _____ (Please tick)
or £ 110 plus VAT @ 15% (per person) for non-members _____ (Please tick)

I enclose my check for £ _____ payable to "EUUG".

Signed ..... Date .....
A VAT receipted invoice will be forwarded to you upon receipt of your booking.

Residential Accommodation in Trinity College Dublin, includes the 4 nights of 6-9th September, 1983 (inclusive). Single or double bedrooms - student type accommodation. Breakfast will be served from 8-9 a.m. Lunch is included in the conference fee.
All fees are in the British currency.

Plese complete and return this booking form, together with your check to,

The EUUG Secretariat
Owles Hall
Buntingford, Herts. SG9 9PL
England.

Tel: Royston (0763-73039).

CLOSING DATE FOR BOOKINGS IS 26th AUGUST, 1983.

EUUG

European UNIX† Systems User Group

Newsletter Vol 3 No 2
Summer 1983

How to Connect to EUNET	1
Cookbook for setting up a National UNIX systems Users Group	7
EUUG Distributions	11
Compatibility Quiz	12
Extract from 'UKC User's Bulletin No. 123', March 1983	13
UN*X Micros Catalogue	15
Large Kernels on Small Machines	16
Greater Manchester UNIX Users Group	18
UUCP Connections via the International Public X25 Links	19
UNIX Booklist	20
Off the Net	21
Important Addresses	25

† UNIX is a Trademark of Bell Laboratories.

IDEC TRAINING OFFERS THE FOLLOWING SCHEDULED UNIX® AND C LANGUAGE COURSES, RUN IN OUR MODERN TRAINING FACILITIES AT STEVENAGE

UNIX® USERS COURSE £180

August 8/9 1983 — March 19/20 1984
October 10/11 1983 — June 18/19 1984
November 28/29 1983

DURATION: 2 days

DESIGNED FOR: Programmers and others who need an understanding of the UNIX programming environment.

PRINCIPAL TOPICS:
- The format and documentation facilities
- The basic shell commands
- Use of the UNIX test editor
- The UNIX file system and utilities to handle UNIX files
- Shell programming techniques
- Overview of the facilities made available by some UNIX program development tools, MAKE, SCCS

SPECIAL FEATURES: The course contains a great deal of practical work run on our UNIX Version 7 system on our in-house machines.

UNIX® FOR SYSTEMS PROGRAMMERS £310

September 12/14 1983 — February 13/15 1984
November 14/16 1983 — May 21/23 1984

DURATION: 3 days

DESIGNED FOR: Programmers/designers who will be developing software which will run in a UNIX environment, systems designers/programmers who need introductory information on UNIX internals. Knowledge of the C Programming language and use of UNIX tools (the shell, editor and the C compiler as a minimum) will be assumed.

PRINCIPAL TOPICS:
- Advanced tools
- The UNIX input-output system calls
- The UNIX file system features
- UNIX processes

SPECIAL FEATURES: The course contains a great deal of practical work run on our UNIX Version 7 system on our in-house machines.

C PROGRAMMING LANGUAGE £290

September 5/7 1983 — February 6/8 1984
November 7/9 1983 — May 14/16 1984

DURATION: 3 days

DESIGNED FOR: Programmers with in-depth experience of at least one other language.

PRINCIPAL TOPICS:
- Data types and operators
- Expressions and Statements
- Control Flow
- Program structure and scoping
- Arrays, pointers and addresses
- Structures and unions
- The standard I/O library
- The preprocessor

SPECIAL FEATURES: The course contains a substantial amount of practical work on-line at terminals in the lecture room.

Oh yes, in case you haven't heard of us, we're part of IDEC, a system house specialising in microprocessor based communications equipment, so we practice what we teach!

For full details of UNIX® and C courses and of our other scheduled courses including:

SOFTWARE ENGINEERING ECONOMICS
SOFTWARE ENGINEERING FOR QUALITY
TESTING TECHNIQUES
PROGRAM DESIGN PASCAL

Please contact IDEC TRAINING on Stevenage (0438) 726161
or write to Vicky Dixon
IDEC, Six Hills House, London Road,
Stevenage, Hertfordshire SG1 1YB

IDEC

IDEC is a division of Standard Telephones & Cables plc
* UNIX is a trade mark of Bell Laboratories

WITH OUR SYSTEMS YOU CAN START SMALL AND GROW

When you're choosing a microcomputer system, you need to think not just about your needs today, but what they're going to be tomorrow. In other words, you need room for growth. And that's precisely what you get with WICAT systems.

FAMILY OF SYSTEMS

Because WICAT has a family of systems, each designed to meet a range of requirements. So you can start small and grow.

There's the WICAT System 150—for up to 6 users; the System 160—for up to 12; and the System 200—for between 8 and 32. All with a real-time, multi-user, multi-tasking operating system.

EXTREMELY POWERFUL

They're all extremely powerful—offering minicomputer performance at micro prices.

All are based on the Motorola 16-bit 68000 processor, with 32-bit data operations.

Memory capacity ranges from up to 1.5 Mbytes on the System 150 to 5 Mbytes on the 200. The capacity of the main storage is what you'd expect to find only on much larger systems. Up to four drives provide a maximum of 160 Mbytes on the 150, and 1896 Mbytes on the 200.

WIDE VARIETY OF OPTIONS

The wide variety of options available include:

- Operating systems: MCS (WICAT proprietary operating system), UNIX, BOSS.
- Communications: local area networking, IBM 2780 and 3780 protocols.
- Languages: FORTRAN 77, APL, CIS-COBOL, RM-COBOL, C, Pascal, Assembler, SMC BASIC.
- Hardware: graphics CRT, video disk interface, additional RS-232C interfaces, tape streamer, tape cartridge, low-cost VDUs, printers.

- Applications software: financial modelling, word processing, sales order processing, stock control, sales/purchase/nominal ledger, incomplete records, job cost ledger.

NATION-WIDE SUPPORT

And they're all backed by our nation-wide network of customer support centres and service organization—giving you the kind of support and service only a major distributor can provide.

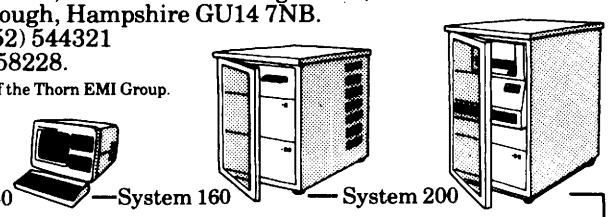
THE FULL STORY

To get the full story either call Ann Mackay or simply return the coupon.

Software Sciences

Software Sciences,
Abbey House, 282-292 Farnborough Road,
Farnborough, Hampshire GU14 7NB.
Tel: (0252) 544321
Telex: 858228.

A member of the Thorn EMI Group.



System 150 —System 160 — System 200

Please arrange for Ann Mackay to contact me.

Name _____

Position _____

Company _____

Address _____

_____

Telephone _____

Software Sciences,
Abbey House, 282-292 Farnborough Road,
Farnborough, Hampshire GU14 7NB.
Tel: (0252) 544321. Telex: 858228

EUUG
European UNIX systems Users Group
AUTUMN MEETING

to be held at Trinity College, University of Dublin, Eire

on 7-9th SEPTEMBER 1983

Members and delegates from Europe, America and Australia will be gathering together in Dublin at the *EUUG Autumn meeting* to exchange views and listen to International Keynote Speakers talk about UNIX, Networking, Benchmarking and Computer Printing and Typesetting among other UNIX related subjects. For the first time there will also be an '*Introduction to UNIX*'-training session on the first day. Anyone with an interest in UNIX as well as those already operating UNIX will find something of interest and there will be plenty of opportunity to ask questions and discuss problems with the experts present.

An *exhibition* will be held in conjunction with the meeting where delegates can see the latest equipment available. Vendors wishing to take space should contact the EUUG Secretariat for an exhibition booking form.

Student Type Accommodation is available for delegates within Trinity College, but it is limited, and will be allocated on a first come first served basis. For those wishing to book hotel accommodation Blooms Hotel, Anglesea Street, Dublin 2, tel: +353 1 715622, telex 31688 is recommended as a first class businessman's hotel and is very close to Trinity College - just outside the gates in fact. The rates are UKL 50 for a single room, UKL 60 for a twin room, and UKL 95 for a suite. Early booking is recommended as the hotels in Dublin become very busy in September.

The Secretariat holds a list of other hotels in the area and would be pleased to send brochures on request.

The booking form is included in the newsletter. A detailed programme will be sent shortly after all the offers of papers have been received.

All enquiries should be addressed to the EUUG Secretariat, Owles Hall, Buntingford, Herts. SG9 9PL, tel: Royston +44 763 73039.

How to Connect to EUNET

David S. H. Rosenthal

EdCAAD Studies, Dept. of Architecture
Edinburgh University
20 Chambers Street
Edinburgh EH1 1JZ

John M. Collins

Root Computers Ltd.
3 Hayne Street
London EC1A 9HH

Piet Beertema

Mathematical Center
Kruislaan 413
NL-1098 SJ Amsterdam

1. Introduction

The article *The European UNIX Network* in EUUGN Volume 3, Number 1, described the development of UNIX communications in Europe. How do you get your machine connected? We describe the equipment you need, the software you need, and what to do once you have it all to hand.

Some of the details which follow are applicable only to the U.K. and others only to the Netherlands. PTT regulations, and approved equipment types, vary between countries. Nevertheless, the broad outline will be applicable in all cases.

2. What You Need

You can connect to EUNET over the public telephone network in two ways; as a *passive* site or as an *active* site.

2.1. Equipment

2.1.1. Passive Site

1) A working UNIX system. Even the smallest PDP11 will do, though without either

   a) I and D space (/44, /45 or /70),

   b) or a text overlay system (e.g: XENIX's *23fix*)

   you will not be able to receive news, as the programs concerned are too big. Note that transferring files by *uucp* involves a handshaking protocol. The slower your machine responds the longer it will take. Don't ask a site to poll you at times when your machine is heavily loaded.

2) A V24 port on your system. You will need to dedicate this to the telephone network, and it

must have a **getty**(8) set for the appropriate speed running on it. Schemes where this port is manually switched to the phone will not work - people are simply too forgetful. Of course, you can also use this port to dial in to your own machine from wherever you happen to be. The port should set DTR, and detect DCD — an EIA DZ11 port will do.

3) A telephone line. This must either be a public line, or a line on a private exchange capable of being directly dialled from the public network.

4) A modem. The type depends upon the speed at which you connect:

   a) At 300 baud, you will need a V21 modem. Examples in use are the Racal MPS3021 (UK), Master Systems MS 300 SA AA (UK) and Repko V21 (NL).

   b) At 1200 baud, you will need a V22 modem, capable of Alternative B, or Alternative C, or (preferably) both. Examples in use are the Racal MPS1222 (UK) and Nokia DS2890 (NL).

If you don't have much experience with data communications equipment, do not use other modems than those mentioned. Then in case of troubles you can get (remote) assistance from a neighbour or backbone site.

5) A cable from the port to the modem. It must convey the signals in table 1. Beware — many modems have non-standard inputs and outputs on other pins. A cable that connects all 25 pins is unlikely to work.

Table 1 — Modem Cable

Male	Female	Signal
2	2	TXD
3	3	RXD
4	4	RTS
5	5	CTS
6	6	DSR
7	7	GND
8	8	DCD
20	20	DTR
22	22	RI

When choosing a modem, the important considerations are:

A) How fast is it? 300 baud modems are more common, and cheaper. The phone bills with 1200 baud modems are a lot less. Receiving more than a tiny fraction of the news at 300 baud is impossible: the phone calls would last for hours.

B) Can it automatically answer the phone? Unless it can, it is useless for *uucp*.

C) For a V22 modem, can it select V22B when connecting to Bell 212a modems? Bell 212a's implement a subset of V22B, and not all V22C modems can make the automatic selection of V22B in this case. This is important only if you wish to call or be called directly by sites in the US.

This equipment will allow an active site to dial you. Most such sites will prefer to do this during the night, so sites that like to turn their machines off at night will be at a disadvantage.

2.1.2. Active Site

To be an active site, you will need all the equipment above, plus:

6) A dialler. This can be either of the following:

   a) A V25 interface on the computer (DEC DN11), together with a suitable dialler.

   b) A V24 single-line dialler. These share the same V24 port on the computer as the modem, and are sometimes actually built into the modem.

   All the diallers in use on EUNET are of the second kind. Examples in use are the Racal

VA811S* (UK), the Master Systems IAD option for their MS 300 modem (UK) and the VECOM K18 (NL).

The important considerations when choosing a dialler are:

A) Can your *uucp* drive it? The vanilla Version 7 expects a DEC DN11. 4.1BSD has code for making a Racal multi-line dialler look like a number of DN11s. The EUUG D3 version has code for the VECOM, Master Systems, and Racal VA811/VA831 diallers. If you only have a binary license, you are pretty much in the hands of your supplier.

B) If it is a single-line dialler, can it be made completely transparent? Most of these listen for some sequence of characters, and if they find them, hang up the phone or do other nasty things. Such diallers are useless for *uucp*, unless this can be completely disabled. UNIX expects to hang up the phone by dropping DTR, and by the modem detecting loss-of-carrier, and not otherwise.

C) Does it permit use of the line for incoming calls as well? A vanilla Version 7 or 4.1BSD will not support the use of a single line for calls in both directions. But, with some minor fixes and a suitable modem/dialler combination, it is possible. (This question may not apply if you have a portselector between the dialler and the computer.)

D) Does it cope with the disagreement between various PTTs and Bell about when to connect the modem, e.g. start-of-answertone, idem+some delay, end-of-answertone? Some diallers do have (undocumented) facilities for this, but some experimentation may be needed to discover which side of the argument the called modem is on.

E) While in the process of calling, does it send tones that are in a modem data band? In that case you can expect problems with modem handshaking.

F) If you are on a local exchange, does the dialler cope with e.g. the dialtone? This is the most encountered problem with diallers, because local exchanges do not always comply with national PTT standards.

2.2. Software

The software used by the network is in three main parts. *Uucp* provides a transport service, moving files from one machine to its nearest neighbours*, and arranging for commands to be executed on these neighbour machines.

One set of commands remotely executed in this way provides the mail service. The standard */bin/mail* program is remotely executed (via a link to */bin/rmail*) so as to route mail to users on the neighbour, or to machines connected to the neighbour. Other programs in the mail system, such as the Berkeley *Mail*, *delivermail* and *sendmail* are used to provide a more comfortable human interface to */bin/mail*. We recommend to use Berkeley *Mail* as the interface to the users. The *delivermail* and *sendmail* programs act as a mail transporter, putting the stamps on it and handling failures.

The other set of commands provides the News service. To transfer news to the neighbour and to forward it to sites connected to the neighbour, *rnews* is remotely executed. Other programs, such as *readnews* provide a human interface to the news.

2.3. uucp

Fixing bugs in *uucp* is a Forth Bridge painting analogue. A reasonably serviceable version is on EUUG D3 (license UNIX V7 source) available from:

---

* This is one of the first type - it is converted into the second type with a VA831 V25-V24 convertor.
* The idea that *uucp* can move files to any machine in the net is the commonest misapprehension about it.

Mathematical Centre
EUUG Distributions
Kruislaan 413
NL-1098 SJ Amsterdam
Netherlands

if you have a source license. If you only have a binary license, you must pray your supplier has fixed it properly.

2.4. The News System

The News system is available on EUUG D3, even if you don't have a source license, from the same address as above.

2.5. Mailers

/bin/mail works, but its user interface is unpleasant if, as is not uncommon, your morning mail contains dozens of letters. The *emacs* mail handlers or Berkeley's *Mail* are available for 4.1BSD and make things tolerable. The mail systems are included in the EUUG D3 distributions.

3. What To Do

Even if you have a dialler, and intend to be an active site, it is better to take it out of circuit and make your first connection as a passive site. This reduces the number of problems to be solved at start-up time, and it is easy to put it back when things are working smoothly.

3.1. Passive Site

Take the following steps in the order they are set out:

1) Install *uucp* as described in the Section 2b document *Uucp Implementation Description*. In particular, check the following:
   a) Is */bin/rmail* a link to */bin/mail**? Is */bin/mail* owned by root and set-user-id? Is *rmail* a command that can be executed by *uuxqt*?
   b) Is the file */usr/lib/uucp/USERFILE* set up to allow all users to access files with path-names starting in *SPOOLDIR* (usually */usr/spool/uucp*)?
   c) Are the programs */usr/lib/uucp/uucico*, */usr/lib/uucp/uuxqt*, */usr/bin/uucp*, and */usr/bin/uux* installed with access modes 04111? Is *uucico* owned by root, and the others by uucp?
   d) Is there a user "uucp" in */etc/passwd*, with */usr/lib/uucp/uucico* as the shell field, and password "uucp"? Is its home directory */usr/spool/uucppublic*, and is this a mode 777 directory?
   e) Try logging-in as uucp on an ordinary terminal. You should get some strange characters including

      Shere

2) Install the modem and check that there is a getty at the appropriate speed on the modem line. If at all possible, use another modem, or (at 300 baud) an acoustic coupler to dial in to it and log in to make sure. At least dial the number and ensure that the modem answers.
3) Contact an active site and ask them to dial you. They will need to know the telephone number of your modem and its speed, your own login name (for mail), and your own telephone number (for when things go wrong). You and they will have to agree on a uucp name for your machine. The name will become known all around the world, and will quickly

* On Berkeley systems running */etc/delivermail*, *rmail* may be a separate program.

become impossible to change. The rules for this game are:

a) It must be seven or fewer characters, and they should be lower case letters, digits, or the minus sign. Upper case is possible in Europe, but you risk your mail going astray.

b) It should be mnemonic. In particular, a common prefix for a group of machines is good practice. For example, all the Edinburgh University machines have names like "edcaad", "edee", "edai" and so on.

c) It should resist the temptation to announce to the world how expensive your taste in hardware is. Machines get upgraded or replaced, and macho names like "xxxvax" or "xxx70" become inappropriate or worse as the machine in question goes out of style.

4) They will try to call you and invoke *uucico* by logging in as "uucp". If this succeeds, the rest is just tidying up. If it fails, check that the getty is at the right speed, and then investigate the strappable options of your modem. Some V22 modems especially are just full of enticing switches and straps. Resist the temptation to play with them, find someone else using the same modem for *uucp*, and copy their settings.

5) Install the active site in */usr/lib/uucp/L.sys* with a line like

```
edcaad passive
```

Install it as a user, with an agreed password, and */usr/lib/uucp/uucico* as its shell. The active site will log in as itself, not as "uucp" for additional security against impersonation. Change the encrypted password for "uucp" to "x" to prevent any further logins.

6) Edit your uucp-name into */usr/include/whoami.h* as "sysname" and re-compile everything that includes it†. This will at least mean *mail.c*. Edit the same name into */usr/src/cmd/uucp/uucp.h* as "MYNAME" and re-compile the uucp system.

7) Try sending mail to your contact at the active site, and to yourself, like this:

```
% mail active!mysys!me active!guru
Hello World!
^D
%
```

On a vanilla system, this will invoke *uux*, which will invoke *uucico*, which will discover that it can't phone the active site. To prevent this time-wasting, edit */usr/src/cmd/mail.c* and add the **-r** flag to the invocation of *uux*.

8) When you are pretty confident that this works, send a mail to "mcvax!piet" (Europe except UK) or to "ukc!mjb" (UK) to announce your arrival, with the following data:

```
Name:
Organization:
Contact:
Phone:
Postal-Address:
Electronic-Address:
```

Your active site will tell you how to get to "mcvax" or "ukc".

9) If you want to install the news system, install it as described in its documentation, make sure the users at your site have read the *Net Etiquette* article in EUUGN volume 3, Number 1, mail to your contact at the active site to start sending you the news and submit a complete announcement article to the net.news.newsite newsgroup.

---

† System III and some others have system calls for getting and setting the system name to obviate this step.

3.2. Active Site

If you are rich enough to afford a dialler, and too aggressive to sit still and be polled, you can now go on to become an active site. You should modify your *uucp* to address your particular dialler, preferably by finding someone who already has one, and ripping-off their code.

Once you can dial out reliably, change the *L.sys* entry and arrange to poll your active site for a while. Shell scripts to be invoked from */usr/lib/crontab* to dial machines at appropriate times of night are available from your active site.

Once you are an experienced active site, and if your dialler's hardware will do it, you can try dialling both out and in on the same line. Expect to spend time discovering weird options of, and interactions between your modem and dialler.

4. The Charges

All costs will be charged by the active sites to their subsites. These costs include:

1) A one-time fee for connecting a site to the network; not all active sites will charge for this.
2) Telephone charges at the published rates for all calls to the subsite plus some overhead.
3) The cost of transferring news to/from the USA through the backbone site; this cost will be equally divided over all the sites subscribing to news.

5. UUCP and Other Networks

There are alternatives to the dialled telephone network for mail and News transmission:

1) A direct link to another machine. It is very easy to run *uucp* over a hard-wired connection between a V24 port on one UNIX system and a V24 port on another, providing you remember to use a null-modem cable.
2) An X.25 or other packet-switched network can be used, in one of two ways:
   a) A UNIX system that is a host on such a network, and is also accessible from the telephone, can run gateway software that maps between the *uucp* mail system and the network's mail system. Eric Allman's *sendmail* system provides this for the ARPA Internet protocols, but extending it for incompatible national protocols (e.g. the UK's) may not be easy.
   b) A UNIX system that is a host on such a network can be "dialled-up" by other systems that are connected as "terminals" to the network. This technique is used in Edinburgh, but it requires that the network provide a totally transparent 8-bit path from a terminal to a host. Typical packet-switch networks fail this test, and even when they pass the technique is catastrophically inefficient.

   The upshot is that the cost of the modem and the phone calls is typically much less than the cost of the connection, and the special software needed to use the packet-switch technique.

Cookbook for setting up a National UNIX systems Users Group

Teus Hagen, EUUG

ABSTRACT

This paper is intended to help you set up a National UNIX systems Users Group. It can not be used as a manual or a set of rules of how the EUUG wants you to do it. If you have your own ideas do not hesitate to use them!
Omissions are due to the shorthand in writing this paper.

6. Why a Users Group

Groups are formed to join together the users of UNIX systems, to join the problems, to join the joy. Of course the group can be used to extend the joy to the vendors for equipment on which UNIX is used. Vendors provide you with the machines and peripherals, and you are their market. It is worthwhile to split the effort in fighting the UNIX beast.

7. What can be organised

National meetings or conferences, UNIX workshops, UNIX introductions, special interest groups, national UNIX network, advisements, publications, exchange of experience and stimulating the UNIX market.

8. Why national

You cannot expect that the UK will understand the problems you have with your national keyboard. You cannot expect that people from Holland will be around all the time to boot your system. But you cannot do it without the other users in Europe! And of course, the EUUG needs you!

9. Why have cover from the EUUG

Some of the needs can be fulfilled better in a union of national users groups, such as international conferences (you have not the money to invite all these people, you have not the time to do it, those people have not the time and money to travel all this time through all these countries), EUUG newsletter, networking, UNIX information service.

The EUUG can (and should) provide you with catalogues as such as available software, UNIX systems, with introductory information and memberlist, because there is always somebody somewhere in Europe with the same trouble as you.

10. EUUG arrangement

Every country should have their own National UNIX Systems Group (NUUG). If needed the country can split that in regional groups as well (RUUG). The RUUG is responsible towards to NUUG, the NUUGs are joined to the EUUG. In order to provide you with the following services, the EUUG needs some money:

- secretary costs (the EUUG has now a professional staff)
- printing and postage costs for the newsletter
- printing and postage cost for EUUG publications (catalog etc.)
- organising the EUUG conferences.

However the EUUG can provide startup support for new national groups as well. (The EUUG should be able to arrange subsidies via the EEC for her work). The EUUG should get enough money from out of the national groups to keep the EUUG running (and not the other way around).

11. Finance for the EUUG

The NUUG should provide enough finances to the EUUG to fulfill her role. Nowhere should be any profit. A yearly arrangement about the money for the EUUG is preferred.

12. NUUG responsibilities

So far the role of the NUUG towards to the EUUG is fixed and explained. The NUUG has pretty much her own constitution, but it should reflect the constitutions of other NUUG's via the EUUG. Preferably the membership arrangements should be roughly the same and no rule should fight other NUUG's or the EUUG.

13. NUUG members

Basically there should be five categories for memberships:

Installation membership (commercial and Academic)
Individual Membership
Associate Membership
Honorary Membership
Vendor Membership

Membership is based on a UNIX Systems license, proof of which must be given to the board (NUUG or EUUG). For AT&T license holders there should be no problem.

14. What about the name

The name: National UNIX Systems Users Group with some prefixing is just about perfect. AT&T will fight you if you have no "Systems" in it. National is a must if you want to play the game.

15. How to arrange a group

Have a national meeting. Do some advertising in national computing papers, but do not think you need to reach everybody, big meetings are a heavy struggle. Get at the meeting a list of people who are interested in joining. And try to get some people who are willing to form a committee. Keep in mind that the same people will be in the national executive board. You need someone for the finance, a secretary and of course a chairman. Arrange a special meeting with some vendors to get them organised as well.

16. What service can you give

Organise UNIX workshops (in some time schedule) to exchange information, to find a backbone site which can be hooked up to the network and arrange a meeting with a representative of the EUUG.

17. Official status

Up until now you are personally responsible for your acts. Your country should have arrangements ready for you to provide you with a legal cover, what you probably need for that is a constitution. Included here is some shorthand for what is in the constitution of the NLUUG (National UNIX Systems Users Group, Netherlands).

18. Questions

If you still have questions, please do not hesitate to call the EUUG secretary.

19. NLUUG constitutions

19.1. Name, date of constitution and location

19.1.1. Goal of the NUUG

The goal of the NLUUG is:

- exchange of information about UNIX
- distribution of software and documentation, as far as is allowed by licenses
- advice on hardware and software for UNIX
- preparation of the UNIX market.

19.1.2. Means:

- yearly (closed) meeting for members
- yearly (open) conference for members, vendors and UNIX interests
- UNIX networking
- EUUG membership
- communication arrangements with vendors and members.

19.2. Time schedule

For ever, starting on the 1st of January ending on the 31st December.

19.3. Membership

Five categories: main membership is installation member based on UNIX System license.

19.3.1. How to start as member

Written request to the board. The board decides with respect to the general membership meeting.

19.3.2. How to end as member

Being legally not a person (the company is dead), by written request for ending, by a decision of the general membership meeting, or by injury of the NUUG or EUUG.

19.4. Finance

Income:

- Yearly payment, fee yearly approved by the general membership meeting.
- Other ways like gifts and other benefits.

19.5. Executive board

Minimum of three persons, voted by the general membership meeting. The board decides who is doing what. The general membership meeting can dismiss an executive board member. Members of the executive board can leave the board after a minimum of 2 months. Yearly there will be one executive board member for (re)-election.

19.6. Responsibility

19.6.1. Representation

The chairman and secretary are allowed to represent the group legally. The executive board can appoint a plenipotentiary.

19.7. General membership meeting

19.8. Finance

Two members are elected to look after the finances every year. They will report to the yearly meeting. The executive board should provide access to all information about the NUUG's finances. The general meeting will approve the financial survey.

19.8.1. General meeting

The general meeting can be organised by the executive board (within a minimum of eight days) by a written request. The minimum quorum is 10 percent of members. A new meeting can be organised, if the 10 percent cannot be reached, in a time schedule not longer then four weeks.

Every member has voting rights. The decision is taken by majority of votes. A 100 percent vote has the same power as a general meeting decision.

19.9. Changes in the constitution

Changes in the constitution should go to the general meeting. The changes should be in written form at least five days before the actual meeting. The decision can be taken with a majority of two/thirds of local votes. With a general vote in a general meeting, a reannouncement is not necessary. Changes should go via the legal offices and should not be against the rules of the EUUG.

19.10. Ending the group

The group can be ended by a two/thirds vote on a general meeting or a two/thirds vote on a 'follow up' general meeting. Any financial profit should go to a group with the same goals.

20. Information sheet

It is important to have a brochure available with some general information about UNIX, the EUUG and the NUUG. The information brochure can provide information about:

- What is UNIX
- Where can you get UNIX (f.i. the address of AT&T).
- Some differences about the licensing.
- Some literature as f.i. the Bell System Technical Journal from July 1978, or some latest books.
- What is the NUUG, and what does it provide you.
- What is the EUUG.
- Software distributions.
- How to be a member: address, fee, account number.
- How to fill the membership form.
- Who is on the board of the NUUG.
- The address of the EUUG secretary: EUUG, Owles Hall, Buntingford, Herts SG9 9PL, tel: +44 763 71209, Great Britain.

EUUG Distributions

Teus Hagen

Mathematisch Centrum
Kruislaan 413
1098 SJ Amsterdam, The Netherlands

There are a lot of requests for the Modula II compiler. The trouble is that no site wants to do the alpha testing. If we do not find such a site, we cannot distribute that compiler.

The EUUG D3 Release 2 distribution with UUCP (UNIX System III and heavily improved), news release 2.10, and some non-distributable extras is ready to be sent out. The UUCP software is in beta testing now. The extras you will be sent with this tape consists of UCBmail, delivermail, sendmail and some configuration guides for mail. This last software is far from ready to be distributed. Alpha testing should be done and is done, but we cannot wait to long for that. Beware that most of the software distributed nowadays will not run on the older PDP-11 (non split-I/D) machines or machines without overlaying software.

Currently we are negotiating with Berkeley about distributing their software from out of the EUUG distribution centre. However, it seems to take a long time to correspond. The Berkeley distribution BSD2.9 (overlaying and job control for PDP11's) is now being shipped in the US. Requests for that distribution should be sent to the EECS Department at Berkeley (see the news in the 'Off the Net' article in this Newsletter). The source of BSD4.2 (VAX's) is frozen now. The BSD4.2 will be about the same as BSD4.1C (except for some bugs). Berkeley is quite busy preparing the documentation. Going from BSD4.1 (or even BSD4.0) to BSD4.2 can only be done via a clean boot of BSD4.2 and later dumping your 'tar'-backup of your old system into BSD4.2. So keep in mind that it is a time consuming job.

The EUUG has made an arrangement with the Software Tools Group in the US. The EUUG will distribute the software tools distributions of the STG. At this moment we have distributions for UNIX, RSX, VMS (VAX), UNIVAC and a machine independent (?) tape. The distribution is called EUUG D4 release 2 (UNIX, RSX, VMS, UNIVAX or MIT). For this distribution no license is required. Non-members can order this distribution as well.

For all distributions the contact address is

Mathematical Centre
EUUG Distributions
Kruislaan 413
1098 SJ Amsterdam
The Netherlands

Compatibility Quiz

Mike O'Carroll

Microsystems Unit, Dept. of Electrical Engineering
The University, Leeds LS2 9JT, England

Herewith a super new quiz for all you 'DEC compatible' fans! Answers, on a postcard please, to the appropriate manufacturer. (N.B. to help those of you who have never gone to another supplier, our answers are included below.)

I. QUESTIONS

Q1. What do you understand by the term 'DEC compatible'?

Q2. What do you understand by the phrase '100%'?

Q3. '[The controller gives] an emulation of all functional features of the DEC RJM02 .... subsystem'. Explain.

Q5. 'Fully supported in this country!' [my exclamation mark]. What is being supported here?

Q6. Are DEC 100% compatible? Think about it.

II. ANSWERS

A1. Certain features, such as the code number of the product, general register layout, etc. are not totally dissimilar from those encountered in the DEC version.

A2. Pick a number in the range from 0% - 90%. We award 90% to our current Emulex controllers which can do most things in a reasonably compatible manner (apart from minor things like multi-sector transfers). Dilog get a slightly lower mark for managing multi-sector transfers, but locking up completely if anything else tries an NPR at the same time. DSD do slightly better now, having fixed the problem whereby the extended address counter went 00, 10, 01, 11, in 'ascending' order.

Xylogics got 5% for an LSI-11 controller which managed to execute the bootstrap, but fell over as soon as it tried to write anything. A Spectralogics controller got 1% as it managed to read in the bootstrap, but failed to execute it. [If you find the last two hard to believe, ask the engineers who came to 'get it working in 10 minutes, squire'.]

A3. '... the maintenance mode features of the DEC RM02 controller is [sic] only partially emulated' - from the same manual as question. Presumably, 'maintenance mode' features are not 'functional' features. See also earlier correspondence in this august publication.

A4. 'The diagnostics marked with an asterisk require certain patches'. See question.

A5. The manufacture of telephone answering machines.

A6. I've given enough away already. Work this one out for yourself.

In order to stave off possible legal action, the author would like to point out that these comments (naturally) relate to our personal experiences with products made by the companies named. However, the points raised above have never been answered by those concerned (see question on support), so here's your chance folks! Incidentally, talking of legal action, here is a supplementary question:

Q7. What, if anything, does the Trades Description Act have to say about terms like 'compatible'?

Extract from 'UKC User's Bulletin No. 123', March 1983

Mike Bayliss

UNIX

1. Mail and News - the Continuing Saga

It seems only reasonable to explain what is happening to the mail and news systems on UNIX, since they have been changing frequently in the last few months.

In the beginning was UNIX, and then there were lots of them, and they talked to each other using something called uucp(1). And then somebody said 'wouldn't it be nice if all our nice mail programs could send mail over uucp'. So they did, but it was badly documented, and nobody else talked like that.

Also in the beginning there was ARPA, and all the ARPA machines talked to each other, and they started sending each other mail. It was documented and was called RFC#733, and was incomprehensible, but it was a *standard.*

Shortly after the beginning there was SERCNET and there was PSS, and all their machines talked and sent mail to each other. Then the JNT spake, saying 'let SERCNET and PSS understand each other, we need a *standard.* And JNT looked at RFC#733 and said 'we will use RFC#733 but it is not good enough for us, we will add things to it, and call it The Grey Book' and SERCNET and PSS talked to each other.

In the meantime there was UKCNET, (although it did not have such a posh name in those days). And all the machines on UKCNET talked (and talked and talked) and somebody said 'let there be *standards*'. And there were, two of them, the EMAS *standard* and the UNIX *standard* and they were incompatible.

Now EMAS was big and powerful and a mainframe and it talked EMAS *standard.* But UNIX was only a small mini-computer and it only talked UUCP *standard.* So the word from on high was 'UNIX will change'. And then EMAS spoke and said 'I am a JNT *standard* mailer, and will only talk to JNT mailers'. So UNIX (and all the other little UNICIES) got together and said 'we must do something' and they did. To talk to EMAS they turned all their mail into JNT mail and to talk to each other they put a JNT mail header in front of UUCP mail. And it sort of worked, but there was a multitude of 'core' files and lost messages.

And then a phone rang and said 'Hello I am Amsterdam, and I want to talk to your UNIX, and so do lots of other people in America'. UNIX said 'that is nice, I am lonely and I like to talk to other UNICIES, do you talk UUCP?' And Amsterdam said 'Yes, talk to me'. But then Amsterdam said 'you cannot call yourself UNIX, there are over 2,000 of us'. So UNIX became UKC, but only when it talked to the World, when it talked to UKCNET it as still UNIX, and UNIX became schizoid (and so did it's programmers).

At the same time, EMAS was told 'you cannot be EMAS, there are two of us, you must change your name'. So EMAS became UKC, but only when it talked to PSS.

But then the World realised there was life beyond UKC, and PSS realised there was life beyond UKC, and they wanted to talk to each other.

But PSS did not want to know about two UKCs and neither did the World. So EMAS and UNIX both said 'I will be UKC', and they fought, and the floor was covered in core dumps and rejected mail.

Then UNIX said 'I am small and flexible, and will make all our machines look like one machine called UKC' and the silence from EMAS was deafening.

But everybody was happy, for in the fullness of time we would be one site and lots of people would talk to each other through us, and UKC would become well known. However, still the UNIX mailer produced core dumps and it was NOT good, and the world could not talk to PSS.

And then the World shook, for ARPA said 'RFC#733 is bad, you will use RFC#822' and the

people who write UNIX mailers said 'we want a *standard*, let us use RFC#822', but they did not produce the code. And then the JNT said 'We will change the Grey Book, but we will not change it', and JNT used RFC#822, but changed parts of it, and said to SERCNET and PSS 'you will change (please)'.

And the UNIX mailer said 'HELP!!!!!' and 'I'm confused'.

So now to the serious part, with apologies for any libel of JNT, ARPA or EMAS.

ARPA now runs RFC#822 mailers, and SERCNET/PSS is changing to new JNT. EMAS is running old JNT but plans to change to new JNT. UNIX runs UUCP, but plans to switch to RFC#822. This is, however, a lot of code, which we intend to obtain from other sites. By the time you read this bulletin, UNIX will be running 'bridging software', (simple, crude and nasty) which converts UUCP and JNT mail formats.

Within a few months UNIX (and COMET, REGI, ROGER) will switch to RFC#822, and EMAS will switch to new JNT. The end result will be better, more *standard* mailers with some nice new features.

How does this affect the news system?

The first version of news we ran here was news2.8, which is being changed to news2.9 at the moment, to clear various bugs and features. In two months we will change to news2.10 which is a drastic overhaul of news2.9 to provide compatibility with RFC#822.

What do all these letters stand for?

UUCP Unix to UniX CoPy
ARPA Advanced Research Projects Agency (American)
SERCNET Science and Engineering Research Council NETwork
PSS Something or other to do with the Post Office Network
JNT Joint Network Team
RFC Request For Comments (seriously!)
UNIX is, of course, a Trademark of Bell Telephone Laboratories Inc.
UNICIES is a plural of UNIX
EMAS might be the trademark of somebody or other.

UN*X Micros Catalog

Teus Hagen

Mathematisch Centrum
Kruislaan 413
1098 SJ Amsterdam, The Netherlands

The UN*X micros catalog consists of the most up to date overview of micro computer systems, which run UN*X, available on the market now. Each UN*X system is described in full detail: manufacturer and address, CPU used, name of the system, which UN*X version it runs, who did the port, which manufacturer made the peripherals (and controllers), the names of the distributers, etc.

So if you are about to purchase a UN*X system this book can help you a lot. The book ia available for printing costs UKL 4.50 (excluding VAT and postage) for EUUG members. Non EUUG members are charged UKL 10.- (excluding VAT and postage). Orders for the book (send request and number of copies you want) can be sent to the EUUG secretary.

Large Kernels on Small Machines

Paul Singleton

Computer Science Dept, University of Keele
Keele, Staffs ST5 5BG, England

Large Kernels on Small Machines

A simple and robust kernel overlay scheme is available for Version 7 on PDP 11/23, -24, -34 and -60. It will work happily alongside the Calgary mod, freeing an additional 30Kbytes of precious kernel space.

Essentially, KernelOverlays ports some C functions outside the kernel address space, and calls them indirectly. Apart from a couple of dozen lines in the machine-language assist, the kernel sources are unchanged, with a modified 'ld' doing all the work. Some new options specify which functions are overlaid: the choice is not critical, although known bottlenecks (Glaswegian terminal drivers?) are probably left resident.

Example

Our 11/34 supports twenty-four serial lines with 50 buffers and 150 inodes in core. Until we get a decent processor (a UNIBUS 68K board?), our kernel looks something like:

resident text	16Kb
data + bss	24Kb
ported buffers	25Kb
ported inodes	20Kb
overlaid text	27Kb

Thus our kernel hogs 112Kbytes of primary memory, leaving rather less for processes than we would like. One condition: resident text + data + bss must not exceed 40Kbytes; this is not a problem, since nearly all kernel text can be ported if necessary. The performance cost of overlays is almost negligible.

Snags

'adb' doesn't know about overlays - would someone out there like to hack it? Has someone already done so?

the new 'ld' isn't portable to VAXes for cross-compiling (Any Wellings and chums at York have apparently fixed this).

Bonuses

profiling: it is trivially easy to count (dynamically) the indirect calls to each overlaid routine, and then perhaps make the more popular code resident again. But remember to suppress the linker's clever optimisations of intra-overlay calls.

a speed-ip: the resident kernel is accommodated within five memory segments. One more is used for overlays, and one for per-process data. With care, these two segments can be borrowed for "two-address" activities on physical memory such as copying buffers (the eighth segment maps the I/O space, and cannot feasibly be used otherwise). The MFPD and MTPD instructions, reputedly slow on 11/23s, can thus be avoided in 'copyin', 'copyout' and 'copyseg'.

user overlays: the same linker can produce overlaid user processes. Segmentation registers cannot be altered from within user mode, so a spare TRAP instruction (actually EMT) is used to quickly enter the kernel. A new system call would have served, but the performance advantage of trapping directly to the dispatch routine was evidently hard to resist.

Credits

The linker was modified by Ken Harrenstein at SRI, and further hacked by Jim McKie (while at Edinburgh). No doubt this stuff will find it's way into the EUUG distribution, but anyone who wants a kit of parts (on mag tape or floppy) is welcome to contact us.

Greater Manchester UNIX Users Group

Brian Clark

Department of Psychology
The University, Manchester M13 9PL, England

This group consists of representatives from four Departments of Manchester University (Owens), two Departments from the University of Manchester Institute of Science and technology (UMIST) and one from Salford University, all running various flavours of UNIX on computers ranging in size from micros(?) to VAXes. There are a few more Departments which either now or shortly expect to run UNIX who have been informed of our existence and who will no doubt join us for future meetings. So far the Group is University based. However, any UNIX users in the area who would like to join us will be most welcome. For further details please contact me.

The inaugural meeting of the group was held at the beginning of March when a register of hardware was compiled along with a list of people who we thought may be interested but had escaped the 'net'. All present described the type of machine they work on, the software they use and what is the principal use of their machine. This established useful contacts and for some removed duplication of effort.

A second meeting was held in the middle of May which was attended by representatives from all the UNIX users mentioned. A report was presented on the EUUG Meeting in Bonn which stimulated further discussion on what was said there and related topics. It was decided that we ought to try to get ourselves 'networked' as quickly as possible, and as a start a Department from Owens and one from UMIST agreed immediately to try to establish a link.

We have decided to hold just two meetings a year, although there will be more if it is thought necessary. For the moment we believe that it is a definite advantage that we are all within 4km of each other. However, this does not preclude anyone from further afield becoming members of the Group; if you are interested, contact me. We have also decided for the present not to have any formal speakers or agenda but to improvise, somewhat on the lines of the EUUG one-day meetings of a few years ago. With this approach we hope to get to know each other and each other's work tolerably well so that perhaps we can discuss UNIX on a more specialised basis, leaving the more general aspects to, say, the EUUG.

UUCP Connections via the International Public X25 Links

Teus Hagen

Mathematisch Centrum
Kruislaan 413
1098 SJ Amsterdam, The Netherlands

In September 1983 the Math. Centre will start to try to hook up the backbone sites in Europe via X25. To be able to test those connections and to try to get the software working, we need to have some test sites who have access to the public X25 network.

So if your site meets these basics please send your site name, name of the contact person(s) and your X25 number to me at the above address (or by EUNET to ....mcvax!teus).

At this moment (27th June) 56 sites in Europe are on EUNET! So about 20% of the members can already be reached via the network.

UNIX
Book List

Emma Searle

UNIX Support, Microsystems Software Unit
South West Universities Regional Computer Centre
University of Bath
Claverton Down, Bath BA2 7AY, England.

These lists do not claim to be comprehensive, additional contributions are welcome.

Books on UNIX

1. Using the UNIX System
   Richard Gauthier
   Reston Publishing Co. (Prentice-Hall) (1981).

2. A User Guide to the UNIX System
   Rebecca Thomas, PhD and Jean Yates
   OSBOURNE/ McGraw-Hill (1982).

3. UNIX - The Book
   MF Banahan and A Rutter
   Sigma Technical Press (Wiley) (1982).

4. A UNIX Primer
   Ann Nichols Lomuto and Nico Lomuto
   Prentice-Hall (1983).

5. The UNIX System
   Stephen R Bourne, Bell Laboratories
   Addison-Wesley (Mar 1983).

6. Concurrent Euclid, UNIX and Tunis
   RC Holt, University of Toronto
   Addison-Wesley (1983).

7. The UNIX Operating System
   Kaare Christian
   John Wiley and Sons, Inc (1983).

Books on C

1. The C Programming Language
   B. Kernighan and D. Richie
   Prentice-Hall (1978).

2. C Notes - A Guide to the
   C Programming Language
   C.T. Zahn
   Yourdon Press (1979).

3. Learning to Program in C
   Thomas Plum
   Plum Hall (1983).

4. The C Puzzle Book
   Alan Feuer
   Prentice-Hall (1982).

Related Books

1. Software Tools
   BW Kernighan and PJ Plauger
   Addison-Wesley (1976).

2. Software Tools in Pascal
   BW Kernighan and PJ Plauger
   Addison-Wesley (1981).

3. Text Processing With UNIX
   nroff, troff, and eqn
   DW Barron and MJ Rees
   Addison-Wesley (1983).

Off the Net

These articles appeared on the UNIX network. Some of the boring header info has been taken out and a little formatting added.

From: mcvax!ukc!pc
Newsgroups: eunet.general
Title: CACM to merge with BYTE?
Posted: Wed Jun 15 12:03:42 1983
Organization: Computing Lab. Kent University, England

>From tbl Thu May 19 20:15:20 1983
Subject: too true to be a joke?
***** sri-unix:net.misc / parsec!Anonymous / 11:46 pm May 7, 1983

a074 0226 29 Apr 83
PM-CACM Folds, Fkr,237
America's Finest Computer Journal to Fall
Eds: Human interest for computer related Sunday supplement
By V. K. Rokofu
Unassociated Press Writer

SILICONE VALLEY (UP) - The world of academic computer science was rocked today by an announcement by Peter J. Denning that the foremost journal of computer science (The Communications of the ACM: CACM) will cease publication with its March issue. The publication is merging with Byte magazine, a popular hobbyist computer rag. Readers of the CACM knew something was amiss when they received their recent March issue which contained almost no technical matter whatsoever. The journal which formerly published papers pushing forward the state of art in computer had resorted to articles such as "Comparing Two Microcomputer Systems: CP/M and HDOS" and "Remote Office Work: Changing Work Patterns in Space and Time". Advertisements for such state-of-the-art companies as Macmillan publishing (books on BASIC-80 and CP/M) appear in the March issue. The March issue also featured children and Apple microcomputers on its cover.

"We're simply delighted that CACM has seen the light", exclaimed Mark Haas, managing editor of Byte magazine. "We saw their editorial content deteriorating over the last year and figured that 1983 was going to be the year of hobbyist computing for CACM!"

Dr. Denning, former chairman of Purdue University's Computer Science Department, announced Dr. D. Dobbs as his replacement editor. He also named Dr. Portia Isaacson as Technology Trends and Fashion Editor. Feature editors include Adam Osborne (architecture and aesthetics), David Ahl (software for the masses), and Steve Ciarcia (logic design and hardware).

"It's just too damn much work to keep trying to think up new material every month", Dr. Denning sighed. "It's a lot easier to recycle stuff from the earlier years of computing and peddle it as "state of the art microcomputer research". I've made a bundle consulting on just that kind of stuff."

In keeping with the academic bent, the new CACM/Byte magazine's next issue will have articles by key researchers and authors in the field. "BASIC Not Considered Harmful At All" by Edsgar Dijkstra headlines the issue, guest edited by Steven Jobs, founder and genius behind Apple Computer Corporation. The issue includes a program in which every line is either the source or sink of a "goto" command. "Assembler Programming For Fun and Profit" leads the new "home entrepreneur" section, edited this month by Adele Goldberg, a reformed high level language

programmer. Dr. Goldberg, who recently joined the staff of CACM/Byte after hearing of the merger, explained that "Peter's right. It's just a real hassle designing new languages and systems all the time. Assembler is where it's always been: speed, power, ego. I've been a closet 'asm' programmer for years and I've finally decided to share my joy with the world."

Some of the surprises in the next issue include a non-bitter article by Dr. Niklaus Wirth: "Why Real Men Program in Fortran". When contacted at his bank in Zurich, Dr. Wirth commented, "Peter's got a real winner here all right. Ever since I designed and constructed that turkey called the Lilith, I've known that microcomputers were the home of the fast buck. I figure I can recycle all my old crap in about two years and make maybe ten times as much money as I did the first time around."

One disappointment to many universities will be the removal of the old "Position Announcements" section and its replacement by a "Personal Advertisements" section. Typical personal ads resemble: "Straight White FORTH programmer desires to meet Female with BASIC background that is stacked well..."

The new CACM/Byte will no longer contain the "Calls for Papers" for most of the high-technology computer conferences. "They were boring, anyway" says young Mortimer Antiluchee, 10 year old APPLE computer owner, whose picture was featured on the cover of the March, 1983 CACM issue. The cover also shows geriatric computing, a house for former Algol programmers, and scores of cars fleeing Boston's minicomputer manufacturers for the greener pastures of microcomputing.

In a related announcement, ACM Associate Editor in Chief Lloyd Fosdick explained that CACM will now stand for "Childrens' & Adolescents' Computer Magazine". He elaborated, "We've known this was coming since the first budget shortage. Byte has been making bucketfuls of money and it's time we cashed in before the industry is overrun by teenage computer hackers."

When contacted for comment, Yoko Sunoto, High Technology Minister for Japan's Fifth Generation Computer Project, stated, "Ha ha. Isn't technology wonderful? Last year most of those guys couldn't even spell computer. We will bury you."

****

From: aps@decvax.UUCP
Newsgroups: net.unix-wizards
Subject: VAX UNIX from DEC; clarifications
Posted: Tue Jun 28 02:01:22 1983

Sorry that this is here. I am not advertising (I think) but want to clear up some incorrect information.

Regarding Will Westfield's trip report excerpts via Mike Muuss:

> The decision as to whether DEC will distribute/support 4.1 or 4.2 has not been made at this time. We are 80 percent sure that it will be 4.2. Factors are 4.2's overall quality, reliablity, and our gut feelings about it. (We are having good experiences with 4.1c, except sendmail, of course.) If we go with 4.2, we will also ship the TCP/IP and everything else that comes with the 4.2 distribution, including drivers for non-DEC devices! The sources will not come with the standard DEC product. As with other DEC software products, one will have to buy it and pay through the nose. Whether or not we will require the customer to have a source license already is not yet determined and is driven by ATT restrictions. I feel that 99 percent of all changes and modifications will find their way back into the Berkeley Software Distribution.
>
> DEC will not support UNII not supplied by DEC (or those DEC UNII that are hacked up by customers, as with any other DEC software product). The person who gave the talk that said that DEC would support non-DEC UNII on a "best effort" basis was refering to hardware support. That person is a member of the Field Service group at DEC.

For other information regarding DEC's UNIX offerings, call

Bernie Toth at
(603) 884-3364.

aps.

****

From: carl%UCBERNIE@ucbvax.UUCP
Newsgroups: net.unix-wizards
Posted: Wed Jul 6 01:27:08 1983
Organization: U. C. Berkeley Computer Science

Subject: 2.9BSD availability

We've received a number of requests to post something about the availability of 2.9BSD. This article is in response to those requests (and an attempt to cut down our phone bill). Please post any followup articles to net.unix.2bsd.

AT&T and the University's lawyers have agreed on the format of our new license and we've begun shipping ordering packets. They have been sent to anyone who had previously requested one. They have not yet been sent to those of you who have 2.8BSD tapes.

Copies of the five raw components of a packet have been deposited in ~uucp/2bsd on ucbvax and may be copied with uucp. There are two parts:

l c l. Blurb.ms | Checklist.ms | publicity and order forms OrderForm.nr |

License.ms |
| license agreement ScheduleA.ms |

Note that ScheduleA is enormous (currently 165563 bytes).

Technical questions may be directed to me (carl@berkeley, ucbvax!carl). A copy of a draft of the paper describing the changes between the 2.8 and 2.9 kernels is available (by electronic mail only) from me. Requests for order packets should be sent to dist2@berkeley (ucbvax!dist2). If you must, we can be reached by US mail at

Berkeley PDP-11 Software Distribution - 2BSD
Computer Science Division, Department of EECS
573 Evans Hall
University of California, Berkeley
Berkeley, CA 94720

or by phone at (415) 642-6258 (although you're not likely to get anything but an answering machine). Electronic mail is preferred. To answer some of the most often asked questions, I've included the first couple pages of our information packet below.

Carl Smith

Second Distribution of Berkeley PDP-11* Software for UNIX** Release 2.9 (revised June 1983)

A new release of the UNIX system with many enhancements is available from the Computer Science Division of the University of California at Berkeley. It is a complete V7 UNIX system, including the kernel, all standard utilities, and additional Berkeley products. The kernel will run on any PDP-11 with memory management hardware and at least 192K bytes of memory, including the 11/23, 11/24, 11/34, 11/34A, 11/40, 11/44, 11/45, 11/55, and 11/70. It supports most common disks (RK05/06/07, RL01/02, RM02/03/05, RP03/04/05/06, and emulations of these) and tapes (TM02/03, TM11, and TS11). With only a few exceptions (pcc and INGRES), all of the programs in the release will also run on all of the supported machines. The major kernel changes since the 2.8BSD distribution are:

- Process control, a mechanism for stopping and restarting jobs in foreground or background, and the new reliable signal mechanism that supports it. This is nearly identical to the process control facility of 4.1BSD VMUNIX (the Berkeley VAX UNIX system).
- Vfork, a more efficient version of fork.
- Automatic reboots, after crashes or on demand.
- Automatic detection of hardware configuration at boot time, with most of the configuration-dependent addresses and vectors in a single ASCII file.
- Much easier kernel configuration process, with most parameters in one machine description file.
- There are numerous efficiency changes. System overhead has markedly decreased in a number of areas: floating point traps (90% decrease) overlay switches (45% decrease), and system calls (22% decrease).
- There have been many bug fixes. The system is now far more robust.

Other features of the kernel, which were also in the 2.8BSD release, include hashing buffers and inodes, moving buffers and clists out of kernel data space, and the 1K block filesystem. The system supports kernel overlays, allowing it to run on nonseparate I/D machines. It also supports user overlays, so that ex version 3 can be run, even on nonseparate machines!

The Berkeley tty driver is included; it correctly handles erase and kill characters on crt and printing terminals, including correctly backspacing over tabs and control characters.

The enhanced Berkeley implementation of the TCP/IP network facility is included.

Changes to the kernel are conditionally compiled with mnemonic names, making it easy to turn on and off features you decide you do or do not want. This kernel contains contributions from Berkeley's Computer Systems Research Group, the U.S. Geological Survey system, DEC's UNIX Engineering Group, and Tektronix (to mention only a few).

This package also includes the instructional Pascal system, the editor ex, the INGRES database management system, and other software (some of which is described below). Source code, binaries and machine readable versions of all documentation are included. The distribution is provided on two 9-track 800BPI magnetic tapes, one of which is bootable and contains the standalone utilities required to bring up a root filesystem and the kernel. The remainder of the sources, documentation and binaries are in tar format, blocked by a factor of 20 (10240 byte records). Tapes written at 1600BPI are available, as are tapes intended for use on the DEC TS-11 tape drive. We will supply the magnetic tape(s) on which the software will be written. Distributions of the software on disk media are not available. Tp and cpio formats are also not available.

---

*DEC, PDP, and VAX are trademarks of Digital Equipment Corporation. **UNIX is a trademark of Bell Laboratories.

Important Addresses

For **EUUG** subscriptions or questions concerning EUUG membership:

EUUG secretary
Owles Hall
Buntingford
Herts SG9 9PL
Great Britain
Tel: Royston +44 763 71209

If you have a question, and you don't know who you should contact, please use the above address.

For subscriptions to the Dutch national group **NLUUG:**

NLUUG secr.
Marten van Gelderen
Nikhef-K
Postbus 411
NL-1009 AJ Amsterdam
Netherlands
Tel: +31 20 5922030

Articles or any material which should be in the next **newsletter**:

Stichting Mathematisch Centrum
EUUG editor
Jim McKie
Kruislaan 413
NL-1098 SJ Amsterdam
the Netherlands
Tel: Amsterdam +31 20 5924127

net address: mcvax!jim

If you want to hook your system up to the network and are looking for an address, well here they are:

For **England**:

University of Kent
Mike Bayliss
Computer Laboratory
Canterbury CT2 7NF
England
Tel: +44 227 66822 x 7615

For **Scotland**:

University of Edingburgh
CAAD Studies
David Rosenthal
20 Chambers Street
Edingburgh EH1 1JZ
Scotland
Tel: +44 31 6671011 x 4598

For **The Netherlands**:

Mathematical Centre
Teus Hagen
Kruislaan 413
NL-1098 SJ Amsterdam
Netherlands
Tel: +31 20 5924127

For **Switzerland**:

CERN
D. Wiegandt /DD
CH-1211 Geneva 23
Switzerland
Tel: +41 22 834940

For **Denmark**:

University of Copenhagen
Institute of Datalogy
Keld J. Simonsen
Sigurdsgade 41
DK-2200 Copenhagen
Denmark
Tel: +45 1 836466 x 14

For **Belgium**:

Vrije Universiteit Brussel
Medische Informatica
Erik Blockeel
Laarbeeklaan 103
B-1090 Brussel
Belgium
Tel: +32 2 4781520/1438

For **Germany**:

Siemens AG
Michael Uhlenberg
ZT1 INF 212
Otto Hahn Ring 6
D-8000 München 83
W. Germany
Tel: +49 89 63644622

For **France**:

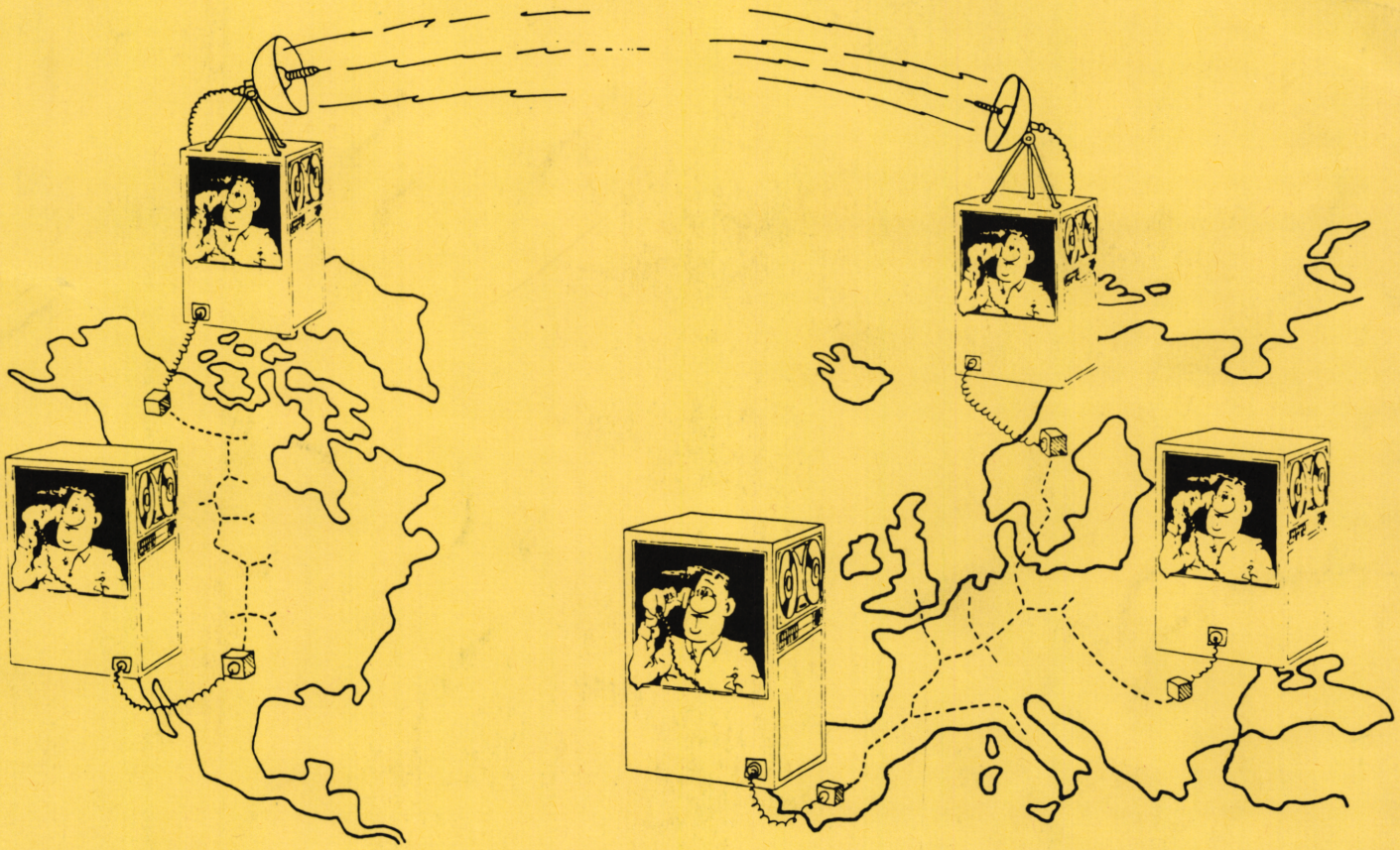
CNAM
Lab. d'Informatique
H.C. Lucas
292 Rue Saint Martin
F-75141 Paris Cedex 07
France
Tel: +33 1 2712414

If you are outwith the above countries, you will be asked to be a central site for your country, and you are invited to hook up your system to the Mathematical Centre.

If you have any trouble connecting up to your local site, please contact:

Mathematical Centre
Teus Hagen
Kruislaan 413
NL-1098 SJ Amsterdam
Netherlands
Tel: +31 20 5924127

net address: mcvax!teus



The Secretary
European Unix® Systems User Group
Owles Hall
Buntingford, Herts.
SG9 9PL.
Tel: Royston (0763) 73039.