Editor’s Column
(Susan Small)

I confidently predicted in my last column that the August issue would focus on UNIX for PCs. Reviews had already been promised and I was even spoilt for choice over who would review BSD/386 and Linux! Well, I made the wrong choice and my reviewer has not come up with the goods, despite dire threats by me via e-mail. There is, however, a review of the MKS Toolkit, and of Norton’s Guide to UNIX.

Of its own accord, this issue has rather taken on a Systems Administration flavour. There is the announcement of the '93 LISA which Neil Todd has been working hard to put together. He’s not a mind reader, however, and needs you to tell him what you would like to see organised and what you think other members would like to hear about. This is your Group. If you have got something that you feel you could talk about, if only UKUUG would offer a suitable platform, let us know and we’ll do our best to arrange something.

The LISA Workshop is also the forum for the announcement of UKUUG’s latest initiative - SAGE/UK (see below); and Neil has been able to secure the participation of Evi Nemeth, who will be able to share her wide experience of system administration with those present.

Alain Williams sent me, a while ago, a nice piece on the Laws of System Administration by Steve Simmons and I thought this issue was turning into the appropriate vehicle for it.

You will also find inside an update on the UKUUG Archive maintained at Imperial College. As Stuart says, the success of the Archive can easily be measured by the number of its users. This very success is the reason why a number of contributors to this issue do not have their picture gracing their column (Stuart included :-). My last job, before printing out the final copy for delivery to the printer, is always to trawl the archive and transfer to my home machine the pictures I need from the FaceSaver files. Despite trying to login for most of Sunday afternoon, I wasn’t able to make the connection because there were already too many users logged on! So apologies to Jane, Stuart and Gary for being faceless in this issue.

Contact addresses can be found, as usual, on the back page.
Advertisements consisting of 2-3 column inches will be accepted from members at no cost. However, if you wish to insert an A4 flier for dispatch with the Newsletter this will cost £100. Full details of this service can be obtained from the UKUUG Secretariat. Deadlines for copy for future issues appear below, but you don’t have to wait until the deadline if you have news of a forthcoming event - let me know now!

Deadline: 19 September
Publication: October

Deadline: 19 November
Publication: December

UKUUG News

Report from the Chair
(Mick Farmer)

As I mentioned in our last issue, your Council are planning new services to make your membership better value than ever. Both the UKUUG and EurOpen are trying to work more closely with USENIX, our equivalent technical organisation in the USA. Therefore, I went to the latest USENIX conference in Cincinnati on behalf of both organisations. Here’s a brief trip report. You’ll find details of agreed new services elsewhere in this issue.

Saturday — Flight Out

This is only my third transatlantic flight, but this time it’s merely 8½ hours direct to Cincinnati; enough time to read Terry Pratchett’s *The Carpet People* and David Lodge’s *The Picture Goers* between ghastly airline food (where do they find it :-)). Met the USENIX organisers and some early arrivals at the hotel, but they’re going to the baseball game. I opt for a Chinese meal with a friendly guy from one of the Mid-West Mini-Bells and an early night.

Sunday — Talking

. USENIX Board Meeting

This starts at the very unfriendly time of 9.00am, but at least it’s in our hotel. A cold breakfast buffet is provided for those still not fully awake. This meeting is much like a UKUUG Council meeting, volunteers reporting what they’d done since the last meeting, and explaining what they intend to do in the future. However, USENIX is much larger than the UKUUG and organises many more events than we do. Their Board is larger (about twelve people) and so is their paid Secretariat. The current Chair, Steve Johnson, keeps the meeting on schedule and they seem to have similar problems to us and EurOpen. The numbers attending the large conferences are dropping, but more and more attend themed workshops, such as LISA, Micro-Kernels, and Mobile Computing. It’s an art choosing the next hot topic in computing!

Before my report, most of their Board thought that EurOpen had ceased to be. After putting them right, I still sensed that they thought the end had merely been postponed. However, we agreed on closer collaboration between Secretariats, Newsletter editors, and SIGs, which should provide them with a stream of information proving that EurOpen is still alive and kicking. I hope that this conduit proves to be two-way as well.
They finally go into closed session, giving me time to have a well-deserved drink, and think about dinner.

Opening Reception

This is supposed to bring delegates together, especially those coming to a USENIX conference for the first time (this is often 50% of the total, a similar figure found at EurOpen conferences). However, there’s only frankfurters and soft drinks available, so a group of us veterans (didn’t I see you at the last USENIX conference?) go out for something more substantial.

Monday — Finding my Bearings

This is the first day of tutorials, so it gives me a chance to wander around Cincinnati taking in the sites and the characters that inhabit this "northern-most Southern Town". There’s an intriguing first-floor level (second level to an American) walkway connecting most of the hotels and department stores which avoids the hot sidewalks and pedestrian crossings. It’s like walking out of The Ritz Hotel into Harrods, then into The Savoy Hotel, then into Selfridges, without noticing any discernable difference, apart from the colour of the carpets. However, ground level is more interesting as there’s more variety in shops and other establishments.

Museum Visit

The afternoon was spent with Greg Rose (AUUG) at the Cincinnati Museum housed in their 1930s, Art-Deco, Grand Central Station. Amtrak still runs, but only from a couple of tracks off to one side. The remainder of this amazing building contains two museums, two wide-screen cinemas, and other assorted services. The museums were set out like nature trails with one hall leading to another. The history of the town was fascinating, with lots of details, including a full-scale mock-up of the early waterfront! All stacked away in the bowels of this huge station. It must have been something in its heyday.

The day ends with a relaxing meal, courtesy of the USENIX Board at the second best French Restaurant in town (it shares a kitchen with the best one in town).

Tuesday — Registration and Meetings

Second tutorial day, but more delegates arriving all the time. Now’s the time to register and buy all those tee-shirts before it gets impossible to move. Registration is slick so I’m soon at the USENIX booth purchasing clothing for wife, daughter, friends, etc. As I’m here to talk to the SAGE organisers, I take the opportunity to introduce myself. Two minutes later I’m invited to a SAGE Board meeting, so that takes care of the rest of the morning.

The Internet Terminal Room is now fully functional so I can spend some of the afternoon catching up with my e-mail. The USENIX FaceSaver is making a comeback at this conference, but I can’t discuss things with them yet — there’re still a few problems with the printer (just like the UKUUG FaceSaver :-). An evening out with Dennis Ritchie, Rob Pike, and a group of others from Bell Labs brings me up to date on what they’re doing (one interesting development, at least from my point of view, is interactive video into their homes with the head end at the Labs, wow just think of that bandwidth :-).
Wednesday — Conference Starts

The Conference starts in earnest and the exhibition opens (but only for two days).

- Evolving New Interface Technologies for UNIX

This was the title of the keynote speech given by an extremely enthusiastic and agile man from SunSoft (but ex-Macintosh) who's spent 20 years designing GUIs. His view was that we still had a very long way to go (couldn't agree more there) and that we had to give more credence to human satisfaction. Lots of hilarious analogies, and walking all over the stage explaining how stupid computers are (agreed), implied that we must be more efficient in producing software if we're going to advance substantially (agreed). Advanced interfaces are the answer (not sure), together with tools that really work together (agreed). Food for thought.

- Five Years of Gateways and Hackers

This talk by Bill Cheswick from Bell Labs was virtually a re-run of Cliff Stoll's *The Cuckoo's Egg*. His work keeping Bell Labs safe from hackers was made more interesting by "playing" with a real one! He ensnared the hacker with tit-bits of information, finally luring him into a "jail" machine where his every move was monitored. Like Cliff, he didn't find the authorities encouraging when he thought it time to catch the person...

- That's Easy with my Editor

This was a three-cornered debate between exponents of Emacs (FSF spokesperson), Sam (Rob Pike), and Vi (Tom Christiansen), punctuated with questions from the floor of the form "How would you do ... with your editor?". In my view, Rob won the debate ("it's the familiar ed sequence ..."), followed by Tom ("3k4w5d6y ..."), and FSF ("just bind these macro calls to this escape sequence ...").

- Oldenburg Brewery Visit

We had a couple of hours to kill before the important BOFs started, so five of us got together to visit the most important "Micro-Brewery" in Kentucky, just over the Ohio River. I'm not sure why it's called a Micro-Brewery, unless this has to do with their output compared with the big conglomerates. They have the largest collection of beer memorabilia in the USA. We saw the brewery, but not in action, and learnt that they supplied beers for many organisations, bottled under their own labels. Advertised as brewing "European warm beers", their tasting samples were all as freezing cold as those served in the city's bars.

- Open Meeting of the SAGE Board of Directors

This consisted of the Board answering questions from the floor. Most were familiar, concerning people's worries about being recognised as a true professional. A couple of Brits came up to me after the meeting expressing interest in our attempt to create SAGE/UK (see Lindsay's article elsewhere in this issue). I'm really astounded by the number of us who travel to the USA for a USENIX conference; do they also consider EurOpen conferences worth going to?
Thursday — UKUUG Speaks

A working day after the excitement of the opening day.

- Exhibition

The exhibition closes today so it’s imperative I visit some of the stands. First the O’Reilly stand where I confirm a meeting later in London with Bob Erwin, their publicity officer; I’m hoping to strike a deal giving members of the UKUUG discounts on their books (see elsewhere in this issue).

- FaceSaver

The FaceSaver is now running smoothly on a NeXT box, self-service. Slow scan TV shows your face in a small window, just click the mouse button when you’re ready. It’s very smooth, but they’re already worried about NeXT pulling out of hardware. Anyway, we agree to merge the USENIX and UKUUG archives and to help each other with software.

- Work in Progress — UKUUG CD Writer

The "Work in Progress" session allows each speaker 30 minutes to talk about their current interest, and answer questions from the floor. Stuart McRobert (Imperial College) spoke about the UKUUG’s new service, based on our software archive at Imperial College. He started by showing how the archive was growing exponentially, and that user’s expectations were also growing. Many requests could not be fitted on a single tape, even in compressed format! Therefore, the UKUUG can now service requests on CD. Note that this is a bespoke service. You get the latest version of the software, written to a CD at the time you order it.

In order to keep the audiences’ attention, Stuart’s colleagues started distributing Pizza slices (from Pizza boxes, geddit :) around the auditorium. This meant that Stuart’s short, but entertaining, talk received a rapturous reception with many encores (especially for the Pizza bit)!

- USENIX Reception

This is just a large buffet held in the largest room (suite?) available. Many of us who’d been at Stuart’s talk (see above) probably didn’t need more food, but we arrived for appearance sake. The main dishes weren’t inspiring, but I did discover a couple of puddings involving chocolate that I probably shouldn’t have eaten (especially seconds :-).

Friday — Conference Ends

- UNIX Documentation: Where are We and How Did We Get Here?

This was the title of an entertaining talk by Linda Branigan. She demonstrated how the audience of "traditional" manual pages had grown to include those who were meeting UNIX for the first time. No wonder that they found them cryptic and unintelligible! However, they’ve stood the test of time in being concise and succinct. Linda is a technical writer, and gave many examples of badly written documentation. My favourite was one manual that said at the bottom of a page:

"On completing the installation delete the temporary files."
Over the page, it continues:

"If the installation fails in any way, do not delete these temporary files".

Talk about a sting in the tail! Geddit??

Zoo Visit

There weren't any talks that sounded interesting on the last afternoon, so I thought I could play truant and visit the "sexiest zoo in the world". This is because they breed more species than most other zoos. Although compact, the zoo was as good as most I've visited and, in keeping with its description, had storks with babies (wooden signs) everywhere something newly-born was to be found.

Saturday — Flight Back

Although late getting off the ground, this flight home only took 6½ hours thanks, presumably, to favourable winds. The two science fiction books that I'd bought for the flight home were incredibly bad, so I won't even give you the titles.

UKUUG Agreement with International Thomson Publishing (ITP)

I'm pleased to announce that the UKUUG has agreed with ITP that we will receive a discount on the popular O'Reilly series of books. How much we can pass onto members has yet to be decided, but I hope it will be 20%+. Orders should be sent to Owles Hall, who will deal directly with the warehouse. Turnaround will be about one week.

The UKUUG is also helping ITP advertise the O'Reilly books by organising a series of "Meet the Author" events around the country. Our LUG organisers are helping here. So far, we've got Tim O'Reilly coming to the London LUG meeting on 18 November at UCL (all welcome). Similar events in Oxford and Cambridge are also planned - contact those local organisers for details.

Finally, members will be able to purchase O'Reilly books directly at all forthcoming events. ITP will have a stand at our LISA event in September and at the joint SUKUG/UKUUG meeting in January.

UKUUG LISA 93 - Coping with Change
Thursday 9 September 1993
(Neil Todd)

The UKUUG announces that the theme of this year's rescheduled System Administration and Management conference is "Coping with Change", with an informal subtitle of "Strategies for hitting a moving target".

With the increasing complexity of the working environment and the rate of change of that environment, in terms of both the variety of hardware platforms and associated operating systems, as well as the increasing number of third party software products available for those platforms, the task of the System Manager has become increasingly difficult.

As well as presenting work in this area we will be presenting an update on the UKUUG software archive held at Imperial
College, including new facilities designed to make access to the archive easier.

Evi Nemeth, well-known author of the best selling *UNIX Systems Administration*, will be attending the meeting to talk about her latest work in the area of system administration.

The Programme and booking details will be sent out to all UKUUG members during August.

It is not only the working environment that is changing, the very role of the System Administrator is changing. System Administrators are now being recognised as being more than just skilled operators. They need to be involved in the planning process when new systems and networks are being ordered. However, at the same time organisations often make inexperienced people take on the job of System Administrator without adequate training or support.

In order to help raise the standard of System Administration and to advance it as a profession, this conference will see the creation of SAGE/UK — a UKUUG Special Technical Group for System Administrators. (See Lindsay’s article below.)

The System Manager strikes back!
(Lindsay Marshall)

At the UKUUG LISA 93 meeting on 9 September, we will be launching the UK version of the System Administrators’ Guild - SAGE/UK. System Managers have had a bad press for a long time and it is time that they got together and pointed out how important the role they play actually is. SAGE/UK is going to help them do this.

There are already successful SAGE organisations in the USA and in Australia, and though they each have their own particular flavour, they are both dedicated to advancing the profession of computer system administration. They are attempting to do this through organisation, education and the setting of standards. Too often system administration is seen as a necessary evil and gets dumped on someone who, through no fault of their own, does not have the knowledge or experience needed to carry out the job effectively. I am sure many of you got started running systems in just this way. SAGE will provide a central point where people can go for advice and information on system management problems.

At the September meeting we hope to have a speaker from SAGE/US who will tell us about their experience and then, with this as input, we would like to discuss how best to organise SAGE/UK so as to maximise the benefit to system managers. The kind of group set up in the USA is probably too heavy-duty for the UK with its many committees and executive boards, and a slimmer version is probably more appropriate to our needs.

And what are these needs? At the meeting I shall try to present what I see as the important areas where SAGE/UK can help people out, but we want to hear from you as well. So come along prepared with questions and suggestions. We will need some kind of committee, so if you really want to help volunteer beforehand. Think of all those pesky user groups there have been for years, now you have a chance to get your own back.

IF YOU RUN A SYSTEM, GET INVOLVED!
Archive News
(Stuart McRobert)

The archive project here at Imperial College continues apace with an ever increasing usage from all around the world. Both the size of the archive, number of users (file transfers and interactive logins) and sites connecting to the archive continues to rise.

Around Easter we finally ran out of all available disk space, with over half the drives at 105% capacity (we set MINFREE to only 5%). To make matters worse, two of our oldest 280 MB drives died over the Easter weekend. The first of these contained the root, swap and /var areas, and died around lunchtime on Easter Saturday. Later inspection revealed that this drive had apparently literally worn away its bearings. But luckily for now, the system could still boot from a backup partition and only required the reload of /var from a recent dump tape — or so I thought.

However, on Easter Sunday whilst doing this, the sudden increase in load on the backup disk was too much for it, and it too died with a devastating outbreak of bad blocks across much of the now new root filesystem and swap space — the backup disk had lasted less than 24 hours before it too passed away.

Having now lost both the root and backup root partitions, the tough get going and one reaches for the trusty CD player to boot from, plus a handy spare SuperEagle and a pile of dump tapes. You can guess the rest — having connected everything up, headed home for a late night modern session, rebuilding the system from numerous tape drives, and it all came back together again. Lee took over and sorted out the now restored /var area and service was resumed in the small hours of Easter Monday.

Later, on the Wednesday after Easter, Sun came and replaced the two 280 MB drives (the only two luckily on maintenance) and performance soon improved once we spread the heavy disk swap and /var I/O load over two drives again. In the end the SuperEagle remained in service (being larger) with only one of the 280 MB drives in use (the second remains as a cold spare).

Attempts to add a further three 1.2GByte Seagate sabre disk drives with a corresponding fifth SMD disk controller proved even more difficult than ever thought possible. It wasn’t going to be easy, but...!

The fifth disk controller (surely in use way beyond Sun’s wildest dreams) brought the number of VME cards in the 12 slot chassis up to 11, and the first problem appeared immediately with the -12 Volt power rail only achieving -6.4 Volts — the power supply unit simply couldn’t drive the increased load and had to be upgraded to a much more powerful 1 KW unit.

Finally having installed the controller and formatted the drives, our problems became steadily worse as the extra load from these three fast (in fact almost too fast) drives was too much for the system to handle with the already very high I/O traffic on the VMEBUS. Both the disk controllers and the CPU simply failed to respond correctly and the system hung almost nightly, probably due to the increased sustained load whilst the filesystem dumps also ran.

By mid May space was getting desperate
with many software updates failing and free space across the 12GB archive down to less than a hundred MB. Some areas were switched to using the new gnu Gzip compression package (whose files end in little .gz [previously, confusingly .z] instead of big .Z) generally achieving a much higher compression factor and so freeing some very valuable disk space. Incidentally, our enhanced Internet ftp daemon has been taught by Lee about both types of compressed file and can now convert between them, as well as compressing and uncompressing on the fly — but this really hits the poor CPU!

In the end, the additional drives and disk controller were moved to our second server (another Sun 4/300 connected to the main archive via a dedicated FDDI ring) already providing about 3GB of archive space via NFS. Again more problems and little joy until a fun-packed afternoon was spent rearranging the controllers, disks and VME slot locations until late in the evening when a combination was found that surprisingly worked. Since then the two systems have worked very well and the archive today stands at around 15GB. Rearrangement work is currently underway to balance disk use and free some space for automatic (mirror) updates to run successfully again.

For now, there are no plans to change any more SMD disks unless one should fail, which considering their age (some Eagles date back to the early 1980s) is likely. Some of the older (> 10 years) disk drives have already been phased out in favour of more recent higher capacity models, which will hopefully increase overall archive reliability.

Since the project started in early 1990 with just one GByte of disk space, the archive has doubled in size every year, mainly with the help of kind donations of both new and generally old (end of project/end of use) disks. The archive is one of the largest and is regularly automatically updated (disk space being the main problem) from over 200 sites around the world with some 300+ packages covering UNIX, PC, Macintosh, and Technical Documentation to name but a few areas. It is also one of the widest and most extensively used, and supports an ever increasing user community with a service clearly highly in demand.

However, the archive’s future sometimes appears uncertain, and in the end, old age catches up with us all. For whatever happens in the future, we’ll just have to wait and see, but for now the archive can be reached (amongst many methods) for either file transfer by anonymous Internet ftp, or for interactive login via telnet, both to site src.doc.ic.ac.uk giving your e-mail address as the password.

Enjoy.

LUGs and SIGs
(Lindsay Marshall)

Well, as usual nothing to report about LUGs and SIGs. Where are you all? Send me e-mail telling me about all the activities you are doing. Tell me that you want to start a LUG and need speakers. Tell me anything but get in touch, and then I have something to write about in this column. Perhaps organising speakers might be a useful place to start, or are all your meetings trips to the pub and then a meal? If so, I’ll come and speak and you can take me to the pub and for a nice meal. (Actually the London LUG did that for me at the AGM. Thanks, excellent
London LUG  
(Andrew Findlay)

There will not be a speaker at the August LUUG, but Thursday 26 August will be a tail-end-of-holidays get-together at the Fitzroy Tavern.

On Thursday 30 September, James Cox of Tandem will be talking about 'How we made a Fault-Tolerant UNIX' at UCL Computer Science Department. BUT the start time is 18:30 rather than 19:00. Don't arrive late, as you won't be able to get in!

Oxford LUG  
(Charles Curran)

If you live in or around Oxford, get in touch with Charles Curran and tell him what you would like organised locally. Elsewhere in this issue, Lindsay Marshall has offered his services to LUGs - take him up on it - let him know how he can help.

PC SIG  
(Charles Atkinson)

Hello everybody. So this is the news@uk that focusses on UNIX for PCs. And what has the PC-SIG coordinator got to say?
have been next to no new products since the last column.

Consensys have finally started shipping RAID for PC UNIX and that’s about it.

I’ve been taking a look at ICL’s DRS/NX version 7 as promised last time. Their marketing department was more effective than IBM’s (regular readers will understand). Installation, on a very generic machine, was moderately painful but level 2, out of beta by the time you read this, is promised to cure those problems. Watch this space for a longer term summary.

Any PC UNIX users out there with large installations, systems administration experience please consider submitting to LISA. I’ve got the call for papers out to some of the big PC UNIX users and am hoping that one way or another there will be plenty of PC UNIX interest at the LISA workshop.

Although RISC machines continue to fall in price, PCs are still a better price/performance choice as long as a top-of-the range 486 satisfies your CPU power needs. In a way it is a pity because PC architecture (bus and BIOS) is not optimal for UNIX. PS/2 was a much better contender but will never have major impact as long as it remains proprietary. And, in a way, it is a surprise when you consider the extent of common hardware - memory chips, floppy’s, everything hung off the SCSI bus, keyboards. Screens are not common because PCs typically use expensive multisync as opposed to cheaper fixed frequency monitors on RISC boxes. Happily this argument is not spoiled for me by knowing any facts - speculation and theorising remain unbridled!

Freeware and copyleft distributors charging reasonable prices get a free plug in this column if there’s a PC UNIX angle. Nothing against commercial software you understand but it’s nice to help even up the disparity in advertising budgets.

The whole freeware phenomenon is on the edge of becoming mainstream. GNU put a lot of work into non-kernel stuff ending up producing some excellent quality software (gcc compiler, emacs editor etc). Now these have been widely used and given a stamp of approval by respected organizations the whole movement is being taken seriously. It’s not compellingly clear why conventional high pressure software development to make profits should result in a better product than similar work done voluntarily by idealists. No, GNU goodies have established quality standards and Linux seems to be evolving very rapidly into a serious usable UNIX-ish operating system (what happened to Hurd, GNU’s UNIX-ish opsys?).

Everyday users need more than quality software though. They need to be made aware of it, to be given paint-by-numbers installation instructions for a binary distribution and to be given a warm comfortable feeling (WCF = technical support, mostly. Caressing not recommended).

Now that freeware distribution has got beyond an Internet archive name you can expect to see increasing advertising, especially by those distributors who want to do freeware WCF on a straight commercial basis. Diehards will see no need, but to the average user having the source code is as much use as having a copy of the Rosetta Stone when it comes to fixing problems.

So to the latest Linux distributor; Graham
Adams. He's been doing GNU, Internet etc for some time as will be known to news@uk small ads scouers. Telephone +44 2915 357. E-mail gadams@ddrive.demon.co.uk.

Complaints in the last number about no excuses for a dig at SCO produced mail by the MegaByte detailing awful problems (gross exaggeration, of course, but this is getting desperate). The entire collection is published verbatim starting on page 28, or should that be 3.2?

Happy PC UNIXing until next time.

Bill & Jane's Bit
(Bill Barrett/Jane Morrison)

The editor has again asked for a bit from Owles Hall; well as you noted from Bill's bit in the last issue he has been "indisposed" for a while now and is working on a part-time basis, so I have taken over some of the UKUUG administration.

I have always done some of the UKUUG work but have only really stepped in to help out on events etc. The first one of these was the major Conference & Exhibition held at the Royal Lancaster Hotel in London in July, 1990. I have fond memories of working with Bill and the UKUUG team on this event; even when we were stuffing delegate packs at 3.00 a.m. because the Conference registration area was being used for a Jewish wedding reception and was not cleared until 6.00 a.m. Bill is always a good companion at these events and is constantly cajoling me to eat cakes and bars of chocolate.

Anyway, I filled in and have been working on the LISA 93 event to be held on 9th September at Imperial College (booking forms and timetable out soon!), general admin and membership and taking the minutes for the monthly Council meetings - held over the telephone - quite interesting especially when everyone decides to talk at once!

Well Bill's coming back for a couple of days next week so we can catch up on things. I must admit I do miss him when he is not here; he's always been my own personal "spell checker" and if my son has a query with his homework, it's always Bill who provides the answer.

STOP PRESS from Bill:

The latest news is that I am off medication now but still have to exercise regularly and watch out for any untoward swelling of my legs. I've just overdone the exercise by falling off my bike, but not disastrously.

I'm looking forward to the LISA 93 event which by happy coincidence is my birthday!

Around Europe

European X User Group

The 5th European X Conference and Exhibition will be held at Imperial College, London on Thursday 16 - Friday 17 September 1993. The following tutorials are offered on Thursday morning (followed by the main Conference which starts at mid-day on Thursday):
X System Administration
Using imake
GUI Design Tips

The papers to be presented cover many aspects of X windows. This year’s themes include multimedia and developing and maintaining real-world windowing applications. The programme includes speakers from the USA, Europe and the UK.

An Exhibition of X products and services will be held in the main Imperial College concourse throughout the two days of the conference from 10.30am-6.00pm (5.30pm on Friday).

New EurOpen Observer

Stephe Walli has resigned as EurOpen’s observer on the IEEE, POSIX, and ISO WG15 standards bodies. Nick Stoughton, who works for Hoskyns, is taking over and hopes to report on events both in this newsletter and the EurOpen News Sheet. He already reports for USENIX so we welcome an experienced hand, especially at this time when politics seems to be taking over from technical endeavour.

unit++
(Gary M Bilkus)

The standard UNIX implementations of C and C++ can prove very clumsy when a program extends over multiple source files, especially if these source files are in several directories, and many different programs share some of the same code.

The traditional C solution, to use include files .h at compile time and either individual .o files or .a libraries at link time, becomes very unwieldy very quickly, especially if the include and library files are not completely stable. A typical result is makefiles with large numbers of dependencies, and with a requirement to be very careful about the order of visiting directories when doing a make for the first time.

In contrast, many other languages, including some versions of Pascal and Modula 2 and 3, adopt a much neater approach. The idea is that everything is grouped into self-contained units. A unit defines a header file and a code file. Any unit may depend on another unit. A main program is simply a unit which defines a main(), and which actually links together all the code into an executable program.

A unit based environment offers the following advantages:

- A single line specifying a dependency can automatically ensure that the correct headers are available at compile time, and that the correct objects are linked into a final program.

- If a unit depends on another unit, programs which use the first unit can automatically get the necessary information from the second unit without knowing it exists. Thus, a low level decision to split a unit, or to change its dependencies, requires no changes above that unit.

- If two units both depend on the same third unit, a program which depends on these two units will automatically get exactly one copy of the third unit.

- Make-style minimal recompilation
is simplified, because the unit structure contains all the information required to calculate dependencies.

The unit++ program allows a unit-based C and C++ compilation environment on a standard Unix system. It is intended to be portable to all common flavours of Unix and variants.

One advantage of unit++ is that it encourages modular programming even for a single standalone job. Under normal environments, a lot of code tends to depend on a globals.h file containing a catch-all of definitions. As a result, reuse of some or all of the code is difficult for other applications. unit++ does not force a different structure, but it strongly encourages the idea of large numbers of units, each with a well defined interface, and (ideally) each with a separate test program. If, after writing a program, you want to reuse a unit for a new job, it should involve just a one line addition to the .u file. All the old messing about with global includes to work out which ones you need and which other object files you have to link in are things of the past.

The first version of unit++ was written as part of a hotel reservations system project, and was briefly mentioned as the uimake utility in a paper I gave at the EuroOpen Budapest Conference in 1991. Since then, interest from various sources has encouraged me to rewrite the program for the public domain and rename it unit++ to emphasise its particular affinity with C++ programming.

EXAMPLE

In order to give a good idea of how unit++ operates, a simple example is likely to be helpful.

Suppose we create a directory with the following files:

```
prog.u
--------
prog
language c++
uses first
uses second
--------
prog.cc
--------
#include "prog.x"

main()
{
  do_first_job();
  do_second_job();
  return 0;
}
--------
first.u
--------
language c++
uses utils
--------
first.h
--------
#include "first.x"
void do_first_job(void);

first.cc
--------

second.u
--------
language c++
uses utils
--------
second.h
--------
#include "second.x"
void do_second_job(void);

second.cc
--------
```
void do_second_job()
{
    send_message("second job done");
}

--------

utils.u
--------

uses <stdio>
--------

utils.h
--------

void send_message(const char *);
--------

utils.c
--------

#include "utils.x"

void send_message(const char*x)
{
    printf("message:%s\n",x);
}

--------

With the above files set up, and the directory otherwise empty, all we need to do is `unit++ prog`. This will perform the following steps:

1. Examine the file `prog.u` looking for dependent modules.
2. Visit first.u, second.u and utils.u.
3. Create the files first.x, second.x and utils.x with the appropriate headers.
4. Call the C compiler to compile first.c, second.c, utils.c and prog.c.
5. Call the linker to link prog.o, first.o, second.o and utils.o into prog.

Of course, if any of the .o files exists and

is recent enough, the relevant compilation is skipped.

In this example, the generated .x files will be as follows:

```
prog.x
------
#define __main_program
#include "first.h"
#include "second.h"
#include "prog.h"

------

first.x
------
#include "utils.h"
#include "first.h"

------

second.x
------
#include "utils.h"
#include "second.h"

------

utils.x
------
#include <stdio.h>
#include "utils.h"
```

We have four units: prog, first, second and utils. Each unit will have files with one or more of the following extensions:

- `.u` the unit file. Specifies unit dependencies, and various other aspects of the current unit.
- `.h` the header file. This file is included in the compilation of this unit, and units depending on it.
- `.c` the code file. This file is compiled to produce a .o object file.

Note that support exists for other languages too, and in these cases, different extensions may be appropriate.
These files are generated by unit++:

.x the header inclusion file. This file is generated by unit++ before compilation takes place.

.o the object file.

.ln the linker response file. Rather than passing all the needed modules on the command line, the final link uses a response file with the necessary information in it. This file is also created as required by unit++.

.lk a lock file. While a unit is under compilation, the .lk file will exist to prevent others from simultaneously trying to compile the module as well.

the executable program itself.

One thing which should be clear from the example above is that neither the header files nor the code files ever directly include any other files. Instead, the code file includes a .x file, which is created by unit++. It is extremely important that this rule be followed, or unit++ cannot guarantee that headers are included in the right order, and once only each.

As far as the content of the files is concerned - that's largely up to the user. The documentation which comes with the program gives some general advice.

So, writing a unit consists of doing the following:

- Writing a header file, if needed.
- Writing a code file, if needed.

Writing a unit (.u) file.

Even in a simple example such as this, the benefits of unit++ can be realized. For one thing, the total number of lines in the user created files is no larger than without unit++, and in fact is rather less than would be required if a fully specified makefile were also created.

Where unit++ really scores though is where the hierarchy is not stable. Suppose we decide that the utils module needs to be rewritten, and in fact could itself best be split into several parts. We could create u1, u2 and u3, and have utils use these modules. A rec ompilation of the main program via unit++ prog would still work, with no change at all to anything except the utils unit itself. prog, which might be being maintained by a different group, just needs to know that it depends on utils, not how utils is implemented.

Ideally, a complete system would involve only unit++ modules. However, it is quite likely that most real systems will need to involve system headers and libraries. To allow these to be accessed easily, unit++ allows lines like uses <stdio> or ldflags+ -lm to access system headers.

The unit++ program supports a number of other useful features, including facilities to allow parallel development of different related units by different groups, coexistence with makefiles and version control systems, and a variety of ways of controlling its behaviour.

I hope that this brief introduction will have whetted your appetite, and you will be encouraged to get hold of unit++ and try it out. Feedback, comments, etc will
be gratefully received. Advanced use of unit++ may be covered in a future article or paper if there is sufficient interest.

OBTAINING UNIT++

The program is available via anonymous ftp from src.doc.ic.ac.uk in the directory packages/unit++. The current version is 3.0. The distributed version is covered by a GPL copyleft. Commercial versions and support are available from the author.

A report from GURU (Romanian UNIX User Group) (Alexandru Rotaru)

Since the beginning of 1993 we have had a number of developments in the country. Some areas of interest are:

Romania now has four public Internet connections:

a) EARN from ICI has about five IP nodes in Romania (administrator adress: estaicut@roearn.ici.ac.ro - Mr Eugen Staicut). This net is linked by IP to Vienna on a leased-line of 9.6K and the other five internal links are leased-lines, so they have full FTP, TELNET and other services. About ten other sites are linked on dial-up basis to the EARN bone.

b) EUnet Romania has about 12 subscribers which are commercial companies, but with only a dial-up link to Vienna (administrator address: lilg@adcon.ro - Mr Liviu Ionescu). All the "net" is implemented with UUCP and sendmail (or MMDF for SCO users). GURU made this popular among the UNIX related companies, but this is not enough for sustaining the EUnet here. A better link and a sort of official presentation together with EUnet representatives is highly recommended.

c) Sprint International has a company in Romania called Logic Sprint SRL. They are developing here a national commercil net based on leased-lines in the country and two X25 links for outside, through Paris and Vienna (administrator address: /PN=LOGIC.OPPS/O=ASSOCIATES, TNET/ADMD=TELEMAIL/C=US/@sprint.com for Mr Adrian Pasulescu). For the moment Sprint has bones in four towns from Romania with about ten dial-up lines in hunting for each, but they still have no clients.

d) Universities have their own Internet project paid from Germany. Now they have a 9.6K IP link with Berlin and a FDDI interconnection project in the Bucharest campus which is 80% finished (administrator: Nini Popovici e-mail: nini@dfn.de). The project evolves to a "ring" topology connecting all Universities from Romania, but still the future investments are not certain.

Other developments include an X25 infrastructure project for linking several towns which has already been started and should be ready in autumn 1994. There are also some proposals from Mitel to introduce ISDN as a solution in concurrency with X25 and linked by means of VSAT connections, but this is still at the very beginning. The first Romanian BBS called "Mediatel Network" started two months ago in Bucharest.

GURU organised the technical and promotional tasks for a program called "Free UNIX for Romania", together with Romanian emigrees from different Universities (mostly from US and Canada).
As a result, we have about 6GB of public domain software transferred to Romania; the start-up of a Romanian newsgroup from Stanford (romanians@sep.stanford.edu); about 100 installed Linux and 386BSD systems in the country; the creation of know-how lists with Romanians all over the world on Internet and the development of several application centers in Romania for UNIX areas (this means VLSI design, PVM applications, AI and NN e.a.), mainly in the Universities.

This autumn GURU organizes the first "Romanian Open Systems Conference & Exhibition" - ROSE'93 from 30 September - 1 October 1993. The goal of this event is to create a traditional technical forum in this area in Romania and to enlarge the audience of the users for the subject. Companies will use the Exhibition Area and presentation hall for showing their Business Strategy. Internet connectivity from the Conference Area has already been offered by Sprint. A separate booth will be owned by GURU and EUnet for public domain software and EUnet services. We appreciate the international participation in the first ROSE Conference as very important.

Reviews

Peter Norton's Guide to UNIX
(Lindsay Marshall)

As a scientist I feel it is necessary to evaluate the statements of others very carefully. So I propose in this review to test the idea that "You can't judge a book by its cover". OK, so let's look at the cover. Well, it is blue and white and features on its front a large photograph of two men; the authors I suppose, though there is nothing actually to tell me this. These men do not inspire me with trust. They have sickly smiles, staring, cold eyes and expensive haircuts. Their shirt sleeves are rolled up and though they both have ties they are casually loosened. Yuppies, pretending to be hackers.

Turning to the back I find that UNIX (not typeset correctly) is an extremely complex and confusing operating system and that this is why the authors (who are respected names in the PC community) have written the book. Funny, I have always found DOS complex and confusing and UNIX rather easy and a model of clarity. I must admit to having never heard of Harley Hahn, and Peter Norton only in association with a program I run on my Apple Mac. If being one of the world's foremost PC authorities is a recommendation for writing books on UNIX then I can't wait for the Ken Thompson book on DOS or the Dennis Ritchie book on Ada. Reading on, it turns out that Harley Hahn specializes in "UNIX and other operating systems" - a ghost writer perhaps to be linked with the famous (ish) name?

Am I being picky? You bet, but these are all the thoughts that pop into my head when I look at this book. It's fat too (opens book) - 560 pages of it, with the printing all slightly fuzzy. The body of the text is set in quite a large size but manages to be hard to read, and the Old Style digits look out of place for some reason. The layout is pretty much the usual kind of thing you find these days with wide left hand margins for notes, though these are actually rather infrequent. There are no graphics, which is on the one hand a blessing because they would probably have been done badly by the authors in some low end drawing package, but on the other means that the book is visually dull.
OK, so you are starting to wonder when I am going to get round to what's in the book and stop talking about the peripheral stuff. Well now you know a bit about how this book is set out. Rather than getting straight to the point and telling you how to do useful work, the book meanders round talking about the `ps' command, `termcap' and `terminfo', three or four different shells and that sort of stuff. This is all geared towards DOS users and, contains gems such as "the result will be gibberish, full of non-American letters and line-drawing symbols". A book slanted to the international market as you can readily see.

The first chapter is a short "history" of UNIX and manages not to mention Kernighan, Thompson, Ritchie or any real people except for Richard Stallman. There are lots of plugs for big computer companies though. Chapter two talks about networks and terminals. It mentions something the authors call "X-Window" which they promise to discuss in Chapter six. Well, in Chapter five they tell us that "X-Window" is a system for supporting GUIs. That's all, though there are a few more plugs for expensive software products (or is this classed as useful information about available software packages?).

Moving along we get a brief look at shells which succeeds only in being confusing, a glance at the "UNIX Universe" which tells the first time user about things like the sched and `vhand' daemons. I may live in a funny backwater in the UNIX world, but I have never heard of these and cannot see why someone coming fresh to the system would want to either. And what's this? Slipped in amongst the list of daemons. The `UEdaemon' which "maintains the Norton Utility UnErase facility". Hands up all those who run the

UEdaemon.... I thought so.

Now, in Chapter eight (these people do like their chapters) we are "Preparing to Use UNIX". This starts with a brief description of single user mode and then moves on to talk about the `termcap' file. As an illustration the `termcap' for a VT100 and the authors assure us that we need not worry if we don't understand it and that we can look anything up in the manual if needed. Then, "out of interest", they proceed to dissect the clear screen code. The next section then tells us that `termcap' is no good and we ought to use `terminfo'. Now I am really confused. Who is this book for? It certainly is not for beginners because there is too much detail, but it is not for experts because there is too much rudimentary stuff. Are DOS users such died in the wool hackers that they have to be given lots of low level detail before they can use a new system?

The next few chapters haul us on through using the keyboard, actually typing some commands, a quick tour of the mail system (`mailx') and finally we get to file system. I had been going to write here "the real heart of UNIX", when I realised that Norton and Harley had started their chapter with the line "The heart of any system is its data". If fifteen other chapters is the way to the heart then they must have started at the toe! This chapter and the following ones do give a reasonable overview of the UNIX file system, but it again has no direction. The user is not introduced to the `mkdir' command until Chapter 19 and Chapter 20 talks about creating ordinary files. All this stuff should have been in Chapter one! The `cat' command is introduced on page 281. The description of this exemplifies all the problems of the book. The authors manage to describe `cat` in such a way that
it appears that redirecting the output is a feature of the `cat` command. In fact they go so far as to say that when you execute the command `cat > file` that if file does not exist `cat` will create it!

At this point I have to admit I looked at the end of the book. Why did I do that? Well the authors promised that they would discuss redirecting standard output "later in the book". Boy did they mean later - one hundred and ninety pages later to be exact. Chapter 30. The second last chapter in the book. To discuss something that ought to have been in Chapter one. Anyway, did I find out what creates the file when you redirect the standard output? Yes. It is "UNIX". As the cover says, "With This Book Anyone Can Be a UNIX Expert". Not! I wonder whether this nonsense is the product of Peter Norton or Harley Hahn's proclaimed "writing with clarity and insight"?

At this point I gave up. My strict moral sense prevents me from reading 78 pages on how to use vi anyway. (Though I did notice in passing that on page 337, cat is accused of creating that file again.) If proof is needed that using DOS really does addle your brain, then this book is it. A waste of shelf space and a waste of paper. This is vanity publishing gone crazy. Vagueley famous author + Trendy System = Successful book. Throw in someone who might know a little about the subject to cover up some of the holes and there you are. People in the PC world will probably fall for it too. "Hey, this guy's program recovered my disc, his book must be great." There are lots of good beginner's guides to UNIX; we do not need another and certainly not this one. It is an insult to the much battered spirit of UNIX.

To return to my earlier experiment, can you judge a book from the cover? Yes and no. The cover told me this would be a lousy book, but it didn't manage to convey how really, really bad it is. One of the author's "rules" is that "UNIX is difficult to learn but easy to use". Perhaps that is why they wrote the book like they did!

MKS Toolkit 4.1 (DOS Version)
(Mick Farmer)

What do you do when you're running a nice UNIX system at work, but you've only got a PC at home? Ideally, obtain one of the systems reviewed elsewhere in this issue. [Though see my column on page 1. Ed] However, the situation may not be that simple!

My wife uses WordPerfect for document production and Kermit for file transfer and access to electronic mail. My daughter's favourite game (at the moment) is Prince of Persia, and she uses Kermit to access her favourite newsgroups and electronic mail. My mother-in-law (who still can't work out the controls on her memory typewriter :-) will play Solitaire until she gets it out. No, DOS has to stay, at least for the time being.

My solution was to install MKS Toolkit. As they state in the Preface of the Installation Manual: "With MKS Toolkit, you no longer experience keyboard shock when you switch between your shared UNIX systems and your personal microcomputer".

MKS Toolkit (Version 4.1) provides over 160 programming and utility commands, including the Korn Shell, Vi editor, Make, UUCP, awk, and an awk compiler. These
tools are both UNIX and POSIX compatible. To install the Toolkit you need up to 6.5MB of free space on your hard disk, 512KB or more of memory, DOS 2.1 or later, and at least one serial port if you intend installing UUCP. That’s nothing these days, even for a PC.

The install program copies the Toolkit to your hard disk, asking you a number of questions along the way. The most important is the DOS device and/or directory to which you want the Toolkit copied. MKS Toolkit locates all files and directories based on this value, later assigned to the environment variable ROOTDIR. Since I wanted my system to look as much like UNIX as possible I chose the value c: (a suggested alternative is c:/mks). The remaining questions concerned which options to install, such as the on-line manual pages, speller and dictionary, MicroSoft Windows support, etc.

At this point you must choose one of five configuration options:

- Configuration 1 — Continue to use the DOS command.com as your shell. This is the most DOS-like configuration.

- Configuration 2 — Use the Korn shell as your shell, though retaining a copy of command.com in memory.

- Configuration 3 — The Korn shell is run directly by DOS from config.sys with no copy of command.com in memory. This is like a single-user UNIX system.

- Configuration 4 — DOS runs init after booting, which loads any required TSRs, and then runs login. Your entry in $ROOTDIR/etc/passwd specifies which shell you start with. This is the most UNIX-like configuration.

Configuration 5 — A cross between Configurations 3 and 4. Not very interesting at all.

Naturally, I chose Configuration 4. This was like old territory. The file config.sys specifies the shell to be c:\etc\init.exe. This init program is driven by the contents of the file $ROOTDIR/etc/inittab, just like real UNIX! The file $ROOTDIR/etc/passwd controls the shell and home directory of each user. You just edit the passwd file to add new users or to change various fields.

With the Korn Shell as your interface to the system it just looks and feels like UNIX. Every so often, something reminds you that this is really a DOS box underneath. For example, when using the command ls -l, the file permissions are artificial, there is always one link, the file owner and group owner are always userid zero. The login prompt may give you a feeling of security, but anyone can still edit the passwd file!

However, what makes MKS Toolkit so powerful is access to all those utilities and tools you use at work. I use awk and make a great deal, occasionally m4 and bc. The cc command is a script which interfaces with whatever C compiler you’re using under DOS. I’ve recently configured UUCP to call up my machine at work and we’re beginning to use mailx to send and receive all our electronic mail. It may not be fast, but it works.
The on-line manual pages are identical to the excellent Reference Manual provided with the Toolkit. What’s more, they’re all complete and page correctly on the screen.

I configured the Windows with MKS Toolkit option which created an MKS Toolkit group for the program manager. This group contains icons for commonly used commands such as awk and make. Personally, I find the windows environment very tedious so I haven’t tested these to any great extent.

The Toolkit has been installed on our PC for a few months and I’ll never go back to plain DOS. My PC environment is as close to my work UNIX environment as I can make it without going 100% UNIX. For much of what I do, it’s difficult to tell the difference (apart from speed).

A little care was needed during the initial configuration. You need to remember whether it’s DOS working (eg config.sys) or whether you’re using the Korn Shell. You still use the notation a: to refer to the diskette drive, which conflicts with my networked work environment. The only problem I encountered was specifying the DOSShell as a user’s shell. It started OK, but not with the correct screen resolution (this probably shows my lack of DOS-pertise:-). Putting it one level removed in the Korn Shell startup file cured that problem though.

Finally, I’m happy, but what about the rest of the family? There was an initial gripe about having to login to their machine, but this soon disappeared when they realised nothing had really changed. This isn’t factually correct. MKS Toolkit runs on GMT and, like UNIX, uses the TZ variable. This means that this summer, the DOS clock is one hour slow! My wife gets her familiar DOSShell when she logs in, as does my daughter. This allows them to point and click on what they want. My mother-in-law logs in (we don’t ask for a password :-) and gets the Windows Games Menu. Last time she visited, she enquired whether we’d installed Flight Simulator...

Available from:

Mortice Kern Systems Inc.
35 King Street North
Waterloo
Ontario N2J 2W9
CANADA

Tel: (519) 884-2251
Fax: (519) 884-8861
Net: inquiry@mks.com

Contact your Secretariat at Owles Hall concerning any special discount for UKUUG members.

From the Net

Simmons’ Laws of System Administration
(Courtesy of Alain Williams)

The Definition

System Administration is the combination of system support and user support.

The First Law of System Administration:

Any rule can be modified by the application of power and policy. By contrast, rules always are subordinate to laws.

The Network Paradox:

System support is a subset of network
support. Network support is a subset of system support.

The Laws Of Unanticipated Support Cost:

1. It will always cost you more to support a thing than the vendor told you.
2. It will usually cost you more to support a thing than to buy it.
3. Sometimes it costs 10x as much to support a thing as it did to buy it.
4. Refusing to support something often results in the thing being unusable.
5. Once it’s installed, supporting a thing is sometimes cheaper than not supporting it.
6. Before buying, make sure you’re committed to support. But see item 1.

The Division Between System Support and User Support:

There’s a difference between system support and user support. There may be overlap in the two positions; sometimes both are done by the same person. But the two tasks are distinct and sometimes have conflicting goals.

The Law Of Distributed Talent:

Great system support people often make lousy user support people and vice versa.

The Paradox Of Dual Abilities:

The person good enough to do both system support and user support will usually be hired away by a shop where the combined tasks are too large for a single person.

On Complexity And Customization:

Application-to-application differences confuse everyone, especially users and support staff. Ditto UNIX-to-UNIX differences, etc. By contrast, complete consistency completely stifles improvement.

At any given site for any given application or feature, there’s someone who knows more about it than the support staff. Finding that person is the first step to take to diagnose any given problem.

Time to diagnose and time to fix are completely unrelated. Sometimes one approaches zero while the other approaches infinity. This is especially hard to deal with when the diagnostic person and the fix person are not the same.

One person’s improved feature is another person’s gratuitous change.

Users want applications and systems they can customize.

One user’s customization is another user’s gratuitous change.

The Laws Of The Cost Of Customization:

The cost of customization is complexity. The cost of complexity is increased difficulty in administration and user support. The cost of increased difficulty in administration and user support is either lower quality of administration and user support, increased support staff, or both. Therefore increased customization means increased cost, or lower quality of support, or both.

The Paradox Of Unused Customization:

It doesn’t matter whether customization has actually been done. The mere fact that
it's possible means you must check for it, thereby increasing the cost of problem diagnosis.

Smallwood’s Law (Simmons’ paraphrase):
"They're not users, they're clients."

Users Are Human:

The user who says "Can X be done?" is usually really asking "Would someone please do X?" Make sure you answer both questions.

It's human to blame problems on outside causes. By contrast, an outsider will always suspect the insider as the cause.

The user who says "I didn't change anything" isn't always lying. Sometimes they're just ignorant or forgetful.

It's more important for users to do their job than to answer the needs of admins. Unless of course their job is to answer that need.

Admins Are Human:

For every statement in "Users Are Human," change "user" to "admin" and vice-versa.

The ‘You Broke It’ Principle:

Cockpit error is the most common cause of problems. Everybody is a pilot.

Support Is Overhead:

One way of cutting costs without cutting development staff is by cutting overhead. System administration and user support are overhead.

User and system admin training are overhead. Not having them increases overhead. Go figure.

The Joy Of Being A Contract System Administrator:

"Sure, we can do that. Here's what it'll cost you."

His Site Isn't Your Site:

The situation at your site doesn't make you qualified to judge the situation at another site, and vice-versa.

Just because someone else's support staff do, it doesn't mean your staff can do it. (This statement is subtler than it looks.)

The Rules of Policy and Power:

1  System administration is whatever the boss tells the admins it is.
2  Users will bypass admins to get the boss to tell the admins something different. That's their right.
3  Most system admins live in a policy vacuum. This can be good or bad:
   Corollary 1: Power expands to fill a vacuum. That thing which expands most easily is a gas.
   Corollary 2: Anything that quickly expanded to fill a vacuum is easily displaced by a solid.
   Corollary 3: A rapidly moving solid will hurt you if you're in its way.
4  The person who does your job
review makes the rules. The good
admins always follow those rules.
See Rule 1 and the First Law.

The Summary:
Be careful what you do in that vacuum.
Nobody appointed you God. However,
you can always be dis-appointed.

The Laws Of System And Network
Growth:

You can always incrementally add one
more.

Sometimes the straw breaks the camel's
back. More often, the camel just goes
slower and slower.

The difficulty of support does not grow
linearly with the size of the site.

Eventually your site outstrips your
methods, and you must bite the bullet and
move to new methods.

Corollary: Nobody bites the bullet until
there's not enough time to do the existing
work. At that point there's not enough
time to make the changes.

Adding a new kind of computer, operating
system, application, peripheral, etc., has a
much higher administrative cost than
adding one more of what you've already
got.

Corollary 1: If you buy one, you may as
well buy ten.
Corollary 2: If you buy ten, you may as
well buy eleven and keep one for spare
parts.

Small Ads

Takealap Systems can supply the following
ISO-9660 format CDROMs from
InfoMagic:

The Internet CD (£33) - RFC’s, IEN’s,
NetInfo documentation. 2nd Berkeley
Networking tape, and WinSock
documentation. Packet drivers, GNU
sources, X sources, ISODE 8.0, UNIX
networking software, DOS port of GNU
EMACS and GNU C/C++, and DOS
utilities for accessing compressed and
tarred UNIX files. Includes the October
1991 edition of "RFC’s in HyperText" for
Microsoft Windows.

USENET archives (£13) - Archives of
USENET newsgroups. Includes
comp.sources.* as well as many of
the rec, alt, and other groups.

For information contact Graham Adams
Tel: +44 2915 357
Net: gadams@ddrive.demon.co.uk

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Calendar of Events

1993

23-27 Aug, INTEROP - San Fransisco, CA, USA
9 Sep, UKUUG LISA '93, London, UK
13-16 Sep, Tutorials, Conference & Exhibition, Wiesbaden, Germany (GUUG)
13-15 Sep, HUNIX '93, Budapest, Hungary (HUUG)
14-16 Sep, JANET User Support Workshop, Manchester Metropolitan University, UK
27-30 Sep, Results through Open Systems, Darling Harbour, Sydney, Australia (AUUG)
30 Sep-1 Oct, Romanian Open Systems Event, Bucharest, Romania
7-8 Oct, Workshop "OSF Distributed Computing Environment" Karlsruhe, Germany
1-5 Nov, LISA VII, Monterey, California, USA

1994

9-13 Jan, SUKUG/UKUUG Conference and Exhibition, London, UK
17-21 Jan, USENIX Winter Technical Conference, San Francisco, USA

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