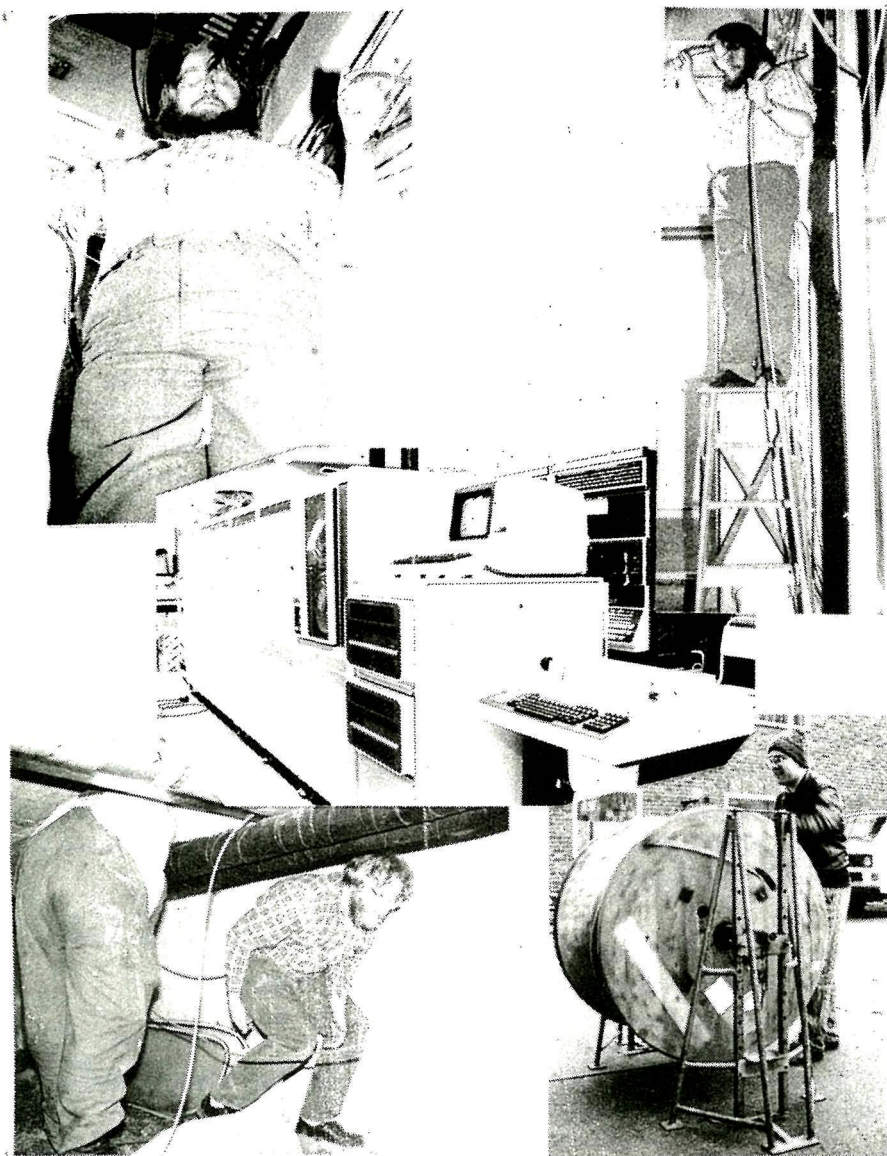


STACKPOINTER

1-1990. Organ för Datorföreningen STACKEN, KTH.



STACKPOINTER



TACKPOINTER är organ för Datorföreningen STACKEN på KTH. Den är tänkt att komma ut varannan månad. Citera gärna, men kom ihåg att ange källan och tillskicka gärna föreningen ett exemplar.

Redaktör: Hans Nordström.
I redaktionen: Jan Michael Rynning
och Stellan Lagerström.
Ansvarig utgivare: Mats O Jansson.
Färdigställd: 3:e februari 1990.
Satt med: T_EX.

Datorföreningen STACKEN



OST till föreningen skickas till nedanstående adress eller läggs i postfacket på NADA.

Datorföreningen STACKEN
c/o NADA
KTH
100 44 STOCKHOLM

Klubblokal: Lindstedsvägen 5
Datorhall: Teknikringen 22
Telefon: 08-791 87 97
KTHNETs modem:
300/300, 1200/75: 08-14 97 30
1200/1200, 2400/2400: 08-14 96 80

Ordf: Stellan Lagerström {08-790 78 14 (arb)
08-46 93 93 (hem)
Skr: Michael Broquist {0752-169 25 (hem)
08-799 82 80 (arb)
Kass: Henning Croona {08-739 17 40 (hem)
0760-167 40 (arb)
Red: Hans Nordström {08-790 65 17 (arb)
08-27 24 30 (hem)
Hexm: Johnny Eriksson {08-35 92 85 (arb)
Hall: Thomas Nyström {08-49 64 56 (hem)
Övr: Mats O Jansson {08-34 93 20 (arb)
08-711 70 37 (hem)
Övr: Thord Nilson {08-712 00 90 (arb)
08-749 21 92 (hem)
Medlemsavgift 1990: studerande 90
kronor, övriga 190 kronor
Postgiro: 433 01 15-9
Bankgiro: 344-3595
Träffas: torsdagar kl 18 i kårmatesalen
Månadsmöten: första torsdagen varje
månad kl 19 i sal E7

Electronic mail: *stacken@stacken.kth.se*
UUCP alternativt: *...{uunet,mcvax,...}!stacken.kth.se!stacken*
ARPA alternativt: *stacken%stacken.kth.se@uunet.uu.net*
BITNET/EARN alternativt: *STACKEN@SESTAK*
NORDUNET DECnet alternativt: *KICKI::STACKEN* eller *60456::STACKEN*
PSI alternativt: *PSI%0240200101905::KICKI::STACKEN*

I detta nummer

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Andra datorn



NDRA datorn i drift i nya datorhallen var VAX-11/780:n vi fick från ENEA. Björn Eriksson, tidigare ENEA, numera SUNET, hjälpte oss att få snurr på den måndagen den 22:a januari.

Den kör UNIX BSD 4.3 och har 2 Capricorn 330-diskar (330 Mb), bandstation, kort för 2 eagle-diskar, Ethernet, 80(!) terminalportar, 64 kbit-ledning och radskrivare.

På kvällen efter vårmötet fick vi fart på Ethernet-kortet (glappkontakt) och

med en raskt utlagd tranceiverkabel, genom ett soprum in i fysikhuset, fick vi den första lösa förbindelsen med stora världen. Mer permanenta förhållanden har det förhoppningsvis hunnit bli när ni läser detta. Vi har lirkat, dragit och najat en optofiberkabel och nu återstår bara för KTHLAN att sätta kontakter på den och koppla in den. Något senare kommer vi dra KTHNET-ledningar, så vi kommer åt datorerna från terminalsalarna och via modem. Ungefär samtidigt kan det bli dags att rulla in omformare etc. i den gamla transformatorhytten. Äntligen har KBS gjutit golv i den.

Studiebesök



EFTER att ha tittat i almanackan och konstaterat att det tidigare inbokade datumet för studiebesöket på Bild- och Grafiklabbet var

skärtorsdagen, så bestämde vi oss för att flytta det till torsdagen den 29:e mars klockan 19. Adressen är Teknikringen 16 (längst upp i Osquars Backe).

Värmötesprotokoll



ROKOKOLL fört vid Datorföreningen STACKENS värmöte, avhållet torsdagen den 1:a februari 1990, med början klockan 19, i sal E7 på Kungliga Tekniska Högskolan.

Närvarande medlemmar i alfabetisk ordning:

Per Andersson, Michael Broquist, Mathias Båge, Henning Croona, Johnny Eriksson, Per Eriksson, Gunnar S A Forsell, Per Hallkvist, Jan Hård af Segerstad, Mats O Jansson, Ago Kalvik, Johan Kjellin, Stellan Lagerström, Erik Levlin, Jan Lien, Janne Lindblad, Anders Lindqvist, Jan Lindström, Peter Löthberg, Staffan Melin, Kurt Minnberg, Thord Nilson, Hans Nordström, Dan Norstedt, Thomas Nyström, Jesper Näsström, Jan Michael Rynning, Erik Svensson och Bengt Åhlin.

§1. Mötets öppnande.

Stellan Lagerström öppnade mötet och hälsade alla välkomna.

§2. Val av justeringsmän.

Jan Lien och Mats O Jansson valdes till justeringsmän.

§3. Val av mötesordförande.

Stellan Lagerström valdes till mötesordförande.

§4. Val av mötessekreterare.

Thord Nilson valdes till mötessekreterare.

§5. Tillkännagivande av uppgjord röstlängd.

De närvarande medlemmarna prickades av på röstlängden.

§6. Fråga om mötets stadgeenliga utlysande.

Mötet ansåg sig vara stadgeenligt utlyst.

§7. Fråga om dagordningens godkännande.

Den föreslagna dagordningen godkändes.

§8. Val av styrelse.

Till styrelse valdes:

Ordförande:	Stellan Lagerström
Sekreterare:	Michael Broquist
Kassör:	Henning Croona
Hexmästare:	Johnny Eriksson
Redaktör:	Hans Nordström
Datorhallschef:	Thomas Nyström
Övriga:	Mats O Jansson och Thord Nilson

§9. Val av firmatecknare.

Stellan Lagerström och Henning Croona valdes till firmatecknare.

§10. Val av revisorer.

Per Andersson och Anders Lindqvist valdes till revisorer.

§11. Val av valberedning.

Per Hallkvist, Per Eriksson och Jesper Näsström valdes till valberedning.

§12. Fastställande av budget.

Som budget fastställdes att inkomma medlemsavgifter skall täcka konstnaderna för STACKPOINTER och telefon.

§13. Bekräftan av årsavgiften.

Det bekräftades att årsavgiften för 1990 blir 90 SEK för studerande och 190 SEK för övriga medlemmar.

§14. Verksamhetsberättelse.

Stellan Lagerström gick igenom verksamhetsberättelsen. (Se bilaga.)

§15. Revisionsberättelse.

Peter Löthberg, som utfört årets revision, meddelade att bokföringen befunnits vara i "sedvanlig STACKEN-ordning", men påpekade att styrelsen bör berätta för Televerket att STACKEN är en ideell förening, för att få sänkt teleavgift. Han rekommenderade att den avgående styrelsen skulle beviljas ansvarsfrihet.

§16. Balansräkning.

Henning Croona gick igenom balansräkningen. (Se bilaga.)

§17. Ansvarsfrihet för avgående styrelse.

Den avgående styrelsen beviljades ansvarsfrihet.

§18. Motion angående stadgeändring.

Henrik Björkmans motion angående stadgeändring befanns bestå av två av varandra oberoende delar och mötet beslöt därför behandla dem var för sig.

Förslaget att §12 i stadgarna skall strykas bifölls. Ändringen kommer att träda i kraft om den bifalls av nästkommande föreningsmöte som hålls minst 60 dagar efter vårmötet.

Förslaget om ändring av §10 i stadgarna avslogs.

§19. Övriga frågor.

Här diskuterades bland annat vilka kurser STACKEN borde anordna när fler datorer har idriftsatts i datorhallen, samt förslag på seminarier, studiebesök och projekt.

§20. Mötets avslutande.

Stellan Lagerström avslutade mötet efter 1 timme och 56 minuter. Därefter förflyttade sig deltagarna till klubblokalen.

Vid protokollet:

Justeras:



Thord Nilson, möttessekreterare



Stellan Lagerström, mötesordförande

Justeras:



Jan Lien, justeringsman

Justeras:

Mats O Jansson, justeringsman

Verksamhetsberättelse

av Stellan Lagerström



NDER det gångna året har föreningen bland annat gjort följande:

- Tecknat avtal med KBS om hyra av lokal, för att inreda som datorhall. Kostnad c:a 140 kSEK/år i 3 år.
- Tecknat avtal med Datorrådet, KTH, enligt vilket Datorrådet betalar hyra och elström för hallen, upp till ett belopp av 340 kSEK/år.
- Hämtat datorer som vi fått, bland annat en VAX-11/780 från ENEA, en PDP-11/44 från Hemlins och två LISP-maskiner från SICS.
- Utrymt datorhall på Svenska Finans (med fara för våra liv) och därvid fått en utomhuskylare och pumpar, samt annan kylutrustning som vi bytt in hos Hanssons Kyl mot två utomhuskylare till.
- Deltagit i utrymningen av Vin- och Spritcentralens datorhall och därvid fått en UPS-anläggning samt 2 pallar magnetband.
- Hjälpt CD (Chalmers Datorförening) att hämta två stycken 400 Hz motoromformare hos QZ och fått den ena.
- Tiggat kylutrustning för vidare befordran till Hanssons Kyl, varvid vi blivit kvitt sista skulden för utomhuskylarna.
- Målat, byggt datorgolv, innertak, belysning och eldistribution i datorhallen. (Puh!)
- Tömt "hög"-lagret och flyttat datorerna till hallen.
- Givit ut 5 nummer av STACKPOINTER.
- Gjort studiebesök på Televerket (telefonstationerna i kvarteret Jericho) och IBM (program och maskiner för CAD/CAM).
- Deltagit i NUCCC-89 (möte mellan datorföreningar och datasektioner vid de nordiska högskolorna) i Oslo.
- Hållit "öppet hus" med öl och mac-kor, visat datorhallen och jordnötskastaren PDI/3, för att värva nya medlemmar.

Balansräkning

av Henning Croona

Ingående tillgångar:

Bank	13.792,80
Postgiro ¹	0,00
Kassa	0,00
Totalt	13.792,80

Utgifter:

STACKPOINTER	-12.815,00
Telefon	-1.486,00
Övrigt ³	-37.357,00
Totalt	-51.658,00

Utgående tillgångar:

Bank	22.215,70
Postgiro	643,00
Kassa ²	-3.201,00
Totalt	19.657,70

Inkomster:

Medlemsavgifter	14.773,00
Gåvor	40.000,00
Övrigt	2.749,04
Totalt	57.522,04

Resultat 5.864,00

- 1 Föreningen har automatisk överföring mellan bankkontot och postgirokontot. Bankkontot ger nämligen bättre ränta. Därför finns det normalt inga pengar på postgirokontot.
- 2 Skuld till kassören.
- 3 Huvudsakligen byggmaterial till nya datorhallen och transportkostnader (last-bilshyra).

Redaktörn

/hn



ÖRJAN på året, tyckte jag, var ett bra tillfälle att låta min Mac växa lite. Åtminstone inne i. Leverantör kontaktades om priset på SIMM. En tusenlapp per Meg ansåg jag var försvarligt. Man kan nämligen utan ansträngning få betala flera gånger mera. SIMMar inhandlades. Som bonus medskickades en primitiv ersättare till den specialskruvmejsel som egentligen skall användas för att öppna Macen. Så hade jag då allt som behövdes för operationen. Direkt när jag vaknat, i morgonrock, började jag det som visade sig vara svårast. Att öppna Macen. Det är en finurlig konstruktion där passningen av de två styc-kena är av väsentlig betydelse. Inne i bakstycket finns något som var intressant att titta på. Nämligen namnteckningar från det arbetslag som varit med om att ta fram Macen. Så klippte jag R8 och bytte till de nya SIMMarna. Satte ihop datorn och gjorde röktest. Det kom ingen. Nu har Macen varit igång nästan en månad och inga problem. Jag börjar inse att det antagligen gick vägen. Men att något av de program som jag arbetar med skulle uppskatta mera minne, det har jag inte märkt något av.

En intressant detalj när det gäller SIMMar är hur de är konstruerade

och som säkert också bidrager till den gynnsamma prisutvecklingen. Kretskortsmönstret görs nämligen för att ta hand om nio kapslar. Sedan löder man dit åtta eller nio beroende på om det är till Mac eller PC. Och vips har man utökat marknaden för ens produkt flera gånger om.

På senare tid har jag kommit i närkontakt med PC-datorer. I dessa sammanhang har det omtalats för mig hur filer "bara försvinner". Framförallt händer detta i samband med det kända trefinger-anslaget. Vid ett tillfälle blev en dator obootlig. Jag fick rycka in och kunde återvinna de försvunna filerna. Såvitt jag kunnat utröna, så händer det bara med filer i roten. Nu undrar jag, om det är flera som har samma erfarenhet? Kanske har du en historia att berätta?

Var i samspråk med söt sakkunskap om försäljningen av semlor. Det visar sig att tisdagen har fått skarp konkurrens av fredag när det gäller semmelförsäljningen. Ja, folk nuförtiden har väl inte den riktiga känslan för traditioner. Säger jag, som handlade årets första semla, en lördag.

Ja, det var det hele.

Äppelkriget

av Mats O Jansson



APPLE COMPUTER är ett företag som har fascinerat många. Amerikanska ekonomijournalister hade det som ett älskingsobjekt under många år. I ledningen för företaget satt "den dynamiska duon" John Sculley och Steven Jobs under ett par år. När Steven Jobs fick sparken sommaren 1985 så gav det stora rubriker i pressen.

Boken *Odyssé* av John Sculley beskriver hur han kom till Pepsi och hans karriär inom företaget. Hur han blev övertalad av Steven Jobs att lämna Pepsi för att bli VD för Apple. Hur han och Jobs ledde företaget under ett par år och varför han till slut var tvungen att göra sig av med Jobs för att få slut på interna stridigheter inom Apple.

I boken *Vandringen är målet* av Jeffrey Young handlar det om Steven Jobs från unga år till idag. Hur Steven Jobs träffade Steve Wozniak och detta så småningom ledde till att Apple Computer skapades. Hur Apple I, Apple

II, Lisa och Macintosh kom till. Hur han blev sparkad och hur han skapade NeXT.

Det intressanta är att bägge böckerna ger en mycket snarlik bild av Jobs. En visionär, driven förhandlare, envis, egocentrisk och arrogant. Hans förmåga att skaffa sig fiender inom Apple var det som till slut ledde till att han fick sparken. I den andra boken så nämns John Sculley mest i förbigående medan Jobs har en mycket central roll i den första.

Båda böckerna är klart läsvärda om man har det minsta intresse för Apple. De ger en god inblick i ett företag som drevs på ett mycket intressant sätt. Jag tycker dock att *Odyssé* är snäppet bättre än *Vandringen är målet*.

Odyssé finns i pocket från Norstedts Förlag.

Vandringen är målet är utgiven på Columna Förlag.

Däckkriget

av Mats O Jansson



TERLIGARE en bok jag läst på senaste tiden är *Mannen bakom Digital Equipment* av Glen Rifkin och George Harrar. Boken handlar om Ken Olsen, Digitals grundare.

Det är en bok som i högsta grad beskriver en viktig del av datorhistorien från 50-talet fram till idag. Man får följa Olsen på MIT i början av 50-talet. Hur han 1957 startade Digital och hur företaget växte och växte.

Man får en intressant inblick i hur Digital, i USA, drivs. Hur Olsen slår undan benen för alla som börjar få

allt för mycket makt i företaget. Hur han skriver om historia när någon slutar. Boken beskriver även hur olika datorer kom till. Hur Digital gång på gång misslyckas med PC-satsningar för att Olsen en gång har fått för sig att PC bara är en dagsslända.

Av boken att döma så är inte Ken Olsen någon större företagsledare, men hur kan då företaget ha blivit så stort?

Boken är intressant för den del av datorhistorien den beskriver.

Mannen bakom Digital Equipment är utgiven på Columna Förlag.

Lights & Crashes

by Nick Christopher



ANY years ago they had some photographers in to take glossy pictures of the IBM machine room at Columbia University for some pamphlet. However the machines kept crashing during the photo session, which stopped the photographers and dragged the session out longer and longer.

Eventually they figured out that the flashes from the camera's were tripping the end-of-tape sensors (which detect light reflected from a reflective end-of-tape sticker on the tape). The simultaneous EOT on all the drives at once was more than the poor machines could handle.

GNU's Bulletin

January, 1990

The GNU's Bulletin is the semi-annual newsletter of the Free Software Foundation, bringing you news about the GNU Project.

Free Software Foundation, Inc.
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Cambridge, MA 02139 USA

Telephone: (617) 876-3296
Electronic mail: gnu@prep.ai.mit.edu



GNU's Who

Joseph Arceneaux is working on Emacs version 19. **Jim Kingdon** is working on GDB. **Kathy Hargreaves** is working on the regular-expression routines `regex.c`, **Karl Berry** is working on Ghostscript, and both Kathy and Karl have been working on transforming character bitmaps into cubic splines, so that GNU can include high-quality typefaces. **Roland McGrath** and **Joy Kendall** spent last summer programming various GNU software. **Mike Rowan** has just been hired as a programmer.

Mike Haertel is working on finishing the C interpreter started by Nobuyuki Hikichi, in addition to continuing to maintain and improve various utilities and library routines. **David Lawrence** is currently expanding the GNU Emacs Lisp libraries. He is working for us at the Rensselaer Polytechnic Institute.

Brian Fox is now working for us at Caltech. He has released the beta version of Bash, the 'Bourne Again SHell', and is now working on GNU's daemon-based Finger. **Jay Fenlason** is writing the GNU spreadsheet program `Oleo`, and maintaining `tar`, `sed` and the GNU assembler. Jay also takes care of our backups and creating distribution tapes.

Diane Barlow Close has written initial drafts of the documentation for all of the small Unix utilities that have been completed for us and is now working on a shell programming manual. Diane is the primary author of the GAWK Manual. **Mona Cosmos** is working on an introductory user manual (shell commands, files, etc.) and **Grace Sylvan** is working on a C manual.

S. Opus Goldstein is still running our office. She now has an assistant, **Erica Brigid ni Judith**, who answers the phone machine, handles correspondence, and packs the orders. **Robert J. Chassell** is our Treasurer. Besides dealing with foundation issues not related to programming, he is working on an elementary introduction to programming in Emacs Lisp.

Richard Stallman continues as a volunteer to do countless tasks, including refining the C compiler, GNU Emacs, etc. and their documentation. Finally, volunteer **Len Tower** continues as our electronic JOAT (jack-of-all-trades), handling mailing lists and `gnUSENET`, information requests, etc.

GNU's Bulletin

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Written by: Jim Kingdon, Robert J. Chassell, Michael Bloom, Barry Shein,
Micheal Tiemann, Richard Stallman, and Leonard H. Tower Jr.

Illustrations: Etienne Suvasa

Japanese Translator: Mieko Hikichi

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GNUs Flashes

- **Donation from Japan Unix Society**

The Japan Unix Society has given us \$10,000. They have also been distributing Nobuyuki and Mieko Hikichi's translation of the GNU's bulletin and have plans to distribute GNU software. We want to say "Thank You," and encourage other user groups to support the development of high quality free software.

- **Emacs Lisp Reference Manual**

We will publish the long awaited, and very long, *GNU Emacs Lisp Reference Manual* in March 1990. The manual describes the GNU Emacs Lisp programming language in detail.

- **Long-named options**

We have started adding long-named options to many of our utilities. For example, instead of remembering whether to use `-v` or `-V`, you can use `+verbose` (or any unambiguous abbreviation) in all programs. Eventually we hope to provide command-line completion for long option names.

- **indent**

We have added some enhancements to the `indent` prettyprinter from the 4.3BSD-tahoe free software release. GNU `indent` improvements include removal of arbitrary limits, GNU coding style support, and bug fixes.

- **GNU compiler gaining acceptance**

Many people are now using our C compiler, including the Open Software Foundation (as part of their operating system); Data General (for their Aviion 88000 based workstation); and Intel (for their 960 microprocessor).

- **GNU Chess defeats Fidelity Mach 3**

A 10 game match was conducted between GNU Chess 1.55 running on a Sun Sparcstation-1 and the strong commercial chess machine Fidelity Mach 3. Fidelity Mach 3 is officially rated USCF 2265 (2200 is master). Most observers acknowledge it is a true master. The match result was 7-3 in GNU's favor. After various corrections, we arrive at a putative rating of around 2330 (strong master) for GNU Chess 1.55 on this machine.

This result was most unexpected since prior versions of GNU Chess had scored no more than 3 points out of 10 against the Mach 3. The big leap appears to come from: (1) the inclusion of Hans Eric Sandstrom's fast move generator and (2) the Sparcstation-1, which is (apparently) particularly suited to speedy chess processing. Minor modifications to the book, draw factor, and thinking on opponent's time have also helped.

Please remember this rating is based on a short match result. Certain moves GNU Chess plays are clearly non-master in quality. Computer masters generally achieve their strength through accuracy of tactics, not subtle positional moves.

Boycott Apple; Defend Apple

by Richard Stallman

Most of the people I know in the computer field are disgusted with Apple for its look-and-feel lawsuit. So, when they hear that Xerox has sued Apple in the same way, they are usually delighted: now Sculley may get what he deserves.

There is only one dark cloud in this inviting landscape: if Xerox wins, the rest of us will also get what Sculley deserves.

In practical terms, a Xerox victory would have the same kind of effect as a victory by Apple in its lawsuit against HP and Microsoft. If we lose the freedom to develop and distribute window systems, it little matters precisely who has taken it away. The dangerous precedent for future cases on other kinds of software would likewise be the same.

However, Xerox as a monopolist could be worse in degree. Xerox was involved in an earlier stage of window system development, so a Xerox monopoly might cover a wider range of window systems than an Apple monopoly.

For the GNU project, the practical result might be that we cannot have a window system. We have been planning to use the X window system, but if Xerox wins the suit, this could become illegal.

An additional danger in the Xerox suit is that public sympathy for Xerox, due to resentment of Apple's own lawsuit and to Xerox's early role in developing window system ideas, may help Xerox win.

This sympathy is misplaced. Xerox entered a competitive market functioning under well-known rules: no one could copyright a user interface. (As for ideas and techniques, copyright has never applied to those.) They developed an interesting product that failed in the market due to various mistakes—an event which is not unusual in business. Now they wish to escape the consequences of their errors by changing the rules retroactively. This is hardly fair.

In order for us to keep our freedom to write software, we must now defeat Xerox as well as Apple. This means our task is now harder. However, the Xerox lawsuit may aid us indirectly: the absurdity of this mess of lawsuits may help convince the public that the whole idea of look-and-feel copyright must be firmly rejected.

But being convinced is not enough; to end the danger of look-and-feel suits, we must convince the courts and Congress. By expressing our views in public, writing to the House Subcommittee on Intellectual Property, or joining the League for Programming Freedom, we can put an end to this wasteful legal contentiousness.

You can write to the subcommittee at:
House Subcommittee on Intellectual Property,
U.S. House of Representatives,
Washington, DC 20515

League for Programming Freedom

by Michael Bloom and Richard Stallman

The League for Programming Freedom is an organization of people who oppose the attempt to monopolize common user interfaces through "look and feel" copyright lawsuits. Some of us are programmers, who worry that such monopolies will obstruct our work. Some of us are users, who want new computer systems to be compatible with the interfaces we know.

"Look and feel" lawsuits aim to create a new class of government-enforced monopolies broader in scope than ever before. Such a system of user-interface copyright would impose gratuitous incompatibility, reduce competition, and stifle innovation.

We in the League hope to prevent these problems by preventing user-interface copyright. The League is not opposed to copyright law as it was understood until 1986—copyright on particular programs. Our aim is to stop changes in the copyright system which would take away programmers' traditional freedom to write new programs compatible with existing programs and practices.

The League for Programming Freedom will act against the doctrine behind look-and-feel suits by any means consistent with the law and intellectual liberty. We will write editorials, talk with public officials, file *amicus curiae* briefs with the courts, and boycott egregious offenders. On May 24th, 1989, we picketed Lotus headquarters on account of their lawsuits against competitors, stimulating widespread media coverage for the issue. If you have other ideas, please suggest them.

In the future, the League may also fight other restrictive practices, such as software patents, which threaten to make every design decision in software development a chance for a lawsuit. The League's founders consider software patents potentially even more dangerous than look-and-feel copyright, but it will be up to the members to decide whether the League should campaign against them.

The League needs both activist members and members who only pay their dues.

To join, write to:

League for Programming Freedom, 1 Kendall Square #143,
P.O.Box 9171, Cambridge, MA 02139, USA. Phone: (617) 492-0023.

Note that the League for Programming Freedom is a separate organization from the Free Software Foundation; please direct all League inquiries to the above address, not to the Foundation.

Online Book Initiative

by Barry Shein

The Online Book Initiative has been formed to make available freely redistributable collections of information. There exist huge collections of books, conference proceedings, reference material, catalogues, etc., which can be freely shared. Some of it is in machine-readable form, much of it isn't.

The purpose of the Online Book Initiative is to create a publicly accessible repository for this information, a net-worker's library.

Information in the Online Book Repository will be available for free redistribution. On-line access, magnetic media and other methods of distribution will involve reasonable charges for the services provided, not the information.

There are other organizations with similar overall goals (e.g. Project Gutenberg, Common Knowledge); in some cases the details of their goals or approaches are quite different. We are in contact with most of them and in general our conversations are very positive. Anyone putting textual information on-line soon develops an attitude of "the more, the merrier;" it's a massive area of endeavor.

What We Wish to Archive

All on-line materials (other than software collections) such as books, journals, catalogues, conference proceedings, magazines, manuals, maps, images, technical documentation, reference works, etc. The only software we are interested in is software specific to the viewing, manipulation, searching and maintenance of information in the repository.

Materials must be free of copyrights limiting redistribution by us or any individual or organization who receives them. The Online Book Initiative is dealing only with materials free of restrictive copyrights because we don't want to be distracted by the complications they demand.

We also need pointers to collections of materials that may be available. For example, there are government collections of interesting data which are available at reasonable costs and do not limit further redistribution of copies obtained.

What We Need from You

Beyond machine-readable material there are huge collections of printed material which could be redistributed if put on-line. We need people willing to organize informal projects to scan, type or otherwise get this material on-line for inclusion in the Online Book Repository.

We need to get in touch with Library and Information Scientists interested in helping us create formats and structures for organizing the repository.

We need international participation to help ensure that our efforts are useful to people everywhere.

We need people willing to participate in a Technical Advisory Board to help us guide our efforts.

We need involvement from academia, industry and governments to help us enrich this effort without bounds and make available a first-rate, freely available information utility.

We need involvement from publishers who have materials that can be included in the Online Book Repository. Many books and reference works have become unprofitable to publish by ordinary paper means. It's time to make these materials available!

We need involvement from the technical community to choose and implement multi-media software standards such as hypertext, mark-up languages, index and catalogue software, text retrieval, network access methods and more. Standards are critical to our efforts.

What We Are Offering

`world.std.com` is a public access UNIX system which will serve as the initial repository. It is a Sun4/280 system and will be expanded as needed.

Anyone can dial into the system and set up an account if they wish direct access (617-739-WRLD). Accounts are charged and proceeds will be used to build the Online Book Repository.

UUCP and other links will be available for the redistribution of collections. We will also make collections available on magnetic media for reasonable copying charges.

How to Get Involved

If you think you can help or want more information send electronic mail to `obi@world.std.com`. There are two mailing lists, one for general discussion about Online Book Initiative issues and another which receives announcements only (the general discussion list will see all announcements so you only need to be on one). To subscribe to either, mail a request to `obi-request@world.std.com`.

Or call us at Software Tool & Die, 617-739-0202.

Or drop by our office and chat if you're in the area: 1330 Beacon Street, Brookline, MA 02146.

Postscript

This started as an informal discussion group that called themselves "The KiloMonkeys Project" ("Strong Typing For Weak Minds") who wanted to figure out how to get useful materials on-line and generally available. I have decided to make Software Tool & Die a home for this activity and formalize the project under the new name "The Online Book Initiative." My thanks to that original group from Monkey Shein.

Common Knowledge's Universal Index

There is an international group called Common Knowledge working to compile public domain, copyright free and machine-readable information. The group, consisting of journalists, scientists, librarians and others, is

amassing a database of non-copyrighted information which they call the "Universal Index". They are doing this to provide an alternative to the information merchants, who are increasingly successful at reducing the amount of material available to traditional libraries. Their address is:

Common Knowledge, Jefferson, MD 21755, USA. Phone: (301) 695-3100

New Support Company

Cygnus Support has been organized as the first for-profit corporation that provides commercial support *only* for free software, that we are aware of. Their initial support package is for GNU program development tools at sites with 50 - 150 seats. Contact tiemann@ai.mit.edu or Cygnus Support, 814 University Ave., Palo Alto, CA 94301. (FSF is not affiliated with Cygnus Support; note that numerous individual consultants are listed in the GNU Service Directory in file 'etc/SERVICE' in the GNU Emacs distribution.)

GNU Wish List

Wishes for this issue are for:

- Someone skilled in compiler maintenance who could take over GCC maintenance for RMS. This would probably be a full-time job.
- We are hiring both programmers and technical writers to work on Project GNU. We want people who can do a good job and who are willing to work for less money than most employers pay. You must either be in Cambridge, Mass., or be able to maintain good electronic communication with us. Contact rms@ai.mit.edu or send mail to Richard Stallman c/o the Free Software Foundation if you are interested.
- Volunteers to help write utilities and documentation. Send mail to gnu@prep.ai.mit.edu for the task list.
- Professors who might be interested in sponsoring or hosting research assistants to do GNU development, with full or partial FSF support. Several schools have done this and we welcome others to join in.
- Speech generation, speech recognition, and character recognition software (if the devices aren't too weird), with the device drivers if possible. This would help at least one partially disabled programmer we know to be productive.
- Grammar checking software for English and other natural languages.
- Copies of newspaper and journal articles mentioning the GNU Project. Send these to the address on the front cover, or send a citation to gnu@prep.ai.mit.edu.
- Money, as always. Please remember, donations are tax-deductible. With the latest donations, we have again been able to expand our staff. One way to give us a small amount of money is to order a distribution tape or two. This may not count as a donation for tax purposes, but it can qualify as a business expense.

GNU Project Status Report

- **GNU Emacs**

Except for bug fixes, work on Emacs version 18 has ceased. Emacs 19 is advancing and the new features we have added include multiple X window capability, support for European character sets and multiple fonts, enhanced visual aspects including scrollbars, floating point numbers, a relocating memory allocator for buffers, more sophisticated mouse support and use of function keys, and many changes to the Lisp libraries.

Other features we are considering are associating property lists and actions with regions of text, incremental syntax analysis for programming languages, source-level debugging for Emacs Lisp, hooks to be run if point moves outside a certain range, a more hyper-text oriented Info mode, a mouse-help X window application, menu bars, and possibly a new and improved pop-up menu system.

We don't know how much of this we will do before we make a release, or when that release will be, so please don't ask. We will announce it.

We will publish the *GNU Emacs Lisp Reference Manual* in March 1990.

- **Kernel**

We hope to use the Mach message-passing kernel being developed at CMU. The current distributed version of Mach is not free because it contains code from BSD of AT&T origin. However, the Mach developers have been working to separate this code from the kernel and they now say they have a first version of this running in alpha test. Prof. Rashid assures us that when this version is stable, it will be free.

Should Mach not become available, then we will start the kernel with either MIT's TRIX kernel or Berkeley's Sprite system.

Right now, we aren't doing any kernel work. It does not make sense for us to start a kernel project now, when we still hope to use Mach.

- **GNU Debugger**

The GNU source-level C debugger, GDB, is now being distributed along with Emacs version 18 as GDB version 2.8. GDB version 3.4 is distributed on the beta-test (compiler) tape, and as soon as it is stable it will replace version 2.8 on the Emacs tape.

When we have a stable release of GDB 3.x we will start work on GDB 4. We plan to add over-the-ethernet debugging, remote cross-debugging, and Dalek extensions such as *if*, *while*, and event-based debugging (see Crawford, Richard H., Ho, W. Wilson, and Olsson, Ronald A., *A Dataflow Approach to Event-Based Debugging*, University of California at Davis, Davis, CA, CSE-89-7, May, 1989), and other features.

Other features that we may add sometime are watchpoints, and the ability to debug multi-threaded parallel programs.

- **C Compiler**

The GNU C Compiler, GCC, is now fairly reliable. People are still reporting bugs, but they also say they think there are fewer bugs than

in commercial compilers. NeXT builds their entire system, including their port of the MACH kernel and NFS, with GCC. Someone has also told us that GCC successfully compiled a System V.3 kernel. Much of the BSD source tree has been compiled with GCC.

We are now working to stabilize GCC version 1 while incorporating new improvements into version 2. Version 2 now has support for nested functions, a certain amount of common subexpression elimination between basic blocks, and a new feature for classifying instructions that can be used to choose between long and short branches, or to provide raw data for instruction scheduling.

Version 2 will support C++ on the same basis as C itself. Also, we expect to have instruction scheduling and perhaps global common subexpression elimination. Ron Guilmette's Protoize, which generates ANSI C prototypes, will be merged in.

We are currently implementing delayed-branch fill and pipeline scheduling (experimentally). We may add facilities for precompilation of header files to save time when they are large and the source files are small.

We might also do other language front ends, but there seem to be enough volunteer GNUers willing to do this job. Jukka Virtanen is now working on the Pascal front-end. It is running, but before it will be ready for alpha testing it needs some new features and the ability to detect errors more gracefully. Other volunteers are working on FORTRAN and Modula. So far, no one has volunteered to write Ada or Cobol.

GCC has recently been ported to the Motorola 88000, Intel 860, and Pyramid processors. Volunteers may be working on ports to the IBM 370, IBM PC/RT, 3B2, HP Spectrum, some sort of Gould machine, and the AMD 29000.

- **C Library**

Roland McGrath and some others continue to work on the C Library. The C library currently contains all of the ANSI C and POSIX.1 functions, and work is in progress on POSIX.2 and Unix features.

Doug Schmidt has provided an improved `qsort` which is faster than Berkeley's and is also reentrant.

The C library is using a new `malloc` written by Mike Haertel.

- **Preliminary Ghostscript**

We are distributing Ghostscript, the free GNU software that provides nearly all the facilities of a Postscript interpreter, on our beta tape.

Karl Berry and Kathy Hargreaves are working on adding typefaces. Beside typefaces, Ghostscript needs these enhancements: to serve as a previewer for multi-page files; to serve other X clients by drawing on their windows; to improve both its performance and visual quality. Other suggestions for enhancements are welcome.

- **Finger and Send**

We soon will have a daemon-based Finger program. It polls a selection of hosts and is thus able to tell you where each person is logged in.

We are also testing a Send program for sending immediate messages to other users across the net.

- **Oleo**

Jay Fenlason is writing a spreadsheet named Oleo (better for you than the more expensive spreadsheet).

- **GNU Mailer**

We may use **smail**, written by Landon Noll and Ronald Karr of Amdahl, or **zmailer**, which Rayan Zachariasen is writing, or perhaps both.

- **File Manipulation Utilities**

We have a collection of utilities for file manipulation, including **ls**, **mv**, **cp**, **cat**, **rm**, **du**, **head**, **tail** and **cmp**. We use these on our own machines and plan to release them soon.

- **Possible Target Machines**

GNU will require a CPU that uses 32-bit addresses and integers and addresses to the 8-bit byte. Virtual memory will probably be required.

GNU Emacs and GNU C require more than a meg of addressable memory in the system, although a meg of physical memory may be enough if there is virtual memory. 2 meg would make a noticeable improvement in performance. Many source files need more than 1 meg of virtual memory to compile.

A hard disk will be essential; at least 30 or 40 meg will be needed to hold a minimal system. Plus more space for the user's files, of course. We recommend at least 80meg for a personal GNU system, and that would be fairly cramped.

Not that it will be impossible to adapt some or all of GNU for other architectures; but we don't currently consider it part of our job.

- **Distribution of 80386 Floppies Still Planned**

We are still considering distribution of 1.2 megabyte 5.25 inch diskettes.

Freemacs, an Extensible Editor for MS-DOS

Russ Nelson has a copylefted editor for MS-DOS called Freemacs. It is one of the few editors that has a full extension language yet runs on small machines. It is the only such editor that tries to be compatible with GNU Emacs. For more information contact Russ via electronic mail (nelson@clutx.clarkson.edu) or paper mail (Russell Nelson, 11 Grant St., Potsdam, NY, 13676).

Note that the Free Software Foundation does not distribute Freemacs; please don't ask us about it.

Lee Schneider

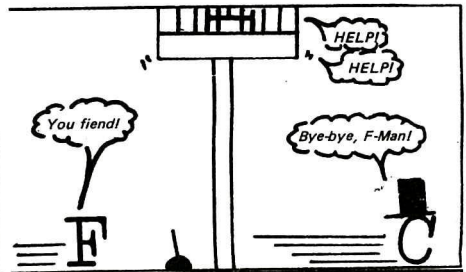
Todd Voros

FORTMAN MAN

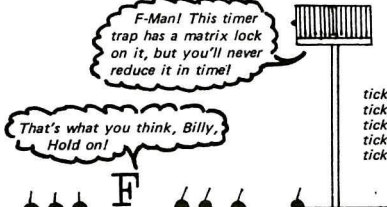
Despair not Fortman Man fans, deep in the heartland of the USA the fertile minds of Lee and Todd are churning, churning, churning . . . a new F-Man series.

The Dragon

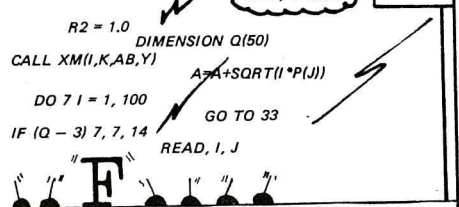
22



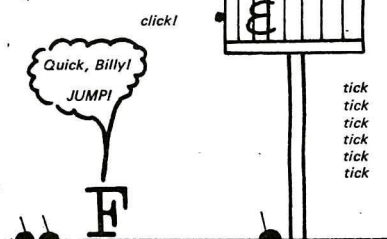
Letting Cornelius Cobol run out the data port and head for the city, Fortman Man swiftly examines the device in which Billy Basic has been imprisoned



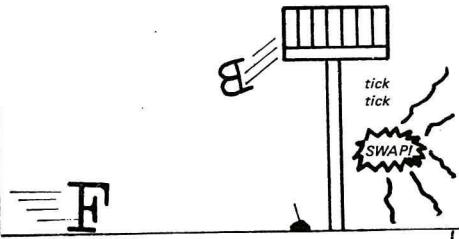
With incredible speed, Fortman Man manipulates the controls required to reduce the matrix and open the lock



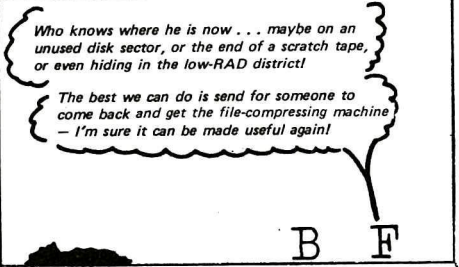
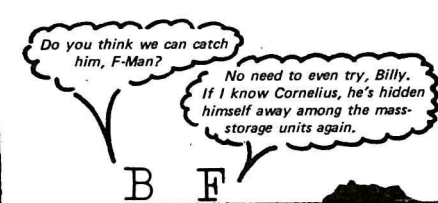
Then, suddenly, the lock is open!



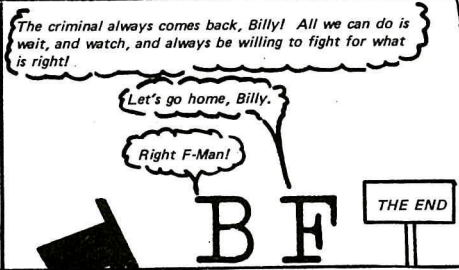
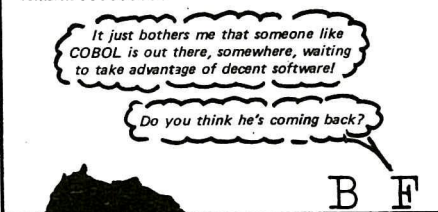
Billy jumps out of the trap, and just in time!



Billy joyfully rejoins Fortman Man, and the two head for the data port together



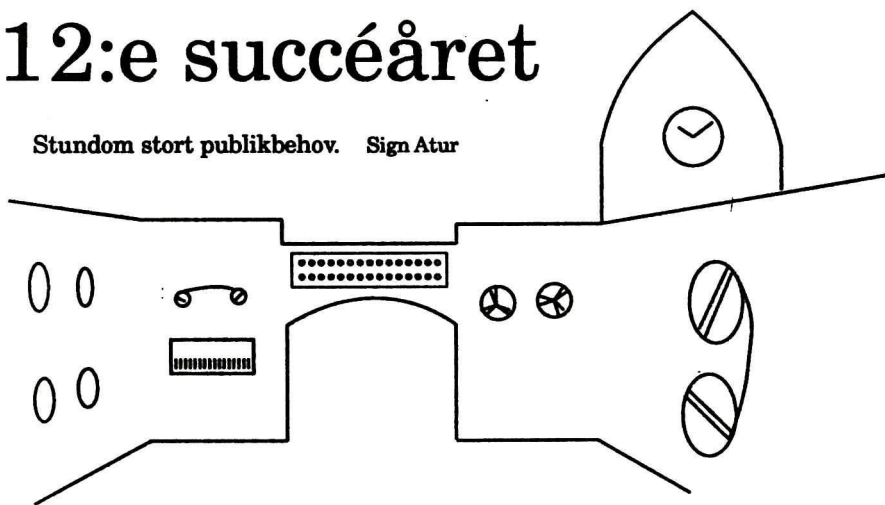
As they head back to BUFFER, another adventure over, Billy remarks





12:e succéåret

Stundom stort publikbehov. Sign Atur



STACKEN
Lindstedtsvägen 5
Teknikringen 22

Torsdagar 19
Försnack öppnar 18 kåren
Alla platser, studerande 90:-, övriga 190:-