MPULAREN NR 1 ÅRGÅNG 13

Innehåll :

Privatdataklubben PD68

Box 1098
122 21 ENSKEDE
Pg 96 04 68 - 7

STYRELSE & REDAKTION

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Suppl	P O Ryeng	Vilhelmsrovägen 1	144 00 RÖNNINGE	0753-548 38
-"-	Leif Hansson	Svampstigen 26	144 00 RÖNNINGE	0753-529 39
-"-	Lars Romare	Vintertullstorget 10	116 43 STOCKHOLM	08-41 82 19

Klubbdatorn

Klubbdatorn är en AT med 80 Mbyte hårddisk.

För kontakt med maskinen finns två modem anslutna.

Modem 1 är ett modem för trafik med 300 och 75/1200 baud samt 1200 och 2400 full duplex telefon 0753-503 48.

Modem 2 sköter trafiken på 1200 och 2400 baud: telefon 0753-503 88.

Nya medlemmar

**Du som vill bli medlem i PD68 går till väga enligt följande:
Sätt in 150.- på klubbens postgironummer 96 04 68 - 7. Meddela samtidigt ditt namn, adress och telefonnummer.**

Annonser

Helsida	**500.-**	**Priserna gäller tryckfärdigt material.**
Halvsida	**300.-**	**Medlemmar får sätta in privata rad-annonser gratis.**
Kvartssida	**200.-**	**Bilaga enligt överenskommelse.**

68HC11 Projektet.

Som vi skrev i förra numret så tänker vi försöka starta ett projekt med en enkortsdator kring 68HC11.

En liten intressant processor med 256 Byte Ram, 512 Byte EEprom, Serie port, Timer, Watchdog, A/D omvandlare etc.

Vi hade tänkt oss ett litet generellt kort som kunde användas till styr och reglerändamål. Bestyckat med 32k Eprom och 32k Ram, V24 etc. Vi har en monitor kallad BUFFALO.

BUFFALO

ASM [<addr>] Line assembler/disassembler.

BF <addr1> <addr2> [<data>] Block fill.

BR [-] [<addr>] Set up breakpoint table.

BULK Erase the EEPROM.

BULKALL Erase EEPROM and CONFIG.

CALL [<addr>] Call user subroutine.

G [<addr>] Execute user code.

LOAD, VERIFY [T] <host download command> Load or verify S-records.

MD [<addr1>] [<addr2>] Memory dump.

MM [<addr>] Memory modify.

MOVE <s1> <s2> [<d>] Block move.

P Proceed/continue execution.

RM [P, Y, X, A, B, C or S] Register midify.

T [<n>] Trace n instructions.

TM Transparent mode (CTRL-A = exit, CTRL-B = send break).

RETURN Repaet last commnad.

Vi har också en OS-kärna kallad MCX11. Multitasking, upp till 126 task, med prioritet, Intertask communication.

Något om MINIX

Lågpris UNIX.

När jag varje dag använder unix i mitt jobb vill jag inte använda MSDOS hemma. Minix är en lösning på detta.

Har kommer introduktions brevet för Minix 1.5. Jag har följt utvecklingen av minix sedan version 1.0 för enbart PC och jag är mycket imponerad av vad som har hänt under tiden. Jag har tillgång till usenet och har följt med newsgruppen från första början.

När man köper Minix följer källkoden med till allt utom C kompilatorn. Jag har C källkoden till en C kompilator för 68000 som passar minix.

Min ambition är att vi inom PD68 skall bygga ett litet europakort som passar in i danskdatorracken och kan utnyttja något av de korten som har gjorts för danskdatorn. Priset skall hållas så lågt som möjligt för att vi alla skall ha råd.

Vi håller på att diskutera inom styrelsen vilken lösning vi skall ha.

Ett förslag är CPU 68070 + en supportkrets från philips som sköter video och andra funktioner till det skulle vi ha 2 eller 4Mb minne. Dessutom skulle vi ha ett SCSI interface för hårddisken. I första steget skulle vi inte använda video utgången utan enbart serieporten.

En annan variant är att vi använder en speciell variant av 68008 som klarar 4Mb minne men det kräver mycket mera kortutrymme.

Bosse Sandholm

1. WHAT IS MINIX 1.5 MINIX 1.5 is a new version of an operating system that is very similar to UNIX. MINIX has been written from scratch, and therefore does not contain any AT&T code--not in the kernel, the compiler, the utilities, or the libraries. For this reason it can be made available with the complete source code (on diskette). It runs on the IBM PC, XT, AT, PS/2, 386, and most clones. Versions are also available for the Atari ST, Macintosh, and Amiga.

This version (1.5) is a major improvement over all previous releases, with many new features, fewer bugs (hopefully), much better performance, and proper documentation. The old versions have been in widespread use all over the world for 3 years. There are probably tens of thousands of users.

2. MINIX 1.5 FEATURES (IBM, Macintosh, Atari, and Amiga versions) - System call compatible with V7 of the UNIX operating system - Full multiprogramming (multiple programs can run at once) - Kernighan and Ritchie compatible C compiler - Shell that is functionally identical to the Bourne shell - Five editors (emacs subset, vi clone, ex, ed, and simple screen editor) - Over 175 utilities (cat, cp, ed, grep, kermit, ls, make, sort, etc.) - Over 200 library procedures (atoi, fork, malloc, read, stdio, etc.) - Spelling checker with

40,000 word English dictionary - Full source code (in C) supplied on diskettes (OS, utilities, libraries) - Easy-to-read manual telling all about MINIX and how to install and use it

3. ADDITIONAL FEATURES In addition to the above features, there are other features present in some (but not all) versions of MINIX 1.5. Some of these are listed below.

3.1 ADDITIONAL MINIX 1.5 FEATURES (IBM VERSION): - Runs in protected mode on 286 and 386 - Support for extended memory up to 16M on 286 and 386 - Up to 3 simultaneous users on one machine - RS-232 serial line support with terminal emulation, kermit, zmodem, etc. - Distributed computing on Ethernet (remote login, etc.)

3.2 ADDITIONAL MINIX 1.5 FEATURES (MACINTOSH VERSION): - Up to 3 simultaneous users on one machine - RS-232 serial line support with terminal emulation, kermit, zmodem, etc. - Runs under Multifinder - Includes support for multiple user windows

3.3 ADDITIONAL MINIX 1.5 FEATURES (ATARI ST VERSION) - Up to 2 simultaneous users on one machine - RS-232 serial line support with terminal emulation, kermit, zmodem, etc. - Support for various real time clocks (Mega, BMS, ICD, Supra, Weide)

4. HARDWARE REQUIRED - IBM: PC, XT, AT, PS/2, or 386 that is 100% hardware compatible with the IBM line. A hard disk not technically required, but is strongly recommended to take full advantage of the system. At least 512K of RAM is required, as well as a CGA, EGA, monochrome, or Hercules video card, or another card that emulates one of these. Both 5.25" and 3.5" diskettes are supported, as are printers using the parallel port and modems and terminals using the serial port.

- Macintosh: Apple Macintosh Plus, SE, SE/30, II, IIcx, or IIx with at least 1M of RAM. An additional 1M of RAM and a hard disk is strongly recommended. MINIX has been tested primarily with version 6.0 and latter of the Apple system software. Problems may conceivably arise with earlier versions. Any hard disk or display that is supported by the normal Macintosh OS is also supported by MINIX.

- Atari: Atari ST or Mega ST with at least 1M of RAM. Although the system will boot with only 512K, you will be very restricted in what you can do. A 720K diskette drive is required to install the software. The older 360K diskette drives are supported, but are not capable of reading the (720K) distribution disks. A hard disk is supported, but is optional.

- Amiga: Commodore Amiga 500 or 2000 with at least 1M of RAM. One 720K diskette drive is sufficient. A hard disk is not required (or even supported). To use a hard disk with the Amiga, someone familiar with how this disk works will have to write a driver for it. If this driver is then posted to the net, it will be possible to use a hard disk with MINIX on the Amiga.

5. PARTIAL LIST OF UTILITIES INCLUDED IN MINIX 1.5 animals ar ascii at atrun backup badblocks banner basename bawk btoa cal cat cdiff cgrep chgrp chip chmem chmod chown clr cmp comm compress cp cpdir crc cron ctags cut date dd de df dhrystone diff diskcheck dosdir dosread doswrite du echo ed elle ex expand expr factor fgrep file find fold fortune fsck gather getlf getty grep gres head ic id ifdef indent inodes kill last leave ln

login look lpr ls m4 machine mail make man mined mkdir mkfs mknod modem more mount mref mv nm nroff od passwd paste patch pr prep pretty printenv printroot ps pwd readall readfs recover ref rev rm rmdir roff rz sed shar size sleep sort spell split strings strip stty su sum sync sz tail tar tee term termcap test time touch tr traverse treecmp true tset tsort ttt umount unexpand uniq unshar update users uud uue vi vol wc whatsnew whereis which who whoami width write

6. PARTIAL LIST OF LIBRARY FUNCTIONS INCLUDED IN MINIX 1.5 abort abs access alarm atoi atol bcmp bcopy chmod chown chroot ctermid ctime ctype curses cuserid doprintf dup dup2 fgetc fgets fopen fork fpathconf fprintf fputc fputs fread freopen fseek fstat ftell fwrite getcwd getdents getegid getenv geteuid getgid getutil gtty index ioctl isatty kill link lock lrand lsearch lseek malloc memccpy memchr memcmp memcpy memmove memset message mkdir mkfifo mknod mktemp nlist open opendir pathconf pause peekpoke perror rand read readdir regexp regsub rename setbuf setgid setjmp setuid signal sleep sprintf stat strerror strlen strncat strncmp strncpy strpbrk strrchr strspn system telldir termcap time times tmpnam ttyname umask umount

7. CONTENTS OF MINIX 1.5 REFERENCE MANUAL Chap. 1 INTRODUCTION Chap. 2 INSTALLING MINIX ON THE IBM PC, XT, AT, 386, AND PS/2 Chap. 3 INSTALLING MINIX ON THE ATARI S Chap. 4 INSTALLING MINIX ON THE COMMODORE AMIGA Chap. 5 INSTALLING MINIX ON THE APPLE MACINTOSH Chap. 6 USING MINIX Chap. 7 RECOMPILING MINIX Chap. 8 MANUAL PAGES Chap. 9 EXTENDED MAN PAGES Chap. 10 SYSTEM CALLS Chap. 11 NETWORKING App. A MINIX SOURCE CODE LISTING App. B CROSS REFERENCE MAP

8. MINIX BOOK The author of MINIX, Andrew S. Tanenbaum, has written a book describing how operating systems in general and MINIX in particular work internally. The book describes an earlier version (and includes a source listing), but it is still useful for understanding how MINIX works inside, even if some details are now different. The bibliographic information is:

Title: Operating Systems: Design and Implementation Author: Andrew S. Tanenbaum Publisher: Prentice-Hall ISBN: 0-13-637406-9

Paperback versions are also available in English (outside North America only), French, Spanish, Italian, and Japanese. The books can be ordered from any bookstore.

10. LEGAL STATUS OF MINIX Although MINIX is supplied with the complete source code, it is copyrighted software. It is not public domain. It is also not like GNU. However, the copyright owner, Prentice-Hall has granted permission to bona fide universities to copy the software for use in courses and in university research projects. It is also permitted for MINIX owners to change the software to suit their needs and to distribute diff listings containing their changes freely. The shrink-wrap license that comes with MINIX states that you may legally make two backup copies of the software. Prentice-Hall is being much less strict than other software vendors. Please do not abuse this. Companies that wish to embed MINIX in commercial systems or sell MINIX-based products should call (212) 995-7788 to discuss licensing terms.

11. NEWS ABOUT MINIX Since its introduction in January 1987, there has been a large an active USENET newsgroup about MINIX, comp.os.minix. It currently has about 25,000 members. Over 12,000 messages have been posted to this group so far. These messages have contained questions, bug reports, bug fixes, new software, and diff listings to allow current users to update to new releases for free. It is the intention to continue this policy into the indefinite future. MINIX users on Bitnet can be put on a mailing list by sending mail to: info-minix-request@udel.edu. Various archives store newsgroup traffic for newcomers to the newsgroup.

12. FUTURE PLANS The major current project is bringing MINIX into conformance with the IEEE POSIX P1003.1 and P1003.2 standards. This will (hopefully) occur with V2.0, perhaps in 1992. V2.0 will also be provided with an ANSI C compiler. Various people are currently working on 32-bit versions of MINIX for the 386, and numerous other projects. To keep up, subscribe to the comp.os.minix newsgroup.

13. WHERE CAN I GET PAST POSTINGS AND PROGRAMS? Many sites keep archives of MINIX-related material, ranging from archives of articles posted to more organized repositories of programs posted to the net. The complete MINIX distribution is NOT (repeat NOT) available from any online archive. This is not permitted. Only the newsgroup traffic is stored there.

List Archives:

bugs.nosc.mil Current louie.udel.edu July '87 - Dec '89 (?) vm1.nodak.edu Current year wsmr-simtel20.army.mil July '87 - Dec '89 (?)

Formal Archives (MINIX sources):

aerospace.aero.org doc.ic.ac.uk dsrgsun.ces.cwru.edu en.ecn.purdue.edu funet.fi hobbes.-cs.umd.edu hub.cs.jmu.edu The Mars Hotel BBS NL-MUG plains.nodak.edu sirius.uc-s.adelaide.edu.au terminator.cc.umich.edu

13.1. File Transfer on the Internet If you are on the Internet, you can get files from many places with the file transfer protocol ("FTP"). When connecting to the host system, use the user-name "anonymous" and any password. Most systems will ask for your "ident" as a password. It is considered good etiquette to use either your login name or mail address when asked. Once connected, look for a "README" file which should give further information about the archive.

13.2. Mail Servers Some archive sites provide access to their archives with a server program that responds to commands mailed to it.

13.2.1. doc.ic.ac.uk An archive of the worthwhile postings from the comp.os.minix newsgroup is available from uk.ac.ic.doc either via mail or by GUEST niftp. For details about how to access this service send a mail message with NO Subject: field to:

info-server@uk.ac.ic.doc

and a message body of:

request catalogue topic minix request end

This will mail you back details of the various ways to obtain the files. This service is only available inside the UK. We have no funds to send such mail internationally.

This archive service is run by Lee McLoughlin. Janet: lmcl@uk.ac.ukc, lmjm@uk.ac.ic.-doc DARPA: lmjm%uk.ac.ic.doc@ucl-cs Uucp: lmjm@icdoc.UUCP, ukc!icdoc!lmjm

13.2.2. NL-MUG The MINIX User Group Holland (abbreviated to NLMUG) maintains an archive of interesting documents, sources, binaries and patches for the MINIX operating system. In the future, an archive of all USENET (comp.os.minix) articles will be kept as well.

The archive can be used by sending e-mail messages to one of the following addresses. To join the archive send a message to:

Internet: arch-adm@minixug.hobby.nl Uucp: ..!hp4nl!hgatenl!minixug!arch-adm

For sending requests, send a message to: Internet: archive@minixug.hobby.nl Uucp : ..!hp4nl!hgatenl!minixug!archive

The "Uucp" address should be used ONLY if your mailer cannot handle internet-style addresses, or if the message bounced back to you.

Since the NLMUG Archive is a (more or less) private archive, we cannot afford ourselves to make it an open archive. In Europe, we must pay a quarter for every Kbyte of mail being sent out. This means, of course, that we want to know who use the archive. It is our goal, to only LOG the usage. We don't intend to BILL people for using the archive...

Because of all this, the server looks at the requester's name, and sees if it may access the archive. Usually this is OK, but if people start misbehaving, they might get locked out. This is mainly the case when people have downloaded tons of stuff, without a single introduction first. We do NOT appreciate anonymous file transfers! Therfore, send a short message introducing yourself to the Archive Administrator to keep him happy. The Archive Service is actually a program running on a MINIX system. It is started once a day by cron(1) to have a look at its mailbox.

To use the archive, you should first send a request to the archive administrator (arch-adm) requesting access to the archive. After you have received an acknowledgement of your request, get the server's help file by sending a message to the server (archive) saying:

HELP

and you will be sent details on using the server. This server is maintained by Fred van Kempen <waltje@minixug.hobby.nl>

13.2.3. plains.nodak.edu An archive of MINIX upgrades and other interesting files are kept in a manually-maintained archive on Plains.NoDak.edu [134.129.111.64].

For those not fortunate enough to be on the Internet itself, we run the Clarkson server to process mail requests. This is an extremely versatile program, that allows various encoding formats (btoa, uuencode), compression (compress, arc, zoo) and splitting of large files. The server has been customized to send HELP and Index files at any time, and all other files between 23:00 and 08:00 local time. If you submit a request that contains *any* file that is not a Help or Index file, the entire request is queued until late night (currently 23:00 local time, but that may be moved to earlier hours of the morning if it proves to be a large load on the system).

The addresses for the server are: archive-server@plains.nodak.edu {umn-cs, ogicse, uunet}!plains!archive-server (UUCP) fileserv@plains (Bitnet)

Note to Bitnet people: this server is not 'logged on' to the machine, so you cannot send it interactive messages. The 'fileserv' alias was added for those of you who do not run the Croswell mailer, but you must still use something that is detectable as mail (such as a NOTE). Bitnet files will drop into our bit bucket, unprocessed, since there is no real user by either of these names.

To obtain a list of the files, the INDEX command is used:

index [<directory>]

where <directory> is a directory under our ~ftp/pub login(empty for the main directory). There are several other directories of programs for microcomputers, current volumes for comp.sources.* and some of the Free Software Foundation's products.

The SEND command is used for having files sent to you, such as in:

send MINIX/doc/Info_Sheet

That file is a copy of the monthly "MINIX Information Sheet" posting. The MINIX Compatibility Report is available in the file "MINIX/doc/Compatibility".

There are many more options for having your files compressed (note: most files in these directories already have been compressed with 13-bit compression), uuencoded, split, and so on. To obtain more information on the server, send the command:

help

and you will be enlightened. The server accepts commands in mixed case, but all directory/file names are case significant (just like MINIX).

This archive is maintained by Glen Overby, <minix@plains.nodak.edu>, at North Dakota State University, Fargo, ND USA (46 52 N / 96 48 W city)

13.2.4. vm1.nodak.edu North Dakota State University is the host site for distribution of the info-minix mailing list (also known as minix-l), which is bidirectionally gatewayed to the Usenet group Comp.os.minix. We maintain archives of all list traffic from within the past year or so (depending on space availability). Archives are available via Anonymous FTP on the Internet, and LIST-SERV file requests from other networks.

Our server is:

Internet: listserv@vm1.NoDak.EDU [134.129.111.1] Bitnet: listserv@ndsuvm1 UUCP: psuvax1!ndsuvm1.bitnet!listserv uunet!plains!vm1.nodak.edu!listserv

If you do not have Internet access, you may request files be sent to you by our LISTSERV file server by sending it commands in the body of a mail message.

13.3. Publicly accessable Bulletin Boards For people without a network connection, there is a PC-based Electronic Bulletin Board System (BBS) that has carried the traffic of Usenet's Comp.os.minix steadily since August, 1987 as well as a formal MINIX archive.

The BBS is not a true gateway to Usenet, like some Fidonet nodes are; rather it is a "delivery service" whereby new comp.os.minix articles are gathered daily and posted as messages on the BBS. Long articles are automatically ARC'ed and posted to the file area for downloading. Raw traffic is kept for about 2 months.

Once a month the articles of lasting interest from the previous month are saved into several ARC files, all less than 100K, to make downloading easier. For any given month, the index of articles is in MNXyymmA.ARC, and the actual articles start in MNXyymmB.ARC. You can just download the index, then download the ARC files that contain articles of interest to you. A complete index is always in MNXINDEX.ARC.

Call: The Mars Hotel BBS, (301)277-9408 (PC-Pursuitable) 300,1200,2400 baud, 8,n,1.

No registration required, no donations accepted. Everyone gets 60 minutes/day. No upload/download ratios (but don't be a jerk!)

Spread the word to those without net access.

This BBS is run by James da Silva. UUCP: uunet!mimsy!jds Internet: jds@mimsy.umd.-edu