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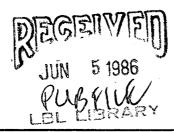
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DISCLAIMER

L B L
COMPUTING
NEWSLETTER

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"I don't necessarily agree
with everything I say."

(*Marshall McLuhan - 1911-1980*)

JUNE 1986

NAMES & NUMBERS TO KNOW

From on-site, dial <xxxx>   From off-site, dial **(415) 486-**<xxxx>   From FTS line, dial **451-**<xxxx>

COMPUTING DIVISION
Head: Leroy Kerth (LTKerth) 7474   50B - 2232

OFFICE OF COMPUTING RESOURCES
Head: Ken Wiley (KGWiley) 7083   50B - 2258E
Ethernet Manager: Sig Rogers (SGRogers)..6713   50B - 2258G

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CENTRAL ELECTRONIC MAIL FACILITY

FIRST INITIAL-MIDDLE INITIAL-LAST NAME is the standard
recipient format in Lab-wide mailing address.
Examples: VMS: LBL::JASmith
            UNIX: JASmith@LBL
    Software Tools: JASmith@LBL

DEVELCON

DEVELCON **Access Names**

| VAX 8600's (GENERIC)CSA |

VAX 8600 (VMS) CSA1
VAX 8600 (VMS) CSA2
VAX 8600 (VMS) CSA3
VAX 8600 (VMS) CSA4
VAX 8600 (VMS) CSA5

VAX 11/ 780 (UNIX4)UX4
VAX 11/ 750 (UNIX5)UX5
VAX 11/ 750 (UNIX6)UX6
VAX 11/ 780 (UNIX7)UX7

Dial-up Access Numbers

    All Machines -   300 BPS 486-4959
    All Machines - 1200 BPS 486-4979
    All Machines - 2400 BPS 486-4969

Local TYMNET Access Numbers

Oakland	430-2900	Vallejo	707-644-1192
Walnut Creek	938-9550	Concord	685-6003
Pleasanton	462-8900	Fremont	490-7366
San Francisco	974-1300	Antioch	754-8222
Santa Clara	408-986-0646	Palo Alto	415-366-1092

COMPUTER CLASS SCHEDULE

Jerry Borges

The following computer classes are to be offered by the Computing Division. There is no charge for these classes; to enroll, obtain your supervisor's approval and then contact Pat Bean (×7008). If you have questions about what's being offered, or suggestions for other computer-oriented topics, contact Jerry Borges (×5568).

DATE	TIME	DESCRIPTION	INSTRUCTOR
July 14, 15, 17	9 AM - noon	Introduction to VAX/VMS	Rosemary Allen
Jul 22, 24, 29, 31	9 AM - NOON	Introduction to VAX/UNIX	Dave Cleveland
Aug 12, 14, 19, 21	9 AM - 11:30 AM	C Programming	Marty Gelbaum
Oct 21, 23, 28, 30	9 AM - NOON	Introduction to VAX/UNIX	Dave Cleveland
Nov 3	10 AM - noon	Introduction to SPSS	Elon Close

RANDOM CHECK OF USER FILES TO BE CONDUCTED

Marv Atchley

The Department of Energy requires that all of its contractors conduct an annual random check of computer files. The purpose of these checks is to verify that sensitive unclassified data is properly protected and that no personal or other improper data resides on DOE computer systems. The following is based on the NMFECC Policy statement on the subject:

> "Examples of fraudulent and improper use include, but are not limited to: holiday greeting generators, party invitations, poetry, personal letters, personal finance programs, investment programs, recipes, outside organizational membership lists, programs utilized for personal gain, etc.

> "There are programs that may not appear related to DOE business, yet are properly part of computer training. Examples include games, interest calculations, amortization schedules, picture generators, etc. These programs may be developed and run on LBL computers but are not to be saved on disk files once the assignment/training is completed. On occasion, however, programs of this type are part of authorized LBL projects and files may indeed have to be kept on disk. To avoid giving the appearance that these programs are run for personal benefit or enjoyment, individuals must exercise good judgment and be prepared to support their decision that such files are directly related to authorized projects.

> "In order to assure that the above policies are being followed, LBL is required to have private user files periodically inspected."

Checks of a few files for each of about 4-5% of the users should be sufficient, unless the initial checks indicate that a more complete review is necessary.

Any suspected instance of improper use or inadequate protection will be brought to the attention of the supervisor of the user concerned for appropriate action.

Note: This notice does not apply to micros and personal computers. Any system smaller than a VAX-11/750 or equivalent may be considered to be a micro or personal system for the purposes of this file check.

"The haste of a fool
  is the slowest thing in the world."

(*Thomas Shadwell - 1642?-1692*)

LBL MAIL GATEWAY BETWEEN HEPNET AND MILNET/ARPA

William Jaquith

Computer mail users on the HEPnet can exchange mail with users on the Milnet/ARPA. A mail gateway now exists at Lawrence Berkeley Lab; this computer accepts mail in either VMS mail protocol or SMTP mail protocol and forwards it with the correct protocol to the user at the remote computer.

People in the Milnet will use addresses of this form:

user_id%hepnet_site@lbl.arpa

Breakdown:

- "user_id" is the login name of the person to whom you are sending the mail.
- a required percent sign.
- "hepnet_site" is the computer name on the High Energy Physics DECnet. Local examples include **CSA3, PHYS,** and **BEVAX.**
- then an at sign (@).
- The "lbl.arpa" address is the name of the gateway computer that will resolve the mail protocols and forward the mail to the final user.

People on the HEPnet will be able to use the VMS Mail Utility to forward mail to colleagues on the Milnet. Literally use the following mail address (include quotes):

lbl::"user_id@milnet_site.arpa"

Breakdown:

- "lbl::" will move the mail to the LBL computer using VMS mail protocol
- then an opening quote.
- The gateway will use the quoted string to derive the correct Milnet address.
- "user_id" (again) is the login name of the person on the remote computer.
- The at sign (@) is next.
- The "milnet_site.arpa" is a computer on the Milnet/ARPA.
- then a closing quote.

Note that the domain ".arpa" is now included in the address. In the future, domains like "edu" for educational sites (UC Berkeley) and "doe" for Department of Energy sites like LBL will become required in electronic mail addresses.

Computing Services CSA cluster users have two symbols defined for them to help locate valid HEPnet computer addresses and valid Milnet computer addresses. One symbol is "decnetlist". If you type

% decnetlist

you will get a list of all of the known HEPnet sites. The other symbol is "milnetlist string". If you type

% milnetlist *string*

a database will be searched for the *string* that you specify.

Some definitions:

HEPnet - High energy Physics DECnet. A nationwide community of mostly VAX/VMS computers that are used by High Energy Physics collaborators. This network numbers 500 DEC computers.

SMTP - Simple Mail Transfer Protocol. Sometimes referred to as **RFC821.** This defines how mail is moved in the Milnet/ARPA environment.

gateway - a computer that is connected to 2 networks. In this case, the LBL gateway is on the HEPnet, known as LBL, and is on the Milnet/ARPA, known as LBL.ARPA. The gateway will translate from one protocol to the other. In this, between VMS mail and SMTP mail.

protocol - a set of conventions defining the format of messages.

Forward comments or questions to William Jaquith (**lbl::WDJaquith** or **WDJaquith@lbl.arpa**)

" Polite conversation
is rarely either."

(*F. Liebowitz*)

VMS COMPUTER RATE CHANGES

Eric Beals

The following is a set of changes to the VMS Cluster Computer rates. They will take effect on June 1, 1986.

These changes were designed to generate NO additional income. They are intended to correct the fact that currently the same job run on CSA3 (the 8650) costs less than then it would on any other machine, creating an undesirable and artificial incentive to use CSA3. Also, the changes address complaints that our disk prices are too high. The income generated by the higher 8650 rates (8600 rates are unchanged) has been estimated to balance the income loss due to the lower disk rates.

While on the average for all users these changes are expected to balance, some individuals could see increased charges while others see decreased charges.

VMS CLUSTER CPU COMMITTED PRICES

	UNCHANGED 8600		NEW 8650	
	Prime	Non-Prime	Prime	Non-Prime
Interactive	$100/Hour	$50/Hour	$140/Hour	$70/Hour
EQUAL Batch	$100/Hour	$50/Hour	$140/Hour	$70/Hour
NORMAL Batch	$50/Hour		$70/Hour	
ECONOMY Batch	$25/Hour		$35/Hour	
STANDBY Batch	$ 5/Hour		$ 7/Hour	

VMS CLUSTER CPU NON-COMMITTED PRICES

	8600		NEW 8650	
	Prime	Non Prime	Prime	Non Prime
Interactive	$160/Hour	$80/Hour	$224/Hour	$112/Hour
EQUAL Batch	$160/Hour	$80/Hour	$224/Hour	$112/Hour
NORMAL Batch	$80/Hour		$112/Hour	
ECONOMY Batch	$40/Hour		$56/Hour	
STANDBY Batch	$40/Hour		$56/Hour	

CLUSTER DISK COMMITTED PRICES

Type		NEVER	Backup Frequency WEEKLY	DAILY
QUOTA	new	$1/MB/Month	$2/MB/Month	-----
	old	$2/MB/Month	$5/MB/Month	$10/MB/Month
USAGE	new	$2/MB/Month	$4/MB/Month	$12/MB/Month
	old	$3/MB/Month	$6/MB/Month	$12/MB/Month
SPECIAL		$200/Month	$300/Month	$900/Month

CLUSTER DISK NON-COMMITTED PRICES

Type			Backup Frequency	
		NEVER	WEEKLY	DAILY
QUOTA	new	$2/MB/Month	$4/MB/Month	-----
	old	$3/MB/Month	$6/MB/Month	$12/MB/Month
USAGE	new	$4/MB/Month	$8/MB/Month	$24/MB/Month
	old	$4/MB/Month	$8/MB/Month	$16/MB/Month
SPECIAL		----------	----------	----------

QUOTA - Space on the disk is not overbooked so that you are guaranteed the ability to use the space for which you have quota. You pay for the peak amount of quota you had during the month whether you used the space or not.

USAGE - Space on the disk is overbooked so that it is possible that the disk could become full without you being allowed to use all of the space for which you have quota. On the average we try to see that there are at least 100,000 blocks available on a USAGE type disk. You pay for the average amount of space you used.

SPECIAL - On this type of disk we do no management. The disk is software owned by a single user who is responsible for all management. We don't establish directories, quotas, protections, monitoring for errors, moving directories, cleanup, etc. Depending on the frequency of backup we would backup and restore the data in the advent of a disk crash. This price assumes that the disk and associate share of associated equipment was purchased by the owner (this is about $20,000. worth of equipment for each disk).

MICROVAX USER LUG MEETING

Mark Tincknell

The Third Meeting of the MicroVAX Local Users Group will be held from 2 to 3:30 PM on Wednesday, June 4, 1986, in the LBL Bldg. 50B Conference Room (Rm. 4205).

All parties interested in MicroVAX computers are invited to attend. Meetings will regularly be held on the first Wednesday of the month -- same time, same place.

Users are also invited to try the PORTACOM bulletin board software on the LBL CSA3 VAX 8600 (and only CSA3!). Access this system by typing

portacom

at the system prompt. The command interpreter is very easy to use, takes abbreviations, and provides help. Enter your name and (a new) password, become a member of the Microvax LUG conference, join it, and read and write entries (contributions).

Topics for the monthly meeting will include:

* Introduction of participants
* Use of the PORTACOM bulletin board software
* Discussion of MicroVAX hardware and software maintenance
* Survey of hardware and software configurations
* Individual applications of MicroVAXen
* Other business.

For more info, contact Ad Hoc MicroVAX LUG Chairman, Mark Tincknell, LBL 50D-111, (x6460) (lbl::MLTincknell or MLTincknell@lbl.arpa).

"If we all did the things
we are capable of doing,
we would literally astound ourselves."

(*Thomas A. Edison - 1847-1931*)

TELECONFERENCING NEWS

HERE'S PORTACOM

Bob Fink

PortaCOM is a "teleconferencing" system that is being evaluated by Computing Services to decide if this type of service should be supplied permanently. VAX Notes, a similar system, is being sought for testing as well. Teleconferencing is an "interactive bulletin board" service that allows groups of users to communicate about topics of mutual interest. Compuserve and the Byte Magazine Information Exchange (BIX) are commercial examples of this.

PortaCOM is available on CSA3 for the several months of the testing period. Just log into CSA3, type

portacom

enter your name (please use two words with a space between them, e.g., Joe Jones), choose a password and you are in PortaCOM. You can then become a MEMBER of a conference and participate in it for as long as you wish. To see what conferences there are to become a member of, type

list conferences

Note that private conferences, as opposed to public conferences, must have the permission of the conference organizer to become a member.

The next time you log into PortaCOM you will be informed of new entries in the conferences you are a member of. Then you JOIN the specific conference you want (presuming you are already a member), and you can read the NEXT entry. Old entries can be REVIEWed if you choose. You can also remove yourself from a conference, so don't think you are trapped forever. Entries in conferences, even if they are letters to you, are kept for a long time (depending on the overall use of PortaCOM) but they are NOT charged to your VAX CSA account.

You will also have your own personal conference, called your mailbox, for other PortaCOM users to communicate with you. Commands, as with all names in PortaCOM, may be abbreviated; try this feature as it will soon save you many keystrokes. For example, the list conferences command given above could be abbreviated as **li con.** PortaCOM is also menu driven, with the first item in the menu being the next default command if you wish to use it. Just give a carriage return to select it.

Current public conferences that may be of interest are **Macintosh General, MicroVAX LUG,** and **IBM PC General.** You might also wish to become a member of Announcements (of) public conferences to keep up with what's new. Note that the parentheses denote words that are only for visual meaning, but are not part of the actual command, so you need not abbreviate them. For example, the list conferences command is actually **list** (public) **conferences** but **li con** suffices.

For more about PortaCOM, call Bob Fink ($\times$5692) or Maggie Morley, ($\times$5529) and a free manual will be sent to you. The easy way to do this is to send Bob a LETTER in PortaCOM (the name to use is **rlfink**).

UNIX BULLETIN BOARDS

Dave Cleveland

UNIX users can enjoy the use of a specialized on-line "Bulletin Board," reflecting a particular interest (i.e., graphics, math libraries, typesetting) to facilitate intra-interest exchange.

To set up such a specialized news group, send mail to "system", requesting the establishment of a limited news bulletin board (examples: **graphics-news, mathlib-news, typeset-news,** etc). The other requirements for set-up can be discussed with the System Manager, Ed Sheena, ($\times$5176).

As stated in the UNIX Programmer's Reference Manual, " . . . the default NEWS directory by convention contains system messages of general interest to the entire user community. Other news directories may be limited to more specialized subject areas or interest groups within the user community. Such news directories may be treated as labelled bulletin boards. Messages are sent by mailing to the login "news-post" (for default news) or to a login corresponding to the name of a particular news directory. They should be short pieces of information which are suitable to be read once by most users of the system."

Purging of old messages is done by the system on an interval (usually 30 days) set by the System Manager.

For more info, contact Ed Sheena (lbl::EHSheena or **EHSheena@lbl.arpa**).

WORKSTATION NEWS

[23.6.1]...

● WORKSTATION GROUP ELECTRONIC MAIL

Workstation Group members can now be reached from the cluster or the Computing Division's UNIX machines by sending mail to **lbl::WKSG** or **WKSG@lbl.arpa**. We hope this alternative (to the telephone) will be of assistance to users who have problems or would like to forward helpful hints.

[23.6.2]...

● A USER LOOKS AT PC-DRAW, PC PRODESIGN, & PC-PAINT PLUS

Jack Zelver has been reviewing some of the IBM PC programs for drawing or other CAD/CAM functions. The following is excerpted from an evaluation of PC-Draw. To get more information on PC-Draw or any of the other packages Jack mentions, call him (×5377). Many thanks to Jack for passing on this evaluation.

□ **PC-DRAW**

PC-Draw is, in some ways harder, and in some ways easier to use than other graphics systems. It lacks some necessary features to qualify it as a CAD system: accurate scaling, auto-dimensioning, read-out in standard units, and rotation in smaller increments, just to name a few. On the other hand, it will handle multiple pages, templates, and a large variety of input and output devices. Also, the resolution on these devices is quite good as evidenced by the graphic outputs included in the manual. It seems to operate faster than *ProDesign*, but is slower than *PC-Paint Plus* for many operations.

□ **PC-PAINT PLUS**

For someone interested in illustrating reports with ease and resolution somewhat better than - but comparable to - an Apple Macintosh, I would recommend Mouse System's *PC-Paint Plus*. It's a mouse-only package that features pull-down menus, and is very easy to learn and use. Its output is quite good, and it supports the Enhanced Graphics Adapter in its highest resolution and color modes. It is also quite inexpensive. This would be the system of choice for someone who draws diagrams only irregularly, and is satisfied with single pages with good, but not high-resolution output on the most popular printers and plotters.

□ **PRODESIGN**

If you want an inexpensive but high-quality CAD system, I would recommend *ProDesign*. It is about as easy to learn and use as *PC-Draw*, and has a short but easily accessible set of help screens. It has all the features mentioned above that *PC-Draw* lacks, and it supports the Enhanced Graphics Adapter. Moreover, it has a zoom feature that makes movement around the drawing sheet very easy, and its file management is simple and uncluttered. This is the choice for someone who regularly makes drawings which may be to scale, and need very precise positioning, with lettering of all angles and sizes.

□ **RECOMMENDATION**

PC-Draw is a good choice for the intermediate range between the choices above. One can make high-resolution, multiple-page drawings, and develop a symbol library for regular use. It would be good for someone who regularly makes high-quality drawings of a more general nature. The lack of effective on-line help would make regular use of the system necessary for one to keep efficient at it.

[23.6.3]...

● BASIC BOOT PROGRAM

There are times when it would be useful to be able to cause a "WARM BOOT" from inside a ".BAT" file. You can now do this with a handy little program published in the May 13, 1986 (Vol 5, No. 9) issue of *PC* Magazine. This BASIC program creates two files - "WARM.COM" which starts a **warm boot**, and "COLD.COM" which starts a **cold boot**. Here's the code.

```
100 ' BOOTER.BAS
110 ' MAKES FILES TO WARM AND COLD BOOT
120 N$(1)="WARM.COM":N$(2)="COLD.COM"
130 FOR A=1 TO 2:OPEN N$(A) AS #1 LEN=1
140 FIELD #1,1 AS D$:FOR B=1 TO 16
150 READ A$:IF A=1 THEN 170
160 IF B=7 OR B=8 THEN A$="7F"
170 LSET D$=CHR$(VAL("&H"+A$))
180 PUT #1:NEXT:CLOSE:RESTORE:NEXT
190 DATA B8,40,00,8E,D8,B8,34,12
200 DATA A3,72,00,EA,00,00,FF,FF
```

You can obtain a copy of the program from the HELP DESK. Remember to bring along a formatted floppy disk.

[23.6.4]...

● **PUBLIC DOMAIN PC SOFTWARE**

The Workstation Group has created a directory on the CSA cluster in which to keep the Livermore BATS public domain PC software. There are several utilities which LLNL users have found useful and have mentioned in their Personal Computer NEWS over the past few months. From your login on any CSA machine, use the command

SET DEF IBMPCSOFTWARE

to get to the main directory for public domain software for the PC. The sub-directory called LLLPD.DIR will contain several sub-sub-directories wherein the PD software can be found. KERMIT can be used to download to your PC. For more information or help, call Workstation Group member Dan Van Zile, (×5589).

[23.6.5]...

● **NEW THESAURUS FOR VOLKSWRITER 3**

Volkswriter 3 users may now purchase **Word Finder**, a memory-resident integrated thesaurus program from Volkswriter's publisher, Lifetree Software. The authors of Word Finder adapted their program so that it works like any of the VW3 editor functions such as the spelling checker. Just place the cursor on the word you want a substitute for, press the CTRL F8 keys, and up pops a list of alternate words. The word you select replaces the original word, retaining the exact punctuation and capitalization. The program contains 220,000 synonyms for 15,000 base words and requires less than 30 Kbytes of memory.

Word Finder is available at an introductory price of $49.95 from Lifetree. After August 31, the suggested list will be $79.95.

Also available from Lifetree is a typing tutorial program for $29.95. For further information or to arrange for a demo of either product, contact a Workstation group member (×6858).

[23.6.6]...

● **EPSON FX-80 / FX-100 PRINTER UPGRADES**

RTSG has upgrade kits for EPSON FX 80 and FX 100 printers in stock. With the upgrade kit, the functional capacity of your printer can be made to equal that of the FX-85 or the FX-105. (Cost for the kit: $95.00).

Important features of the upgrade are:

● Near Letter Quality (NLQ) and Draft character modes can be freely selected from the control panel.

● Addition of word processing functions such as justification and print position assignment.

● Addition of an IBM emulation mode (internal switch setting).

For additional information, contact Jim Harvill (×6411).

[23.6.7]...

● **NEW WIDE-CARRIAGE HP THINKJET PRINTER**

PC users planning to purchase an Epson dot matrix printer, or equivalent, are urged to first contact a member of the Workstation group.

As our press deadline of the 15th approaches, we have not received an official announcement. However some of the specifications are:

● 132 columns - normal print

● push-button selection for Compressed / Draft / Near Letter Quality mode.

● NLQ printing @ 75 cps.

● pin feed or single sheet operation

● adjustable pin feed with a paper advance knob.

● comes with both a serial and parallel Centronics interface

● last Page Tear-off Feature

● Laboratory cost ˜$570.

The print quality of the new product is much improved. With the wide-carriage and other enhancements, the silent ThinkJet should replace the noisy dot-matrix printer for those low cost printer applications.

[23.6.8]...

● **VT240 EMULATOR**

(*This item was gleaned from the LLNL Personal Computer NEWS - April, 1986.*)

LLNL is recommending the **Persoft SmartTerm 240** package for monochrome graphics terminal emulations. SmartTerm emulates the following terminals: VT-100, VT-125, VT-220, VT-240, VT-625, Tek 4010, and Tek 4014. All emulations can be used with a standard Color Graphics video card in conjunction with either a color or monochrome monitor. All displays are limited to two colors. Enhanced Graphics support will be provided by Persoft in the future. The program is expensive but the results are excellent. (Laboratory cost from 800-Software is $217.55).

[23.6.9]..

● SCHOLAR'S WORKSTATION CLOSED

Those of you who wanted to take advantage of the good prices for new or upgraded Macintosh computers at UCB's Scholar's Workstation are out of luck! The store was shut down. Until it can reopen, the March issue of the Newsletter has the best prices we have found. As soon as we have any more news on this, we will print it here.

[23.6.10]..

● KERMIT PROBLEMS SOLVED

In last month's issue, we talked about some file transmission problems when using KERMIT and other similar protocols. More work has been done since then, and we can report that in nearly all cases, the problem of too many re-transmissions can be cured by using the **MODE** command before KERMIT is invoked. If you have problems, configure your port with no parity and two stop bits, using the **MODE** command. Our thanks to Randy Michelson of RTSG for his help in chasing down this problem.

[23.6.11]..

● ZENITH NOTE

The Workstation Group has new, lower, employee pricing for the Zenith line of IBM PC compatibles. For more information and/or price lists, contact Workstation Group member Dan Van Zile, (×5589).

"Preant, inquit, qui ante nos nostra dixerunt."

(*Confound those who have said our remarks before us*)

. . . Aelius Donatus

YES I would like to receive the Computing Newsletter

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