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COMPUTING

NEWSLETTER

Volume 25, Number 4  
April 1988

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## NAMES & NUMBERS TO KNOW

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

### INFORMATION & COMPUTING SCIENCES DIVISION

Acting Head: Sandy Merola (AXMerola) .....7440    50B - 2232C

### COMPUTING AND COMMUNICATIONS RESOURCES

Head: Ken Wiley (KGWiley) .....7083    50B - 2258E

#### Office of Computing Resources:

    Dave Stevens (DFStevens) .....7344    50B - 2258F

LBLnet Manager: Sig Rogers (SGRogers) .....6713    50B - 2258G

Telephone Services: Sam Gibson (FSGibson) 4234    80A - 103

### ADVANCED DEVELOPMENT PROJECTS

Head: Dennis Hall (DEHall).....6053.....50B - 3238

### WORKSTATION GROUP

Group Leader: Richard LaPierre (RLLaPierre)....4692.....50B - 2245

    Software Evaluation & Acquisition.....6858    50B - 2231

### COMPUTING SERVICES

Head: Marv Atchley (FMAtchley).....5455    50F - 104

Asst.Head: Serge Polevitzky (SIPolevitzky) ...4389    50F - 142

    Central Office.....5871,2    50F - 106

### VMS SYSTEM

    Eric Beals (ERBeals) .....5351    50F - 143

    System Manager (GPJohnson) .....6211    50B - 1225

### UNIX SYSTEM

    Dave Cleveland (DHCleveland) .....5336    50F - 115

    System Manager (RJCochran) .....5565    50F - 127

### DISTRIBUTED PRINTING

    Bob Rendler (RERendler).....5629.....50F - 119

    System Manager (RJCochran) .....5565    50F - 127

### USER RESOURCES

Jerry Borges (JTBorges) .....5568    50F - 144

    Accounting.....7008    50B - 1232A

    HELPDESK.....5981    50B - 1272

    Math Libraries .....4749    50F - 114

    Library/ Document Sales.....4242    50B - 1232B

    Opening a New Account (PSBean).....7008    50B - 1232A

#### UNIX and Cluster

    Software Evaluation & Acquisition.....5568    50F - 144

### COMPUTING FACILITIES

    Connecting a Remote Terminal (ACHart)....7444    50B - 2249A

    Graphics .....6945    50F - 126

    Network Coordinator (WDJaquith) .....4388    50F - 109

### COMPUTING FACILITIES (Continued)

    Operations Area .....6211    50B - 1215

    Develcon Problems & Terminal Repair

        (PGMurray).....5354    50B - 2259

### COMPUTING APPLICATIONS

#### Applications Group

Head: Jerry Borges (JTBorges).....5568    50F - 144

### 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.gov

            Software Tools: JASmith@lbl.gov

### DEVELCON

#### DEVELCON Access Names

    [ VAX 8650's (GENERIC) .....CSA ]

    VAX 8650 (VMS) .....CSA1

    VAX 8650 (VMS) .....CSA2

    VAX 8650 (VMS) .....CSA3

    VAX 8650 (VMS) .....CSA4

    VAX 8650 (VMS) .....CSA5

    SUN-3 / 280 (UNIX1) .....UX1

    SUN-3 / 180 (UNIX3) .....UX3

    SUN-3 / 180 (ISD) .....ISD

### 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 for DEVELCON

	1200 bps	2400 bps
Oakland	430-2900	633-1896
Walnut Creek/Concord	935-0370	935-1507
San Francisco	974-1300	543-0691
Santa Clara	408-980-8100	986-0646
Palo Alto	415-366-1092	361-8701
Vallejo	707-644-1192	
Antioch	754-8222	
Fremont	490-7366	
Pleasanton	462-2101	

MFE Consulting Number is ..... 422-1544

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## SCHEDULES FOR COMPUTER CLASSES

IN THE TRAINING ROOM, BLDG. 50B, RM. 1237

OR

IN THE BUILDING 50F CONFERENCE ROOM

Jerry Borges

The following computer classes are to be offered by Computing Services. There is no charge for these classes. To enroll, obtain your supervisor's approval and then contact Pat Bean (x7008).

If you have questions about what's being offered, or suggestions for other computer-oriented topics, contact Jerry Borges (x5568).

DATE	TIME	DESCRIPTION	INSTRUCTOR
April 14	11 AM - NOON	Electronic Mail: An Overview	William Jaquith
June 15 & 17,	1 - 3 PM	Introduction to VAX/VMS	Marty Gelbaum

### IN THE MAC TRAINING ROOM, BLDG. 50B, RM. 1229

Carole Casaretto

The following computer classes will be offered by the Workstation Group. There is no charge for these classes. To enroll, obtain your supervisor's approval and then contact Carole Casaretto, (x6858). Those classes with asterisks (\*) appended are already full.

Call now to sign up for classes later in the year. For more information, see THE WORKSTATION SCENE in this Newsletter. If you have any questions regarding these classes or suggestions for other computer-oriented topics, contact Richard LaPierre (x4692).

DATE	TIME	DESCRIPTION	INSTRUCTORS
April 12, 14, 19, 21	1:00 - 2:30 PM 3:00 - 4:30 PM	Beginning MS WORD 3.01*	Karla Savage, Carole Casaretto Claudia Madison, Jean Wolslegel
April 13	10:00 - 11:00 AM	Introduction to HyperCard	Bruce Burkhart
April 19, 21	10:00 - 11:30 AM	HyperCard-- Creating Cards and Stacks	Bruce Burkhart
April 20	1:00 - 3:00 PM	Beginning Excel Charts	Nancy Travis, Carole Casaretto
April 25, 27, 29	1:00 - 3:00 PM	Beginning Excel Spreadsheet	Claudia Madison, Dana Conant
April 26	1:30 - 3:00 PM	Using your MAC as a Terminal (Beginning)	Cliff Stoll
May 10, 12, 17, 19	1:00 - 2:30 PM 3:00 - 4:30 PM	Beginning MS WORD 3.01	Karla Savage, A. Soulsburg Claudia Madison, Jean Wolslegel
May 23, 25, 27	1:00 - 3:00 PM	Beginning Excel Spreadsheet	Nancy Travis, Carole Casaretto

## LBLNET NEWS

Bob Fink  
Sig Rogers

### LBLnet Activity

A Building 50 Auditorium Thinwire Ethernet has been installed for demonstration/presentation use. If you wish to use this at any time please contact Ted Sopher, the LBLnet Coordinator, at x5354.

### LBLnet Monitoring Center

LBLnet is constantly monitored for both ongoing operation and trouble shooting. To provide this capability an LBLnet Monitoring Center (LMC) has been installed over the last year in Building 50A Room 1156, near the LBLnet fiber wire center.

The LMC consists of an Ethernet network analyzer, terminals, printers and related switching equipment capable of inserting the test equipment into most of the LBLnet bridged LANs. This allows monitoring and debugging of many LBLnet problems without travelling to outlying buildings, thus reducing debug time and service outage for users.

As LBLnet grows over the next several years, in large part due to the upcoming ICS Project fiber installation, additional LMC locations will be developed. These will be located in the ICS Node Sites being constructed for the ICS voice/data switch. These LMC's will be in ICS Node Site 2, just outside of Building 10, in ICS Node Site 3 just outside of Building 62, and in ICS Node Site 4, inside of Donner Laboratory.

### LBLnet Hardware

LBLnet is composed of many hardware components. The most obvious ones to the user are the cable and transceiver used to attach the user's system to the LBLnet cable. In addition there are local repeaters, remote fiber optic repeaters, bridges and multiport transceivers.

All of these components have been carefully chosen to interoperate with each other. Several products that have been tried over the life of LBLnet have failed to interoperate reliably and have been rejected. At this time the two major suppliers of

LBLnet hardware are Cabletron and Digital Equipment.

### LBLnet Physical Connections

Due to the interoperability issue as well as the need to guarantee the continued reliability of LBLnet, users are not allowed to attach their own network components to LBLnet or to tamper with existing LBLnet components. No user should undertake any action with this cable or hardware, except for the direct attachment of their own system to existing connectors, without contacting LBLnet management. It is expected that users will attach their own workstations/systems to existing LBLnet connectors, but never at the expense of other users.

Sig Rogers (x6713) and Bob Fink (x5692) are the appropriate contacts for any questions regarding necessary policy.

-----  
LBLnet new installations: Ted Sopher, x5354

LBLnet trouble calls: x5354

LBLnet comments or trouble reports: lblnet@lbl

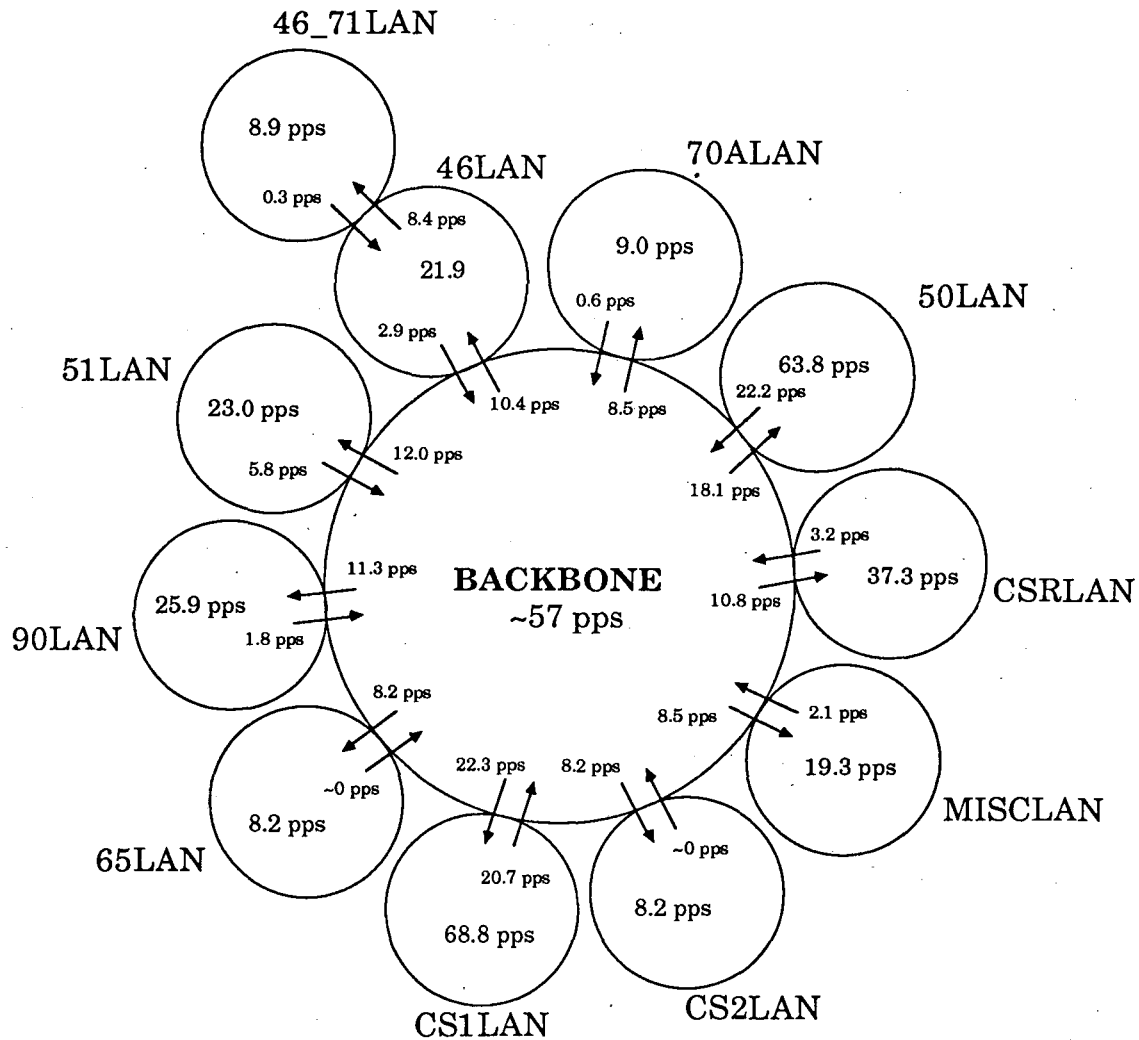
For Decnet administration: William Jaquith, x4388

For Internet administration: Serge Polevitzky, x4389

For IBM PC and Macintosh network administration: Richard LaPierre, x4692

If you are in doubt about whom to call, call Bob Fink, Serge Polevitzky or Sig Rogers.

Forward comments or queries to Bob Fink (x5692) or Sig Rogers (x6713).



pps = packets per second; all figures are monthly averages

arrows represent packet flow through a LanBridge from one LAN to another

Note: Each ellipse shown above is a separate Ethernet that is interconnected to the others via Digital LanBridge-100 devices that provide forwarding of packets based on a learning algorithm that minimizes traffic between networks to those packets addressed to computers on another Ethernet.

## LBLnet Activity February 1988

ICSD/CCR Fink/Rogers

## POSTMASTER'S CORNER

William Jaquith

*This is the Postmaster's Corner. We'll answer frequently-asked Electronic Mail questions here.*

*You can also get answers to your Electronic mail questions by sending them to **Postmaster** or **PostOffice** on the CSA cluster.*

This month there will be one Electronic Mail class offered. (See Page 3 of this Newsletter). The first part of it is introductory and the second part will cover further topics.

**Q** UESTION: What is my Bitnet address?

**A** NSWER: Your Bitnet address is your computer userid (login) on the CSA cluster. If Randy Newman's CSA computer userid is RANDY, then his Bitnet address is RANDY at the Bitnet node LBL. He can receive mail and files sent to RANDY at LBL.

If Randy has elected to be installed in the LBL Central Electronic mail database (as RJNewman), then he now has a second valid Bitnet address for electronic mail (but **only** for electronic mail). Now he can also receive mail as RJNewman at the node LBL in the network Bitnet.

Many LBL people who do not have CSA computer accounts do take advantage of the Central Electronic Mail database to receive Bitnet MAIL. The LBL mail system can receive electronic mail for someone who does not have a CSA computer account and can forward that mail to the computer where he does have an account. If you would like to be registered in the LBL Central Electronic mail database, send mail to REGISTRAR@LBL.GOV.

NOTE: you will NOT be able to receive or send Bitnet files if you do not have a CSA computer account.

**C** OMMENT: Users sometimes reset all their file protections so that the "world" can not read their files. The most common way to do this is also the easiest way -- using VMS wildcards. This works but often has an unanticipated side effect - you no longer receive electronic mail. **System** must have permission to write mail files in order for you to receive electronic mail. **System** typically loses its permission to write these files when you use wildcards to reset file protections. The files for the CSA cluster are for VMS Mail MAIL.MAI or MAIL.DIR and for MSG (Software Tools) MYMAIL. In order to receive electronic mail, these files (directory) should have System READ and WRITE permission **enabled**. What follows is an

example of file protections that have been correctly set:

```
CSA> directory/protection
MAIL.DIR;5 (RWE,RWE,,)
MYMAIL.;3 (RW,RW,,)
```

In this example, both **System** and **Owner** have READ and WRITE permissions. Now the mail deliverer - **System** - can put the incoming mail into your file space.

Normally, UNIX system users won't have this problem because UNIX mail is delivered to System space.

**Q** UESTION: I will be working temporarily at another site for several months. I will be keeping my LBL computer accounts, but I'd like my electronic mail to be forwarded to me at my temporary site. Also, I'd prefer it if I didn't have to tell all my correspondents about my new address and then re-direct them back to my LBL address two months later. Is there some way to do this?

**A** NSWER: Yes. You can see that your mail is forwarded from your computer accounts at LBL to other valid network hosts. The UNIX mail system, the VMS Mail, and the Software Tools Mail (MSG), all can forward your mail.

### o UNIX Mail

Create a **.forward** file. (Type **vi .forward** after the UNIX prompt (UX1)). This file will contain a valid Internet/Milnet/ARPA mailing address. The 'man aliases' help file describes both the **.forward** file and 'Automatic Forwarding' what follows is a typical '**.forward**' file. To view it, type

```
UX1> cat .forward
```

and what you'll see is something like  
**robert@hamlet.caltech.edu**

On UX1 and UX3, any valid Internet address will work. You can also specify a Bitnet site by using the **.bitnet** domain on the address.

### o MSG

Create a file called **\$forward**. Use the EDT editor and be sure to append a period to the file name to prevent the creation of a default file (with the **.LIS**-type extension). There must be NO blanks, tabs, or blank lines in the file. The address you specify can be any valid CSA address on the Internet/Milnet/ARPA, the MFEnet, the HEPnet, or the Bitnet. You will need to include the domain in the address.

What follows is a typical **\$forward** file. To view it, type

```
CSA4> type $forward.
```

and what you'll see is something like



david@abraxis.mit.edu

What it means is that all your mail will be directed to your account on the Internet node Abraxis at MIT in the EDUcation domain.

o VMS Mail

Use the \$forward. file. You should also create the entry st%username in VMS Mail at the SET FORWARD command. This insures that that any VMS Mail from another VMS Mailer is forwarded. The address in the \$forward. file should include the domain of the remote computer. If you are forwarding mail to the HEPnet, include .hepnet in the address. Do NOT put any tabs or spaces in the \$forward. file.

What follows are two examples of correct forwarding setups.

- (1) User Kris Thompson would like to forward her mail to a node in the HEPnet at FermiLab. Her local username is KRIS.

MAIL> show forward

Your mail is being forwarded to ST%KRIS

CSA> type \$forward.

krist@fnal.hepnet

All mail addressed to KRIS at LBL on the CSA cluster will now be forwarded to the username KRIST on the HEPnet node FNAL.

- (2) User Rick Burman would like his mail forwarded to the Bitnet node DHHDESY3. His LBL computer username is BURMAN.

MAIL> show forward

Your mail is being forwarded to ST%BURMAN

CSA> type \$forward.

mmr123@dhhdesy3.bitnet

Now all mail to BURMAN on the CSA cluster will be forwarded to the userid MMR123 on the Bitnet node DHHDESY3.

Since these files and entries are under your control, you can keep mail delivered to your account at LBL until you are ready to leave. This means that there will be continuity in your mail. You also do NOT have to tell your correspondents that you have a new electronic mail address.

Possible complication: if you do not log in to your computer account for 90 days, the account will be moved to inactive status.

...Hermes, Postmaster

Forward comments or queries to William Jaquith  
(x4388) or

VMS Mail:	lbl::WDJaquith
UNIX or Software Tools Mail:	WDJaquith@lbl.arpa

## GRAPHICS NEWS

*...making great slides*

### 35 MM FILM RECORDER AVAILABLE ON THE VAX CLUSTER

Claudette Lederer

A 35mm film recorder made by Matrix Instruments is now available on the VAX CLUSTER. The addressable resolution of this Matrix QCR D-4/2 film recorder is 4000 × 2600 pixels with a range of 16 million colors. This slide-making device is readily available to users of CA/ISSCO<sup>1</sup> software.

• **With TELLAGRAF**

TELLAGRAF users need to edit the TAGPRO.DAT file to specify the Secondary Device as follows:

Secondary Device is	laser
Secondary Device Model is	2
Secondary Device Unit Number is	1
Secondary Device Code is	1
Secondary Device Option is	7

There is a predesigned page layout for this type of device. To specify it, include the following statement in your TAGPRO.DAT file:

PAGE LAYOUT IS SLIDE.

• **With DISSPLA**

DISSPLA users need to initialize their programs with the statement

CALL LASERQ (1).

For both TELLAGRAF and DISSPLA users, the output file is called INTSRC1.DAT. This file is written in something called Lasergraphics Language.

**PVI**

Currently, there is no easy access to this device for users of PVI<sup>2</sup> software, (i.e., DI3000). The driver can be purchased and installed upon request.

This device accepts files written in Lasergraphics Language. Those who want to use the device but are not using CA/ISSCO products can purchase a copy of the **Lasergraphics Language Programmer's Manual** at the Computer Center Library (Bldg. 50B, Rm. 1232B, ×4242).

To send a Lasergraphics Language file of plots to the Matrix QCR film recorder, type at the system prompt

PRINT/QUEUE=SLIDE file\_name.dat

To check your slides going through the slide queue,

type at the system prompt

SHOW QUEUE SLIDE

When you no longer see your file in the slide queue, then you know your plots have been recorded on 35mm film.

The recorder uses standard 35mm 64ASA daylight film which can be processed on-site (LBL's Photo Lab charges range from \$3.50 to \$5.00; turnaround time is about 48 hours) or off-site (Presto Prints, 2315 Telegraph Ave., between Bancroft and Durant in Berkeley, -- 845-5268; turnaround time is 2 hours). Check with the operator at the I/O desk about on-site processing of your film.

Forward comments and questions to me (×6945) or

VMS Mail:	lbl::CELederer
UNIX or Software Tools Mail:	CELederer@lbl.gov

### NEW COLOR LASER COPIER

Maggie Morley

Once you've produced those 35mm color slides on the Matrix recorder, you can make copies on our Graphic Arts Department's new Canon Color Laser Copier. This new system, located in Bldg. 90, Rm. 1060, ×6584 (the Copy Center), can produce full-color copies of slides and negatives, using an attached projector. That's not all. It can also

- Produce color view-graphs.
- Reduce or enlarge the original from 50 to 400 per cent.
- Copy segments of a picture independently so that pages can be matched up to produce a display-size picture.
- Produce sharp, vivid, four-color copies on plain paper, up to 11" × 17".
- Produce mono-color copies or convert the color on an original to any desired tone or intensity.
- Compose pages, combining a color original with black-and-white text.

Cost for a transparency is \$2.25; for a single 8 1/2" × 11" is \$1.25. Rates go down with multiple copies.

The copier is operated by a Graphic Arts staffer who will be on duty from 10 AM to noon and 1 to 3 PM daily. You can leave orders at the Bldg. 90 and Bldg. 50 Copy Centers as well as at the Photo Lab (Bldg. 10).

<sup>1</sup> Computer Associates/Integrated Software Systems Corp.

<sup>2</sup> Precision Visuals, Inc.

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## COMPUTING SERVICES NEWS

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### CHANGES TO TCP/IP ON THE CLUSTER

---

Jon Forrest

Computing Services is planning a major upgrade of the TCP/IP networking software running on the Cluster. We are currently running software that corresponds loosely to the networking software from 4.1c BSD Unix. This software is about 5 years old. We're planning to upgrade to the networking software from 4.3 BSD Unix. In addition to all the bug fixes you'd expect in 5 years of development, you'll also find that the new software is about 3 times faster than the old.

We expect the new software to look the same to users. We'll be testing it on our Local Area VAX Cluster before we put it on the 8650 Cluster.

#### ATYPICAL USAGE

We're concerned about users who may be using the current TCP/IP software in ways we don't expect and therefore can't test. You can assume that we'll be testing the basic capabilities of *telnet*, *ftp*, *rlogin*, and *mail*. But if you have developed your own applications based on TCP/IP, or if you think you use TCP/IP in uncommon ways, please call me (Jon Forrest x4991) to describe what you're doing. I'll be glad to arrange for you to test whatever you have in mind on the Local Area Cluster. This way you can be sure it will work later. If you aren't sure whether or not you're using TCP/IP in a strange way, go ahead and call anyway.

Or contact me via electronic mail at

VMS Mail:       lbl:JLForrest  
 UNIX or  
 Software Tools Mail:   JLForrest@lbl.gov

### VMS DOCUMENTATION ON SALE!

---

Jon Forrest

This is your lucky day. Computing Services is having a sale on VMS documentation. The reason for the sale is that we're overstocked and want to clear out our shelves. Also, VMS 5.0 will be out later this year so we want to make sure we sell all our current VMS documentation before the new stuff starts coming in. (Since VMS 5.0 hasn't even been formally announced yet, we have no estimate on its release date. We doubt you'll see it on the Cluster until the end of the year, if even then.)

So, to perk your interest, we're offering all our VMS documentation at 1/3 off, first come first served, and while supplies last. This means that if we sell completely out of something and have to order new copies, the sale price does not apply to the new copies. To purchase VMS documentation at this bargain price, contact the Computing Library (Bldg. 50B, Rm. 1232B, x4242).

---

### AED 512 LOOKING FOR A HOME

---

Maggie Morley

The AED 512, presently residing in the Computer Center's Graphics Laboratory, is available for dedicated use elsewhere. It can be moved from its present location to a laboratory office of choice.

The AED is a color raster display terminal supporting 8 primary colors (white, red, green, yellow, blue, magenta, cyan, black) with vector and area-fill imagery. The raster size of 512 x 512 pixels is capable of displaying 256 simultaneous colors (out of 16.7 million possible) of various hue, saturation and lightness. It has a joystick for moving the graphic cursor around, a programmable cursor, pan and zoom features. A Summagraphics graphics tablet with a four-button cursor, for digitizing pictures, etc., is attached.

Charges can be negotiated. If you are interested in having exclusive rights to the use of this device, call Marv Atchley (x5455) or

VMS Mail:       lbl:FMAtchley  
 UNIX or  
 Software Tools Mail:   FMAtchley@lbl.gov

---

## MATRIX STORAGE MODES IN IMSL

---

Marty Gelbaum

Some IMSL (International Mathematical and Statistical Library) routines which manipulate matrices require that the input matrix be stored in special Matrix Storage Modes: these include band storage Mode, band symmetric storage mode, and band hermitian storage mode.

For example, the IMSL routine **LSARB**, which solves a real system of linear equations with iterative refinement, requires that the coefficient matrix be stored in band storage mode. Therefore, you should use the IMSL service routine **CRGRB** to convert the coefficient matrix into band storage mode. You then call the **LSARB** routine with band storage mode version of the coefficients.

Chapter 9.1, **Matrix Transformation**, and the **Matrix Storage Modes** section of the Reference Material in the IMSL User's Manual explain these modes and routines in detail. Below is the output from a tiny program that uses the IMSL routine **CRGRB** to convert a general real matrix to band storage mode:

The original matrix:

```
1. 0. 0.
1. 2. 0.
0. 1. 3.
```

The matrix in band storage mode:

```
1. 2. 3.
1. 1. 0.
```

Notice that the original matrix has one (1) lower codiagonal, that is, one non-zero diagonal BELOW the main diagonal, and zero (0) upper codiagonals, that is, there are no non-zero diagonals ABOVE the main diagonal.

Forward comments and questions to me (x4749) or

VMS Mail:        **lbl::M\_Gelbaum**  
 UNIX or  
 Software Tools Mail:    **M\_Gelbaum@lbl.gov**

---

## ERROR CHECKING AND HANDLING IN IMSL V 10.0

---

Marty Gelbaum

### IERCD

The IMSL function **IERCD** can be used to retrieve the integer code for the informational error set by the most recently-called IMSL routine. **IERCD** returns 0 (zero) if there was no error. The codes returned by **IERCD** correspond exactly to the codes (NOT the types) listed in the Informational Errors section in the description of each IMSL routine. Therefore, you can use these codes to determine what course to take.

Notice that fatal errors (those of type 4) cause the program to stop unless the user first calls the IMSL subroutine **ERSET** so that the IMSL routine will NOT halt the program on such error.

The following example uses the IMSL routine **LSARG** to try to solve a system of three linear equations represented by the  $3 \times 3$  zero matrix. Such a matrix is singular; **LSARG** therefore returns error code 2 and the program would stop. (It would not even call **IERCD**). However, **ERSET** has been called, so execution will continue.

```
PARAMETER (IPATH=1, LDA=3, N=3)
REAL A(LDA,LDA), B(N), X(N)
INTEGER IMERR, IERSVR, IPACT, ISACT
DATA IERSVR /0/, IPACT /-1/, ISACT /0/

DATA A /0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0/
DATA B /129.0, -96.0, 8.5/
```

C Print error messages but do NOT stop even on FATAL errors.

```
CALL ERSET (IERSVR, IPACT, ISACT)
CALL LSARG (N, A, LDA, B, IPATH, X)
IMERR = IERCD()
PRINT *, 'IMSL ERROR CODE FROM LSARG = ', IMERR
```

C Restore default IMSL error-handling.

```
CALL ERSET (0,2,2)
STOP
END
```

These routines are documented in the Reference Material section of the User's Manual for the IMSL routines, available for reference at the HELP DESK (Bldg. 50B, Rm. 1272) or in the Computing Library (Bldg. 50B, Rm. 1232B).

---

... *Interchangeable commands*

## MACSYMA ON THE CLUSTER

---

Marty Gelbaum

You may now invoke **MACSYMA**, the symbolic algebra system, on the CSA cluster by typing

**macsyma**

or

**vaxima**

whichever you prefer. Either command will invoke the version of **MACSYMA** that we use here.

This is exactly the same version of **MACSYMA** that is running on our Sun Unix systems and which is invoked there by typing

**macsyma**

Forward comments and questions to

VMS Mail:        **lbl::M\_Gelbaum**

                  UNIX or  
Software Tools Mail:    **M\_Gelbaum@lbl.gov**

---

## FOCUS NEWS

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Bert Albrecht

### • FOCUS USER GROUP MEETING

The next meeting of the **FOCUS Users' Group** will be from 1 to 4 PM Thursday, April 12 in Bldg. 50B, Rm. 1237 (the Training Room).

Topics to be discussed include:

- A report on the new **VAX** release
- A look at the **Expense Report in Tool Kit**, a look at (perhaps) an easier way to say the same thing, and how to customize the report to your needs or wishes.

### • FOCUS CLASSES

The list of users wanting to take the new **Beginning FOCUS** class is growing. If you'd like your name added to that list, call Pat Bean soon (x7008) to register. We hope to schedule a class for late April or early May.

We plan to offer **BASIC REPORT PREPARATION**, a two-day class providing the student with skills needed to create, maintain, & report from **FOCUS** databases. This class replaces the earlier three-day version of **Beginning FOCUS**, which, it was suggested, covered perhaps more material than was needed by most of **LBL's** user community.

Cost for the course (approximately \$250) depends on the number of students signed up. The more students we have, the less it will cost.

Let me know if you have suggestions for other classes. Contact me at x6280, or

VMS Mail:        **lbl::HCAIbrecht**

                  UNIX or  
Software Tools Mail:    **HCAIbrecht@lbl.gov**

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**CERN LIBRARY NEWS**


---

Werner Koellner

**CERN LIBRARY UPDATES ON VMS**

- (1) **GEANT V 3.11** is now the default. (V 3.10 is available as **Geant310.Olb**).  
Some other Cern Libraries have been updated as well. Type  
**HELP CERN LIB**  
to see which versions are available.  
As always, various additional information about products can be found by browsing in the directory **Cern\$Inform**.
- (2) **GEANTGDI** is V 3.11 using the PVI (DI3000) Graphics Interface. Besides the advanced capabilities of DI3000, a number of Graphics Devices may be used. The graphics menu differs from the standard GDRAW menu. Procedures to link and run GeantGdi can be found in **Cern\$Library:Geantgdi.Lnk** and **Geantgdi.Run**. You may also want to look at  
**HELP GRAPHICS PVI**
- (3) **PAW**, the Physics Analysis Workstation, and its associated products **KUIP**, and **COMIS** are available for testing. This ambitious software package is intended to be the last link in the analysis of experimental data. It is currently implemented with the Mini-GKS graphics interface. For additional information, type  
**HELP PAW**
- (4) The CERN Electronic Mail Address database has been made available for direct (DECNet) access from LBL. Type  
**HELP CERNDIR**  
for more information.

Forward comments and questions to me (x4398) or

**VMS Mail:** **lbl::WOKoellner**  
**UNIX or**  
**Software Tools Mail:** **WOKoellner@lbl.gov**

---

*... 2 to 1 against*  
**FORTRAN 8X UPDATE**


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Dave Stevens

The public comment period for the proposed new Fortran standard (8x) closed on February 23, with about 400 registered comments. The comments range in length from a few lines to several pages, and in technical scope from zero (simple Yea or Nay comments) to considerable sophistication. I stopped keeping careful track after the first 220 or so, but to that point the comments were running roughly 2:1 against adoption of the new standard. Some of the reasons were specific technical points, but most tended to fall into three classes:

- Regret: "We'll lose the traditional Fortran virtues of fast compilation and simplicity."
- Lamentation: "We'll eventually lose some widely used statements."<sup>1</sup>
- Objection: "It's a new language; don't call it Fortran."

Since (1) the committee must answer each comment individually, and (2) if the response to any comment changes the standard in any technical way, the new version must undergo another public review, it seems unlikely that there will be a new standard within this calendar year. In any case, I shall keep the Newsletter posted.

If anyone cares to review the comments, I have a complete set in my office. I will also make the responses available as they come in. D. F. Stevens, Bldg. 50B, Rm. 2258, x7344, or

**VMS Mail:** **lbl::DFStevens**  
**UNIX or**  
**Software Tools Mail:** **DFStevens@lbl.gov**

---

<sup>1</sup>There is no loss in 8x, but the ground is paved for loss without further comment.

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## UNIX NEWS

---



---

### NEW FORTRAN COMPILER

---

Dave Cleveland

A new Fortran compiler that can handle the VAX Fortran syntax is now available on the Sun UNIX systems.

#### Step One

To convert a VAX Fortran program to UNIX, type

```
f77cvt filename.for
```

which creates an `f77 filename.f` file.

#### Step Two

To compile, then type

```
f77 filename.f -o filename
```

which creates the executable binary file, `filename`.

To get more information about converting your VAX Fortran program to UNIX, type

```
man f77cvt
```

For more information about compiling your UNIX Fortran program, type

```
man f77
```

---

### ISD IS UP

---

Dave Cleveland

ISD, a new UNIX system from Sun Microsystems, Inc., is now operational and users in the Information Services Department can access it through Develcon or from UX1 or UX3.

The ISD system, running on a Sun 3/180, replaces the TID7 system.

Forward questions and comments to Dave Cleveland, x5336 or

```
VMS Mail:      lbl::DHCleveland
               UNIX or
Software Tools Mail:  DHCleveland@lbl.gov
```

---

### USING FMT IN VI

---

Marty Gelbaum

The `fmt` program, a simple text formatter, is a useful tool with the Vi editor. `fmt` produces a version of its input with lines as close to 72 characters long as possible. The spacing at the beginning of the input lines is preserved in the output, as are blank lines and interword spacing. Following are two typical uses of `fmt` within Vi:

- (1) To even all the lines in a file:

Press the escape key (<ESC>) and then type these characters:

```
:%!fmt (colon, percent, bang, fmt)
```

This command evens the lines of the whole file. (In this context, "%" is a metacharacter that means *use the whole file as the input for fmt.*)

- (2) To even all the lines of a paragraph:

Press the escape key (<ESC>) and then type these characters:

```
!)fmt (bang, close-curly-bracket, fmt)
```

at the beginning of a paragraph. This evens the lines of that paragraph.

You can use `fmt` within Vi on both the CSA cluster and the Sun UNIX systems.

Forward comments and questions to me (x4749), or

```
VMS Mail:      lbl::M_Gelbaum
               UNIX or
Software Tools Mail:  M_Gelbaum@lbl.gov
```

## NOTES FROM TROUBLE MAIL

Dana Conant, Computing Services

Following are further examples of typical exchanges from our on-line UNIX and VMS trouble mail facilities.

\*\*\*\*

**MESSAGE:**

I would have expected that the command

```
$ SET FILE/ACL/DELETE
```

```
FILE_NAME.EXT;1;;2;;3
```

would be valid, but only the first two files are affected, and an error occurs upon the third. This seems a little peculiar. Is it expected?

**RESPONSE:**

You're right: the DCL parser has some problem here. Computing Services has submitted an SPR on your behalf to DEC. Thanks for letting us know about it.

\*\*\*\*

**MESSAGE:**

I would like to safeguard the DELETE command in my account. I understand that this can be done by using the command DELETE/CONFIRM. Is it possible to use my *login.com* to redefine DEL:

```
$ DEL := DELETE/CONFIRM
```

or will redefining a system command string lead to problems?

**RESPONSE:**

I put the following in my *login.com* several months ago and have been extremely pleased with the results:

```
$ del*ete := "delete/conf"
```

It definitely is a useful safeguard.

\*\*\*\*

**MESSAGE:**

I would like to create for myself a never backup disk area where I could store my output files and data files.

1) Could you tell me now much it would cost per month for 100,000 blocks?

2) Could you tell me now soon I would be able to have one?

**RESPONSE:**

For NEVER\_USAGE, it would cost you

$\$2 * \text{avg\_use\_in\_blocks} / 2000$  per month.

For NEVER\_QUOTA, it would cost \$50/month.

You may have either type immediately.

(ed. For online information about charges, type help recharge and select VMS\_Rates, or other topic.)

\*\*\*\*

**MESSAGE:**

Could you let me know where lbl115:[xxx] has been moved?

**RESPONSE:**

LBL115:[XXX] was moved to LBL158:[XXX]. If you insert "DISKLOGICALS XXX\_FILES" in your *login.com* file, it will define the logical name

XXX\_FILES\_NEVER\_QUOTA to have as its value the current location of the XXX\_FILES and will allow you to access the files in a way which will work even when the files are moved. Sorry for any inconvenience the move may have caused you.

\*\*\*\*

**MESSAGE:**

This is not, strictly speaking, a problem, but I did not know who to send this question to. I want to emulate the VMS command PRINT/DELETE when sending files to the Imagen printer IP5. As far as I know, the only way to do this is to issue the command

```
LPR -PIP5 <filename>
```

and then wait; after the file is printed, delete the file.

My question is: how long do I have to wait before I can delete the file? Does the command make its own copy of the file at the moment it is executed, or does it simply note where the file is and print out the file when my turn in the queue comes?

Thanks.

**RESPONSE:**

The LPR/IPR/IMPRINT family of printing programs on CSA do make a copy of the file in a spool directory; therefore, in principle, your file should still print if you delete it AFTER you get back the system prompt from issuing the LPR command. However, I always wait to see the paper output before deleting the disk version of the file. Good luck.

\*\*\*\*

**MESSAGE:**

The quota for our experiment (user\_files) on lblXXX is 350K blocks, among which 147K are free. However, the free disk space on lblXXX is only 81K, which means that our real available free space is only 81K. We need some more space; can you fix it for us?

**RESPONSE:**

LBLXXX is a NEVER\_USAGE disk and as such is overbooked. There is no guarantee that you can EVER use



space that your quota would allow. We do manage these disks on a day-to-day basis and try to see that there are about 100,000 blocks available.

You can acquire space on a NEVER\_QUOTA disk where you ARE guaranteed to be able to use all the disk space your quota would allow. However, you pay for your quota (at half the rate), not your usage, on a NEVER\_QUOTA disk.

\*\*\*\*

### MESSAGE:

Is there any way to get Imagen printers to print text with lines of 140 to 150 characters? In landscape mode, the most I can get is 132 characters, but there's another inch or two of room on the right. Why can't the printers use this space? (I'm using imprint -r filename.) Thanks.

### RESPONSE:

Imagen printers, when printing text, attempt to emulate a generic dumb line printer. You may have used such a printer 15 years ago on an IBM batch system. Unfortunately, these printers could only print 132 characters per line and the software driving the printers didn't do line wrapping. In creating their line printer emulator, Imagen chose to emulate these features even though there is room on a page for extra characters, and all things considered, it just isn't all that hard to do line wrapping. We happen to agree with the gist of your comments and will forward your comments to the Imagen account manager for LBL. Happily, the software that drives an Apple Laser-Writer, or any PostScript printer, is more flexible and can properly wrap lines up to at least 1024 characters long (this is the highest length we tested). So, if you need a line printer style device that can print more than 132 columns, use a PostScript laser printer. Or you could create a T<sub>E</sub>X or troff document using formatting commands that result in output of the length you desire.

\*\*\*\*

### MESSAGE:

How do I kill a printing job in the 90v queue? Thanks.

### RESPONSE:

Use

SHOW QUEUE/ALL 90V

If your job is in that queue, you'll see it listed, with a job number; call it JOBNUMBER.

DELETE/ENTRY=JOBNUMBER 90V

should delete that job.

\*\*\*\*

### MESSAGE:

Is g\_floating implemented on the cluster? I have a program that I compiled with and without g\_floating and then ran. The results of the two runs are completely different. Is this usual?

### RESPONSE:

The CSA 8650s have hardware support for both G and H floating point. Sometimes the results with G floating are quite different from those without; compiling the following tiny program with and with G\_FLOATING leads to quite different results.

```
REAL*8 X,Y
```

```
X = 0.368D-36
```

```
Y = (0.368D-3)**12
```

```
PRINT ('(2E15.7)'), X, Y
```

```
END
```

Your question didn't mention the language your program was written in. In most cases, this doesn't matter. However, if you are writing in C, you should keep in mind that the sizes of F and D float format is different from that of G and H. Plus, you must link with different versions of the C Runtime Library when you are using G and H float. For more information, see pages 1-13 of the Guide to VAX C or type:

```
help cc/g_float
```

\*\*\*\*

### MESSAGE:

What does "rm: remove /tmp/tsxxxxx" mean, and what answer do I give? I realize it's a setup for my terminal type, but don't know why I'm being asked whether I want it removed. Should I incorporate it (the file) into my .login?

### RESPONSE:

/tmp/tsXXXXX is a temporary file created while setting up your terminal. You can answer "Y" to get rid of the file; you could also change your .login file to read "/bin/rm -f /tmp/ts\$\$" instead of "rm -f /tmp/ts\$\$. That way, the file will be removed without any question.

\*\*\*\*

*If you want wider distribution of your comments or questions, we encourage you to send them to trouble since it is seen by a wide range of people, including Divisional management.*

To use trouble, enter the VMS, Software Tools, or UNIX mail system and send mail to the address

```
trouble<cr>
```

We won't, of course, include any user's name in the exchanges. . . . Ed.

## THE WORKSTATION SCENE

### [25.4.1].....

#### ● WORKSTATION GROUP ELECTRONIC MAIL

Workstation Group members can now be reached from the VMS cluster or the Computing Division's UNIX machines by sending mail to

VMS Mail:       Ibl::WKSG

UNIX or  
Software Tools Mail:   WKSG@lbl.gov

We hope this alternative (to the telephone) will help users who have problems or who want to share helpful hints.

### [25.4.2].....

#### ● COMPUSEVE BLANKET ORDER

... From Jean Lawther in Purchasing

LBL maintains a Blanket Order (No. 3370900) with the CompuServe Online Information service.

To access this service, send a purchase requisition to Jean Lawther, (Bldg. 69, Rm. 201 - x 4596), asking to be included in the blanket. Forward the following information:

- User name (must be an individual)
- Telephone number to be used
- Account number to be charged
- Specific service requested.\*

Once the account is in place, CompuServe will call you directly with an identification number.

Pricing is under the General Services Administration Contract No. GS00K-88AFS1205. Charges are ~\$14 per hour for 1200 Baud connections and ~\$21 per hour for 2400 Baud connections.

*\* Workstation readers might be interested in the Interchange Service, which lets you access the many special interest groups and forums - such as Apple, IBM, Microsoft, Borland, and Lotus - that are available on CompuServe.*

### [25.4.3].....

#### ● TOTAL WORD IS HERE

Total Word, from LifeTree Software, has arrived. VolksWriter users will feel right at home with this new word-processing package that supports graphics and PostScript printers. We will be evaluating it and will give you a report next month. If you have heard reports elsewhere about Total Word and are dying to see it, stop by the Workstation Lab (Bldg. 50B, Rm. 2231) and apply hands.

### [25.4.4].....

#### ● IBM SUPPORT UPDATE

Representatives from IBM will present a technical update class -- the first of a projected series -- at 10 AM Thursday, April 14th in Bldg. 70A, Rm. 3377 (the Conference Room). Folks at IBM are working with LBL's Workstation Group to establish better support for the IBM PC user community.

This opening class will be followed by a technical discussion of the PS/2 family. Come and hear about IBM's plans for support of the LBL community.

For additional information, contact the Workstation Group (x6858).

### [25.4.5].....

#### ● LOTUS 1-2-3 DEMO

There will be a demonstration of the new features of Release 3 of Lotus Corporation's 1-2-3 -- due to be shipped this summer. The presentation will be at 1:30 PM Wednesday, April 20 in Bldg. 70A, Rm. 3377 (the Conference Room). For more information contact the Workstation Group (x6858).

### [25.4.6].....

#### ● ON-LINE PHONE BOOK NEWS

We've put the latest LBL Phonebook on line and we have added a file of other good LBL phone numbers to have at your fingertips. You'll now find most of the other lists printed in the LBL phone book - area codes, benefits, building managers, FTS information, dialing codes and more. This new list is called ADDPHONE.FIL and can be found on the CSA cluster by using the command:

```
SET DEF IBMPCPHONE
```

The list is an ASCII file. You can download it to a PC and search it with *list*, *fgrep* or *browse*, just as you now do with the file PHONBK.FIL. This file is not yet available in the compressed mode suitable for search by PHONE1.EXE on the PC's. PHONBK.FIL continues to be updated on or about the tenth of each month and it remains the most current available listing of LBL personnel.

### [25.4.7].....

#### ● WARNING TO C COMPILER USERS ON THE PC

If you write programs using the 'C' language on an IBM PC (or clone) and you mix routines compiled with different memory models, you may have a disaster lurking just around the corner.

There are at least two ways to wipe out a hard disk accidentally by clobbering the disk's FAT (File Allocation Table).

• **BOOM!**

The first way you can wipe your disk is to mix modules which were compiled with different memory models. Large (and huge) memory models deal with **segment:offset** pointers. The PC-DOS operating system allows any program to read or write anywhere in the 1 Mbyte addressable memory. Mixing routines compiled with large memory model and routines compiled with tiny, small or medium memory models may result in errors allowing the program to write in memory where it shouldn't. If the gods are not smiling on you, one of the bad places where the program may write just might be the in-memory copy of your disk's FAT. If any **write to disk** occurs after that, **BOOM!**

Results are totally unpredictable and recovery may not be possible. The solution is simple: **DON'T** mix routines compiled with different memory models. Note that virtually any C Compiler can have this problem. This is not a compiler bug. One could argue that the Linker should be smart enough to detect the problem and warn the user, but we don't know of any that does.

• **LOOKOUT!**

The second possible way to wipe out the disk is somewhat similar. Inexperienced C programmers might write large memory model programs. If they use pointers and those pointers are null when the program goes into execution, then **LOOKOUT!** Null pointers may also result in writing to memory in random locations with the same danger of clobbering a hard disk. The only compiler with an option to detect and warn of null pointers is the Microsoft Optimizing C Compiler, V 5.0. There may be others of which I am not aware.

The interesting thing about these warnings is that such a programmer error can't cause this kind of problem in the Unix or VMS environment. These operating systems use memory protection to prevent a user's buggy program from damaging other users or the operating system itself. Only in the PC-DOS (or MS-DOS) world, where there is no protection for the system, can the user shoot himself in his own foot in quite this way.

Please take warning from this article. We monitor various networks and we've observed that both of these disasters occur fairly frequently with much anguish to all concerned. For more information, or if you know of additional ways a C user can clobber his hard disk, please contact WorkStation Group member Dan Van Zile (x5589).

[ 25.4.8 ].....

• **A NEAT LASER JET UTILITY**

... *From the March 15 issue of PC MAGAZINE.*

ASPRN.COM is a Terminate-and-Stay-Resident (TSR) utility which does a substitution when it 'sees' certain 2-character strings in a print file. (The strings themselves are not printed. This is called 'macro substitution'.) This utility gives users a powerful way to send complicated commands to a laserjet printer from within an application without having to save and exit the application first.

For example, the HP Laser Jet printer requires the following command string to select **BOLD** when using the "B" cartridge:

```
^[\&l 00 ^[(0U ^[(s1p10v0s3b5T.
```

Many word processors cannot send the Escape characters (shown as ^[ above) or they could not send the required sequence in the middle of a line of text. Most word processors and editors could send a ~B which had been previously defined and ASPRN would substitute the required printer command strings.

ASPRN.COM and its .DOC file have been added to the directory of Public Domain and Shareware programs on the CSA cluster. The command

```
SET DEFAULT IBMPCSOFTWARE
```

will move you to the directory from where the files ASPRN.COM and ASPRN.DOC can be 'KERMIT'ed. Or bring a blank PC disk to the WorkStation Lab (Bldg. 50B, Rm. 2231) for a copy. For more information, contact WorkStation Group member Dan Van Zile (x5589 or x6858).

[ 25.4.9 ].....

• **MAC MEMORY & MULTIFINDER:  
ANOTHER LOOK**

*We discussed this in the November, 1987 Computing Newsletter (24.11.14). We think we should talk about it some more.*

**D**oes your MAC, operating under Multifinder, work in harmony with your software application program? It should, but let's be realistic. Both the MAC II and Multifinder are relatively new; much software is still not fully tested under Multifinder. You need a minimum of 2.5 Mbytes for an SE or MAC Plus if you wish to run Multifinder. Users are rapidly discovering that they need 5 Mbytes to be productive with the MAC II running Multifinder.

**Note:** In an article in November's Computing Newsletter, Richard LaPierre discussed suggested memory upgrades of the Macintosh II. At that time the recommendation was to go with the \$160 upgrade to 2 Mbytes of memory. Experience now indicates

that users will really need the \$800 upgrade to 5 Mbytes of memory. Unfortunately, everything you read in the press about the shortage of 1 Megabit memory chips is true; they are just not available at this time. Apple estimates that the shortage will exist for at least six months. In the interim it might be necessary to go with the \$160 upgrade, recognizing that the upgrade will be of no use when upgrading to 5 Megabytes of memory.

Software upgrades are slowly making their way to the user. Apple's newest operating system with Multi-finder caught most software developers with programs that just wouldn't run properly. Presently, the major players have shipped upgraded products. But a few bugs linger here and there. Keep in touch with the Workstation Group for the latest word on software products.

In summary then, there are no quick fixes for the MAC II compatibility problems. As memory becomes available, upgrade to 2-5 Mbytes of RAM and be patient for the arrival of new software upgrades. Frequently a MAC II compatibility listing will appear in MacUser or MacWorld. The March 1988 issue of MacUser has such a listing. Stop by the Workstation Lab (Bldg. 50B, Rm. 2231) for a copy. These listings are not complete by any means. As usual, *Caveat Utator*.

[ 25.4.10 ].....

• VERTICAL MAC II TESTS

In the latest *Apple Release Notes* there's a report on testing of the Macintosh II computer in a vertical position.

There was no reliability degradation.

The testing was performed on Apple drives with 1 1/2" of floor clearance and with clear air paths under and around the system. (For maximum cooling, it was recommended that the power supply be at the top. However, the power supply could be at the bottom). Reliability degradation was not tested with third-party drives.

Other findings:

- Several Macintosh II stands (brand names withheld) do not meet the reliability criteria because they either place the CPU on the floor or they block the air vents on one side of the housing.
- Several CPU stands listed in the latest Inmac Catalog do not qualify as MAC II vertical stands. These Inmac stands are designed for other CPU units.

If you are interested in mounting your MAC II or IBM CPU vertically, contact the Workstation Lab (x6858) for current information. The Workstation Lab has several Inmac-style vertical stands (at \$50) for IBM PC/XT/AT and compatible CPU's.

[ 25.4.11 ].....

• TEXTURES TURNOVER

The future of TEXTures, Addison-Wesley has decided, is best served by having the product's future development, sales, marketing and technical support handled solely by Kellerman & Smith. This will be a complete transition.

All calls regarding technical support, customer service and product information should now be directed to Kellerman & Smith (1-800-622-8398)

As mentioned in last month's LBL Computing Newsletter [25.3.14], there is a current upgrade (V 1.1) to TEXTures. If you are a registered user of TEXTures V 1.0, you should have received an upgrade notice from Kellerman & Smith by now. For additional information, contact Bruce Burkhart (x6858) in the Workstation Lab (Bldg. 50B, Rm. 2231).

[ 25.4.12 ].....

• COMPUTER LOCKDOWN DEVICES

The Workstation Lab has just received another supply of cable-type lockdown devices for computers, printers and other peripherals. These devices cover the MAC Plus, MAC SE, the IBM PC/XT/AT and printers.

**For Apple Products:**

The lockdowns use brackets which snap into the security slots in the back of the MAC Plus and and SE case. One end of a flexible 5/16-inch vinyl-clad stranded steel cable threads through the the bracket. The other end is secured around a fixed support with a heavy padlock. If you would like to see a working example of this setup, check out the MAC Training Room (Bldg. 50B, Rm. 1227). Security Kit prices are as follows:

System	Device	Price
MAC Plus	Security Kit	\$ 35.00
MAC SE	Security Kit	\$ 30.00
MAC II	Vaultec Unit	244.00
LaserWriter/ other peripherals	Adhesive Pad Assembly	\$40.00
IBM/AT	Vaultec Unit	\$220.00

Prices are approximate.

For additional information, contact Workstation Group members Dan Van Zile or Bruce Burkhart (x6858).

[ 25.4.13 ].....

• LBL FONTS FOR THE MAC

When you type text intermixed with symbols, do you get tired of switching fonts? Well, you don't have to anymore. Roy Kerth has constructed three PostScript fonts (called LBL fonts) that mix

alpha-numeric characters with the most-used symbols. Several characters not available in the standard symbol font have been added as well (for instance,

ñ, λ, †, x̂, ŷ, ẑ, T, l, U)

These font families are based on Palatino, Times and Helvetica.

These are available at no cost. Bring a disk to the Workstation Group Lab, Bldg. 50B, Rm. 2231, between 8 AM and 5 PM. We'd like your feedback: What symbols need to be added, what key placement of symbols do you prefer, etc. Send comments to the Workstation Group.

[25.4.14].....

● SOFTWARE UPDATE CORNER

**MacDraft V 1.2b**

The makers of MacDraft have found a problem serious enough to warrant the release of a "revised" version (1.2b). The problem is specific to the new release of the LaserWriter and LaserPrep files, version 5.0. Since this is a free upgrade to registered users, you can get the upgrade from the Workstation Lab. Recent experiences seem to indicate that versions newer than 1.2a will not work on the MAC Plus.

**Cricket Graph V 1.2**

Cricket Graph V 1.2 is now in color. By this date, users should have received a form from Cricket for the \$20 upgrade. The update has been out for some time now. The latest version for Cricket Draw is 1.1.

**TOPS V 2.0**

If you are using TOPS, you should probably upgrade to V 2.0. The enhancements include a "remember" function that allows users to make files automatically available to the network and access remote files. V 2.0 is fully compatible with all Apple File Protocol applications; it also supports AppleTalk zones linked by network bridges. Call (415) 549-5900 for a TOPS 2.0 Upgrade Order Form. Prices vary according to original purchase dates. TOPS Terminal should be shipping soon. This software package provides a local area network link to TCP/IP-based networks and systems.

**MindWrite**

If you are a MindWrite user and haven't upgraded to V 1.1, stop by the Workstation Lab for a copy. This free upgrade fixes bugs and includes some major enhancements.

**Equation-processing options and fonts**

Because the MAC Equation Extravaganza was such a success last month, we've readied a list of the latest versions of the equation generators, which should be useful in the ordering process. Ask for MacEqn V 2.1 (\$39), Expressionist V 1.12 (\$82), MathType V 1.52 (\$129), and MathWriter V 1.4 (\$50). These programs

seem to be updated fairly frequently. Minor upgrades are usually free: major upgrades generally range from \$20-\$50.

**MORE V1.1c**

The new MORE V 1.1c has been available for some time. The upgrade is a hefty \$42.80 for registered users. There are some enhancements besides the normal bug fixes, and the upgrade includes Acta, the popular outliner.

**TeXtures**

As mentioned elsewhere in this Newsletter, the upgraded version (V 1.01) of TeXtures is now available from Kellerman & Smith.

**DiskFit V 1.4**

DiskFit V 1.4, a floppy disk backup utility, has just been released. Most of the features pertain to streaming tape compatibility.

Other such utilities in the Workstation Lending Library include: FastBack V 1.02 and HFS Backup V 2.02. Not one inquiry followed last month's article on floppy disk backup utilities for the MAC. Evidently, users are quietly buying backup utilities or at least backing up those individual important folders.

**Excel V 1.06**

Those users who recently purchased or upgraded to Excel V 1.06 may have thought color would be included in the upgrade. Not so. Microsoft has stepped back from a full color release, probably will have it with V 2.0. The DOS version of Excel 2.0 is in color. Microsoft is currently working on a MAC equivalent of the DOS 2.0 version (probable shipping date: late in the second quarter of 1988).

**Quiet fans**

You may not have noticed, but the MAC Training Room is almost as quiet as a tomb now. The original "howling" SE fans have been replaced with new Apple Upgrade Fans. For a little less than \$100, an Apple Duty Tech from RTSS can put a replacement fan in your MAC SE.

For additional information, contact Bruce Burkhart (x6858) in the Workstation Lab (Bldg. 50B, Rm. 2231).

[25.4.15].....

● FILEMAKER PLUS OFFER

A window of opportunity is now open for those of you interested in purchasing FileMaker Plus at a fantastic discount. This popular award-winning database manager and forms-design program for the Macintosh is being offered at educational discounts starting at 50 per cent. An even greater discount is available depending upon quantity ordered.

The Workstation Lab would like you to take advantage of this one-time offer. We'll do the paper work for you. Call or stop by our Lab (Bldg. 50B, Rm. 2231)

and give us your order(s), and account number. Prices for this offer will begin at around \$75 and decrease with volume. The normal educational discount price is around \$150.

We will process your order till mid-April, so don't delay. If you have any further questions, please contact Bruce Burkhart (x6858).

[ 25.4.16 ].....

● RESUME TEMPLATE FOR THE MAC

The template for the "Annual Supplement to the Professional Résumé" form is now available for MAC users. Jeff Zalkind of the Occupational Health Division has created this template on MicroSoft Word. Employees who must fill out this form every year can have a copy of the template by bringing a disk to the Workstation Lab, Bldg. 50B, Rm. 2231.

[ 25.4.17 ].....

● NEW COURSES

If there is enough interest, the Workstation Group will schedule a class on **HyperCard - Creating Cards and Stacks**. This will be a two-day course for 1 ½ hours each day. The tentative schedule for the first class will be from 10 to 11:30 AM on April 19 and 21.

Also, from 1 to 3 PM on April 20, there will be a class on **Beginning Excel Charts**. This course is designed for people who are already familiar with the basics of Excel.

If you would like to attend either of these courses please call Carole Casaretto (x6858).

[ 25.4.18 ].....

● ENGINEERING & SCIENTIFIC PRODUCTS  
FOR THE MAC

Apple Computer has compiled and produced a directory of information on engineering and scientific products currently available for the MACintosh family. Called the *Apple Engineering/Scientific Solutions Guide*, it has over 350 software programs divided into 11 major sections corresponding to categories of applications. Only a few products have a full description, but those not fully described have a telephone number for additional information. The Guide also has a Company and Product Index for easy lookups.

The Guide is available in the Workstation Lab (Bldg. 50B, Rm. 2231) for reference use. Contact Bruce Burkhart (x6858) for more information.

[ 25.4.19 ].....

• WORKSTATION SOFTWARE LENDING LIBRARY

The Macintosh and IBM PC software listed below can be borrowed for one week for evaluation. It is not to be copied!! Call Bruce Burkhart (x6858) to reserve a software package. The Workstation Group lets you keep these packages for one week at no charge. If not returned after the 8th day, there will be a \$100 charge plus the software cost recharged to your account.

APPLICATION CATEGORY	APPLE MACINTOSH	IBM PC-XT-AT
<b>Communications</b>	Kermit V 0.8 Red Ryder V 9.4 ** TOPS for the MAC V 2.0 Versaterm V 3.10	DECnet DOS V 1.1 Kermit V 2.29 PC-VT V 8.4 * SmartTerm 240 V 2.0a ** TOPS for the PC V 2.0
<b>Database Application Generators</b>	4th Dimension V 1.0 * FileMaker Plus V 2.1	dBaseIII Plus
<b>Demo Programs</b>	dBase MAC FullWrite Professional * FreeHand by Aldus MathType * MGM Station Cad * Reflex Plus by Borland VersaCad (MAC SE)	GENIFER Javelin PLUS Lotus Agenda MiniTK Solver
<b>Disk Backup Utilities</b>	* DiskFit V 1.4 * FastBack V 1.02 * HFS Backup V 2.02	
<b>Drafting</b>	* MacDraft V 1.2b 2/24/88 MiniCad V 3.15	
<b>Drawing and Design</b>	Cricket Draw V 1.1 * Cricket Graph V 1.2 Fontographer V 2.3.2 FullPaint V 1.0 Illustrator V 1.0 MacDraw V 1.9.5 MacPaint V 1.0 SuperPaint V 1.0	HP Draw Gallery V 1.0 HP Chart Gallery V 1.0 Lotus GraphWriter V 1.0 Lotus Freelance V 1.0 * MS Chart V 2.0 MS Paintbrush MS Show Partner
<b>Equation Generators</b>	* Expressionist V 1.12 MacEqn V 2.1 * MathWriter V 1.3 * MathType V 1.04	
<b>Fonts</b>	* LBL Fonts V 1.0 * Princeton Font 4.0L * SciFonts V 2.5	
<b>General Languages and Tools</b>	Aztec C Compiler V 3.40B Lightspeed C V 2.01 QUED/M Editor Turbo Pascal V 1.0	MS Fortran V 4.0 MS C Compiler V 5.0 MS Quick Basic V 3.0 MS Quick C V 1.0 Q-DOSII RM Fortran V 2.0 Turbo Pascal V 3.0

\* Update or New Listing. \*\* WKSG Lab Demo Only.

APPLICATION CATEGORY	APPLE MACINTOSH	IBM PC-XT-AT
<b>Instructional</b>	Personal Training Systems: Audio Cassette & Disk "Learn Excel" (9 courses) "Learn HyperCard" (4 courses) "Learn PageMaker" (3 courses) "Learn Word" (3 courses) * FlipTrack Learning Systems: "How to use Word" (4 courses)	ATI Teach Yourself: Lotus 1-2-3 V 2.0 Cdex Training Program: Lotus 1-2-3 V 1a PC Tutor
<b>Mathematics/Statistics</b>	Parameter Manager Plus	* TK Plus Solver
<b>Organizational Tools</b>	* More V 1.1c * Acta V 2.0	TimeLine V 1.0
<b>Presentation Graphics</b>	PowerPoint V 1.0	
<b>Spreadsheets</b>	* Excel V 1.06 101 Macro's for Excel	Excel V 2.0 Lotus 1-2-3 V 2.01 InWord V 1.0 Lotus HAL & Metro Learn & SpeedUp * Funk WorkSheet Utilities * QUATTRO by Borland
<b>Technical Publishing/ Page Layout</b>	PageMaker V 2.0A PageMaker Templates V 2.0 Quark XPress V 1.1 Ready-Set-Go!4	PageMaker V 1.0a Ventura Publisher V 1.1
<b>Utilities</b>	* HyperCard V 1.1 * HyperDA V 1.0 PrintWorks for the MAC * QuickKeys V 1.1 SmartScrap & The Clipper Thesaurus for Word 3.0 Tempo V 1.2	Carousel V 1.0 Double DOS JetSet MS Windows 2.0 MS Windows/386 Norton Utilities V 4.0 Polaris Forms V 1.0 SideView V 1.0 * SoftWare Bridge V 3.0
<b>Word Processing/ Editors</b>	MacWrite V 4.6 MindWrite V 1.12 MS Word V 3.01 * Textures V 1.01 WriteNow V 1.0	DisplayWrite4 V 1.0 Lotus Manuscript V 1.0 MS Word V 4.0 PC/VI V 1.11 Volkswriter3 WordPerfect V 4.2

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**SIGN UP FOR THE NEWSLETTER**

Attention LBL employees: If you use the Computer Center's UNIX or VMS system, or if you are a owner or user of a PC or a MAC, you should sign up to receive the Laboratory's Computing Newsletter. It contains useful information about our systems and has a helpful **Workstation News** section (supported by the Information and Computing Sciences Division's Workstation Group), offering support and helpful hints for PC users. This is also a place for you to send questions and comments. To add your name to the Newsletter Mailing List, contact Maggie Morley, x5529, or

VMS Mail:           ibl::MAMorley  
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