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PUB-429

ATTENTION READERS!

WE'RE UPDATING OUR NEWSLETTER MAILING LIST

IF YOU WANT TO CONTINUE TO RECEIVE IT,

FILL OUT THE FORM ON PAGE 17 AND SEND IT BACK.

IF YOU DON'T, YOUR NAME WILL BE DROPPED FROM OUR LIST

ATTENTION USERS!

WE'RE CLEANING OUT OUR OLD TAPE LIBRARY

IF YOU WANT TO CLAIM YOUR BKY TAPES,

DO SO BEFORE JANUARY 1, 1986

For Reference

Not to be taken from this room

RECEIVED
JAN 14 1986
PUB FIVE
LBL LIBRARY

PUB-429

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PUB-429 12-85/2000

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 - 2258

ADVANCED DEVELOPMENT PROJECTS

Head: Dennis Hall(on leave)

Workstation Group

Group Leader: Richard LaPierre (RLLaPierre)....4692.....46A - 110

COMPUTING SERVICES

Head: Marv Atchley (FMAtchley).....5455 50B - 2239A

Asst.Head: Sandy Merola (AXMerola)4389 50B - 2239B

Central Office5871,2 50B - 2239

Guest Cards & Parking Permits.....5947 50B - 2239

COMPUTING SERVICES

User Resources

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

Accounting7008 50B - 1232B

Library/ Document Sales5529 50B - 1245

Math Libraries.....8166 50F - 145

Graphics6945 50F - 126

HELP DESK.....5981 50B - 1272

COMPUTING SERVICES

Computer Facilities & Networks

Group Leader: Sandy Merola (AXMerola)4389 50B - 2239B

Operations Area6211 50B - 1215

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

Terminal or Port Repair (PGMurray).....5354 50B - 2259

Tape Library (Steve Holcomb)6218 50B - 2249

Terminal Rental6218 50B - 2249

Graphics System Manager (RJCochran)5565 50B - 2245

Network Coordinator (WDJaquith).....4388 50B - 1232

COMPUTING SERVICES

VMS System

Group Leader: Wayne Graves (WRGraves).....7035 50F - 144

VMS Cluster Manager (RBallen).....8203 50F - 116

COMPUTING SERVICES

UNIX System

Group Leader: Dave Cleveland (DHCleveland) 5336 50F - 115

UX4/ UX5/ UX6 UX7 System Manager

(EHSheena).....5176 50F - 120

COMPUTING APPLICATIONS

Applications Group

Head: John Colonias (JSColonias).....6019 50B - 2262B

DEVELCON IDENTIS

COMPUTER

DEVELCON DIRECTORY NAME

VAX 11/ 780 (UNIX4)UX4

VAX 11/ 750 (UNIX5)UX5

VAX 11/ 750 (UNIX6)UX6

VAX 11/ 780 (UNIX7)UX7

IBM 3081 (UCB)CCDB

[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

Dial-up Access Numbers

All Machines - 300 BPS 486-4959

2400 BPS 486-4969

o All machines - 1200 BPS 486-4979

o VA-3400 & 212A are equivalent

Local TYMNET Access Numbers

Oakland 430-2900 Vallejo 707-557-0333

Walnut Creek 938-9550 Concord 682-3851

Pleasanton 462-8900 Fremont 490-7366

San Francisco 974-1300 Antioch 778-3420

Operating Hours

All machines are available 24 hours daily.

With these exceptions.

UX4 - VAX 11/ 780Mon 12/ 02..... 00:30 to 8 AM

UX5 - VAX 11/ 750Mon 12/ 09..... 00:30 to 8 AM

UX6 - VAX 11/ 750Mon 12/ 16..... 00:30 to 8 AM

UX7 - VAX11/ 780Mon 01/ 27..... 00:30 to 8 AM

CSA1 -VAX 8600.....Mon 12/ 02 8:00 to 12:00

CSA2 -VAX 8600.....Tue 12/ 03 8:00 to 12:00

CSA3 -VAX 8600.....Wed 12/ 04 8:00 to 12:00

CSA4 -VAX 8600.....Thur 12/ 05..... 8:00 to 12:00

CSA5 -VAX 8600.....Fri 12/ 06..... 8:00 to 12:00

DEPARTMENTAL MATTERS

RECHARGES

Eric Beals

The costs of the Computing Services Computers are recharged on a monthly basis to LBL account numbers. To display your charges enter one of the following commands:

BILLUSER
BILLACCOUNT
BILLGROUP
BILLDIVISION

- (1) **BILLUSER**
 Displays on the screen the total charges for the currently logged in user.

Format:

BILLUSER [month spec] or **BILLU** [month]

The charges displayed can be for previous month and is specified by supplying the first 3 characters of the month's name as an argument. For Example: **BILLUSER OCT**

If no argument is supplied the period is the current month through yesterday. For example: **BILLU**

- (2) **BILLACCOUNT**
 Displays on the screen the total charges for the currently logged in user's account number.

Format:

BILLACCOUNT [month specification] or **BILLA** [month]

The charges displayed can be for previous month which is specified by supplying the first 3 characters of the month's name as an argument.

For Example: **BILLACCOUNT OCT**

If no argument is supplied the billing period is the current month through yesterday.

For example: **BILLA**

- (3) **BILLGROUP**
 Displays on the screen the total charges for the currently logged in user's group.

Format:

BILLGROUP [month specification] or **BILLG** [month]

The charges displayed can be for previous month and are specified by supplying the first 3 characters of the month's name as an argument.

For Example: **BILLGROUP OCT**

If no argument is supplied the period is the current month through yesterday. For example: **BILLG**

- (4) **BILLDIVISION**
 Displays on the screen the total charges for the currently logged in user's division.

Format:

BILLDIVISION [month specification] or **BILLD** [month]

The charges displayed can be for previous month and is specified by supplying the first 3 characters of the month's name as an argument.

For Example: **BILLDIVISION OCT**

If no argument is supplied, the charge period is the current month through yesterday.

For example: **BILLD**

- **USAGE_MONTH**

There are two kinds of reports generated each month:

- a usage report which displays connect_time, CPU_time, and disk_usage for each user within each account within the group. This is an 80 column report and can easily be viewed with the **TYPE/PAGE** command.
- a billing report which displays all charges in dollars for each user within each account within the group. This is a 132 column report which can be viewed on appropriate terminals or printed on the VMS printers.

The **FILE_NAME** specifies the group and type of report and the **FILE_TYPE** Specifies the month. For example:

COMPUSE.OCT is the usage report for Computing Services for October.

PHYSICSBILL.NOV is the billing report for Physics for November.

- **USAGE_WEEK**

There are two kinds of reports generated each week:

- a usage report which displays connect_time, CPU_time, and disk_usage for each user within each account within the group. This is an 80 column report and can easily be viewed with the **TYPE/PAGE** command.
- a billing report which displays all charges in dollars for each user within each account within the group. This is a 132 column report which can be viewed on appropriate terminals or printed on the VMS printers.

The **FILE_NAME** specifies the group and type of report and the **FILE_TYPE** specifies the week. The first character of the **FILE_TYPE** specifies the month (A-JAN, B-FEB,...) the next 2 digits are the day of the month associated with the Sunday which ends the week. For example:

- **NSDUSE.K03** is the usage report for NSD for 28-OCT thru 3-NOV.

- AFRDBILL.J20 is the billing report for AFRD for 14-Oct thru 20-Oct.

ACCOUNTING REPORTS

Eric Beals

We will generate weekly and monthly accounting reports which itemize the use and charges associated with each user group. These reports can be found in the directories USAGE_MONTH: and USAGE_WEEK: We will hold back-records of charges for one month.

VMS DISK USAGE

Eric Beals

Users can query the system for their current disk usage status by typing

CSA#> DISKSPACE

to get a listing of disk usage, types, and quotas.

LAST CHANCE TO CLAIM TAPES IN OLD LIBRARY

Marv Atchley

Owners of magnetic tapes remaining in the BKY tape library have until Jan 1 to claim them before they are tossed out. Non-LBL users may buy their tapes for \$10 each. LBL users have the options listed in the newsletter over the past year. (Refer to **Computing Newsletters** of March '85, Pg. 7 or May '85, Pg. 10 for list of options).

COMPUTER CENTER POLICY FOR DORMANT (UNUSED) COMPUTER LOGINS

Marv Atchley

In the interests of security and on-line disk space utilization, the following policy will be observed for dormant computer logins:

- If a newly-issued login is not used within one week, it will be deactivated.
- If a login is not used for 90 days, it will be deactivated (logins will not be allowed.) If a user does not reactivate the login within a month, his/her files will be moved from on-line disk to an archived magnetic tape.

To reactivate an account, contact Pat Bean (50B/1232, x7008).

- Terminating LBL employees will have their logins turned off and their disk files purged at the time of their termination.

CORRECTION PLEASE

Maggie Morley

- Users CAN now make color transparencies on the TEKTRONIX 4695 Color graphics Copier (in Bldg. 50B, Rm. 1237). Users can get film -- for use on Computing Services equipment ONLY -- from Irene Partyka. (Cost will be charged against your computing account.)
- Users can NOT purchase film to make color transparencies on other equipment (personal or off-site) from Irene Partyka. (However, one possible supplier is TEKTRONIX, PO Box 19523, Irvine, CA. 92713.)
- Users CAN get info on using OUR TEKTRONIX 4695 Color Graphics Copier from Irene Partyka.

Forward questions and comments to Irene Partyka. (bernal@ux4, x4242). or Jerry Borges (x5568).

COMPUTER CLASS SCHEDULE

Jerry Borges

The following computer classes are to be offered by the Computing Division starting in January 1986. There is no charge for these classes; to enroll, obtain your supervisor's approval and then contact Suzzon Wilson (x5871). If you have questions about what's being offered, or suggestions for other computer-oriented topics, contact Jerry Borges (x5508).

DATE	TIME	DESCRIPTION	INSTRUCTOR
Jan 7, 8, 9, 10	9AM to 4 PM	Introduction to FOCUS for end users	Bert Albrecht
Jan 14, 16, 21, 23	1 PM to 4 PM	Introduction to VAX/UNIX	Dave Cleveland
Jan 21, 23	9AM to noon	Introduction to VAX/VMS	Rosemary Allen
Feb 4	10AM to noon	Introduction to SPSS	Elon Close
Feb 25	10AM to noon	Introduction to the IMSL and NAG mathematical software libraries	Elon Close
Mar 4, 6	9AM to noon	Introduction to VAX/VMS	Rosemary Allen
Apr 1, 2, 3	9AM to 5 PM	ISSCO Graphics	Claudette Lederer
Apr 8, 10, 15, 17	9AM to 11:30AM	The C Programming Language	Marty Gelbaum
Apr 15, 17, 22, 24	1 PM to 4 PM	Introduction to VAX/UNIX	Dave Cleveland
Apr 16	9AM to 5 PM	Software Management Using DEC/CMS and DEC/MMS	Edgar Whipple
Apr 29, 30	9AM to 5 PM	Precision Visuals Graphics	Claudette Lederer
May 6	10AM to noon	Introduction to SPSS	Elon Close
May 13, 15	9AM to noon	Introduction to VAX/VMS	Rosemary Allen
May 27	10AM to noon	Introduction to the IMSL and NAG mathematical software libraries	Elon Close
Jul 15, 17, 22, 24	1 PM to 4 PM	Introduction to VAX/UNIX	Dave Cleveland

NMFECC ADVISORY GROUP MEETING

Sandy Merola

In early January, there will be a meeting of an NMFECC advisory group on the subject of possible future NAP functionality. If you are a Super Computer user at MFE, your input on this subject could be instrumental in effecting improvements to this critical resource.

If you have any thoughts concerning either the NAP architecture, the user-level commands, the functions of the NAP, or its underlying Network, please forward them to me (lbl::axmerola or axmerola@lbl) at your earliest convenience, certainly before the Christmas break.

HIGH-ENERGY PHYSICS COMMUNITY DECNET MAP

William Jaquith

This map represents the High Energy Physics Community DECnet during the fall 1985. It has grown with the inclusion of Brookhaven National Lab and the introduction of areas into our DECnet. Major sites include: Lawrence Berkeley Lab, Stanford Linear Accelerator, University of California Riverside, Cal Tech, Fermi Lab, University of Wisconsin, and Brookhaven National Lab. The map lists many of the currently active nodes. It also shows the connections between the sites. Most sites are now using Ethernets to connect the local area computers.

The Ethernet is a bus topology and is represented on this map by a bold line with diamonds on each end. Local computers are listed along either side of the Ethernets.

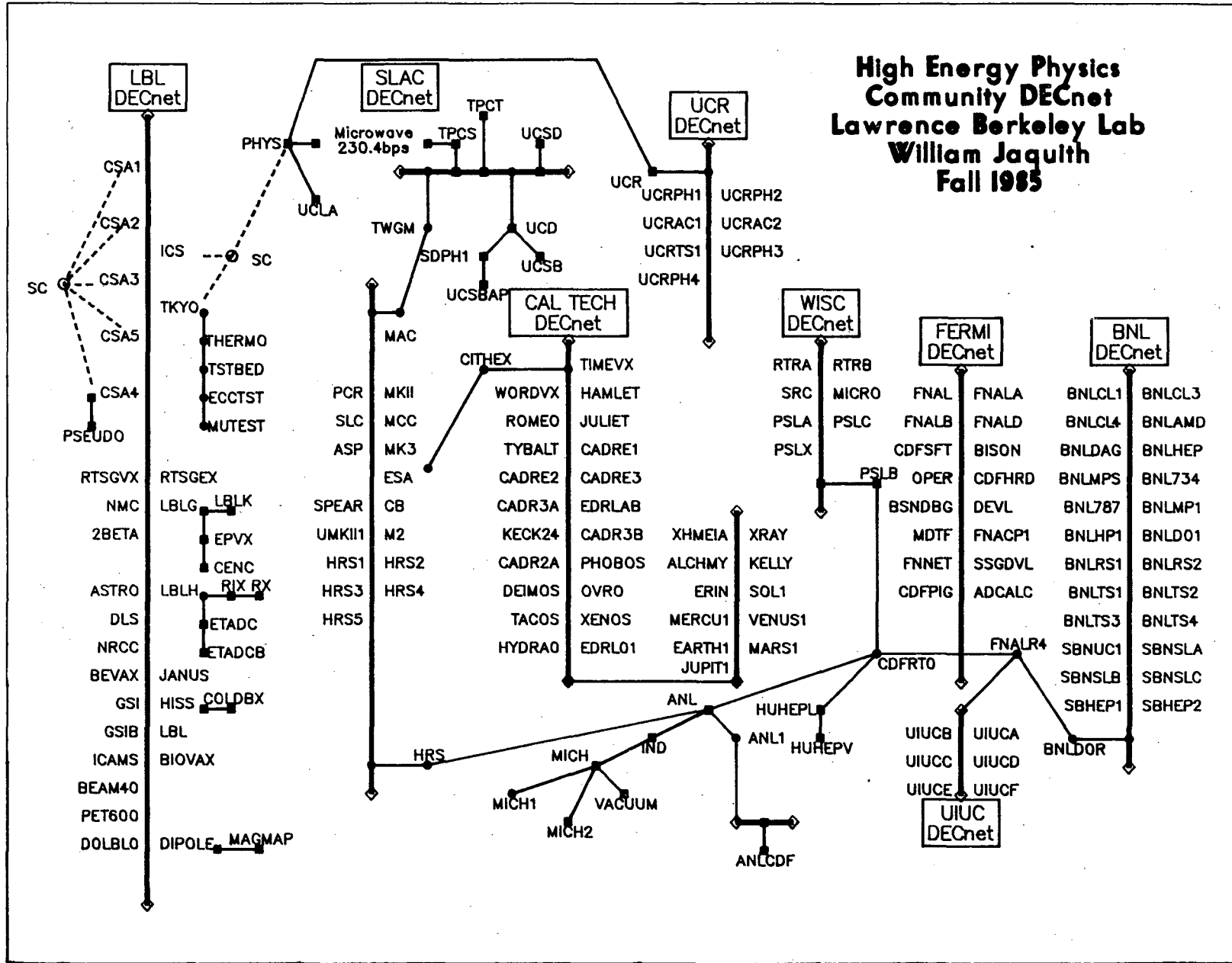
Computers that are not on the Ethernet have solid lines to show the nodes to which they are connected. For example, the LBLK computer is connected to LBLG. The LBLG computer is on the LBL Ethernet. LBLK is connected to the High Energy Physics DECnet via the LBLG machine.

There are two CI connections that are marked at LBL. They are the dashed lines linking the LBL Computing Services 8600 cluster and the lines linking the Physics Division cluster.

The most up-to-date listing of nodes on the High Energy Physics Community DECnet is the file on the CSA cluster:

```
lbl104:[networks]nodedef.area
```

The October 1985 **LBL Computing Services Newsletter** discusses the use of areas with the High Energy Physics Community DECnet. More technical information about DECnet is available in the Digital Equipment Corporation publication "**Guide to Networking on VAX/VMS**". The order number is AA-Y512A-TE. A second resource is "**DECnet-VAX Use's Guide**". It is order number AA-H802B-TE. Address comments and questions to me using electronic mail (lbl::WDJaquith).



SYSTEM NEWS

TRY UX7 - YOU'LL LIKE IT

Dave Cleveland

The UX7 system is readily available and is currently the least-used UNIX system; therefore it provides the best response time. So you'll find that you can get your work done more quickly on UX7 than on UX4, UX5 or UX6.

The UX7 and UX4 VAX-11/780 systems have faster CPUs than the UX5 and UX6 VAX-11/750 systems. As a consequence, the CPU rates have been set higher for UX4 and UX7 to account for the differences. Thus CPU costs for comparable jobs run on any of the four systems should be similar.

To obtain an account or login on UX7 please contact Pat Bean, Bldg. 50B, Rm. 1232, (x7008). (PSBean@lbl). For more information on the relative merits of the VAX UNIX systems, contact me (DHCleveland@lbl).

THE BENEFITS OF SUBMITTING A JOB TO THE VMS BATCH QUEUES

Cammie Howard

There are many advantages to using VMS batch queues. When you submit your jobs to run in a batch queue, you can continue to work interactively on your terminal. The second big reason is cost. CPU time for most batch queues is half, or less, that of interactive CPU use.

The DCL (DEC Command Language) command SUBMIT will place a job in a batch queue. The typical form is:

```
SUBMIT command-filename
```

A command file is a file containing VMS commands. The following example command file, *mycom.com*, compiles, links, and runs the program *progl*:

```
CSA#> fortran progl
CSA#> link progl
CSA#> run progl
```

When the SUBMIT command is used as above, SUBMIT *command-filename*, the default options are used. For instance:

- 1) The default queue is `sys$batch` (*Generic queue name*)
- 2) A log file, *command-filename.log*, will be created in your default directory. This file contains the output normally seen on your screen when the job is run interactively.
- 3) The name of the job will be the user's login name.
- 4) The job will be queued immediately, and executed at the next available point.

There are qualifiers to set each of the above:

- 1) `/queue=queue_name`
- 2) `/log=disk:[directory]file_name`
- 3) `/name=new_name`
- 4) `/after=hh:mm:ss.tt` where h = hour, m = minutes, s = seconds, and t = ticks. The day default is *today*. The day can also be set, see chapter 2 section 5 of the Command Language User's Guide (DCL Dictionary).
- 5) `/notify` This sends a message to your terminal notifying you when the job completes.

An example using all these options is:

```
SUBMIT/queue=sys$batch/log=lbl105:[jdoe]mylog.log -
/name=jdoe1/after=16:30:00.00/notify mycom
```

This command submits the example command file, *mycom.com* to start execution at 4:30 pm today in the batch queue `sys$batch` with a job name *jdoe1*. The log file will be created in the directory *jdoe* on *lbl105* (you need to have write permission to this directory). Note: If it is after 4:30 pm when this command is given then it will be queued and start execution at the next available point. When the job completes, you will get a message on your terminal.

The queue `sys$batch` is a *Generic* queue name. A *Generic* queue represents queues on several machines. The batch job is placed on the least busy machine queue in that generic group. This provides faster turn around for most jobs. The one time when using the generic queue name is not good is if the job has to run on a specific machine. An example is if your command procedure runs the image TELL-A-GRAF, which is only located on CSA2 and CSA4. Then to insure that your job runs on the proper machine use the `/queue=node_queue_name` qualifier with the SUBMIT command. So, to submit a command procedure that runs TELL-A-GRAF on the CSA2 machine `sys$batch` queue, use the command:

```
$ SUBMIT/queue=batch$TAG command-filename
```

Queue names that might be of interest.

GENERIC Name	Machine Names	Purpose
Batch\$Equal	'node'_Equal †	Jobs compete with Interactive processes, CPU charges are the same as interactive jobs
Batch\$Normal (Sys\$Batch)	'node'_Normal †	Normal jobs
Batch\$Economy	'node'_Economy †	Less expensive queue for jobs that use a lot of CPU
Batch\$Standby	'node'_Standby †	Less expensive queue for jobs that use a lot of CPU, jobs only run when no other job is active on the system
Batch\$Dtr	'node'_Normal †	Jobs that need to run on machines that have Datatrieve.
Batch\$TAG	'node'_Normal •	Jobs that need to run on machines that have Tell-A-Graf.

† Currently the possible node names are CSA1, CSA2, CSA3, CSA4, and CSA5.

• Currently the possible node names are CSA2 and CSA4.

ON-LINE SOFTWARE LIST

Marty Gelbaum

You may find out which software packages and products are available on the Computing Services VMS & UNIX systems by typing "help software".

"help software" also shows the machines on which each product is available, that is, whether it is available on CSA1, CSA2, CSA3, CSA4, CSA5, UX4, UX5, UX6, & UX7,

DOE-MACSYMA FOR VAX/VMS

Elon Close
Marty Gelbaum

DOE-MACSYMA, Version 8.23, is now installed on the Computing Services VAX 8600 cluster.

While CSA users are encouraged to use DOE-MACSYMA, it is presently furnished as an AS IS product. Problems encountered with DOE-MACSYMA should be reported via **trouble mail**. For further information on this product, type HELP MACSYMA while logged onto the CSA cluster.

We do not presently have the appropriate documentation for this version of MACSYMA, but you can use much of the SYMBOLICS documentation already on hand.

MACSYMA (Project MAC SYmbolic MANipulation System) is a computer programming system that performs symbolic as well as numerical mathematical manipulations. It is able to differentiate, integrate, take limits, solve systems of linear or polynomial equations, factor polynomials, expand functions in Laurent or Taylor series, solve differential equations (using direct or transform methods), compute Poisson series, and manipulate matrices and tensors.

For more information, contact erclib@csa1, (x6166).

GRAPHICS, PRINTING, & TYPESETTING NEWS

WE'LL CONTINUE TO SUPPORT PVI SOFTWARE

Jerry Borges

We've received requests from our user community to continue to support the Precision Visuals (PVI) suite of graphics software products at its current level. (See the article titled "Future Support of Graphics Software" in the August 1985 Computing Newsletter.)

You can continue to use **DI-3000**, **Grafmaker** and **Contouring** on CSA2 and receive support from Computer Center staff as in the past. In addition, two new PVI products, **DI-Textpro** and **Picsure**, have been added to our PVI repertoire on CSA2. (See the accompanying article for the introduction of **DI-Textpro** and **Picsure**.)

DI-TEXTPRO & PICSURE

Jerry Borges

Two new Precision Visuals (PVI) graphics programs, **DI-TEXTPRO** and **PICSURE**, are available on CSA2.

DI-TEXTPRO

DI-TEXTPRO is an exciting new text option for **DI-3000**. It is fully integrated with **DI-3000** so you can use it in the same structured manner as **DI3000**'s other text capabilities. This makes **DI-TEXTPRO** easy to use with **DI-3000**, **Grafmaker**, **Contouring System** and **Metafile System**.

DI-TEXTPRO provides you with a full set of features to build crisp, professional graphics quickly and easily. It includes ten different publication-quality typeface fonts and a fast preview option to reduce CPU overhead and drawing time for previewing and "working Sessions".

There are 14 **DI-TEXTPRO** example programs (10 for **DI-3000** & 4 for **Grafmaker**) on our system, type:

```
CSA2> di (Define DI3000 symbols)
CSA2> tptest (Set default to DI-TEXTPRO
             test directory)

CSA2> copy *.for disk:[your directory]*.for
CSA2> set def disk:[your directory]
CSA2> for tst01
```

(Compile the first **DI-3000** test program)

```
CSA2> di3load tst01 vt240
```

(link the test program with **VT240** driver)

```
CSA2> run tst01
```

(run the test program on the **VT240**)

PICSURE

PICSURE is a conversational computer graphics system for defining and drawing charts and graphs without learning a computer language.

Line Graphs, Bar Charts, Pie Charts, Text Charts, and combinations of these Chart types (i.e. Multicharts) are created using English-language commands. These commands may be either entered directly at a terminal or read from command files. **PICSURE** is an effective tool for creating both "quick-look" and professional quality graphics.

PICSURE is self-teaching, through its on-screen tutorials. Beginners can use the tutorials as an initial learning aid. Comprehensive **HELP** messages are only a keystroke away when more information is needed.

To use **PICSURE** tutorials, type :

```
CSA2> di3 (Define DI3000 symbols)
```

```
CSA2> picsure t14 (Execute PICSURE with
                  the 't14' driver. The prompt
                  "PicSure>" will be printed)
```

```
PICSURE> help 'tutorials'
```

There are five tutorial sessions available on the system:

- Basic **PICSURE** Chart,
- Horizontal and Vertical Bar Chart,
- Line Graph and
- Scatter Gram, Pie Chart, and Text Chart Creation.

There are also 12 **PICSURE** examples (command files) on our system, type:

```
CSA2> pitest (set default to the PICSURE test
             directory)
```

```
CSA2> picsure t14 (execute PICSURE)
```

```
PICSURE> read command 'commandfile.cmd'
             (read commands from a file)
```

The **DI-TEXTPRO** and the **PICSURE** User Manuals are available in the Computer Center Library (50B-1245).

For more information, please contact Claudette Lederer (x6945).

IMAGEN LASER PRINTERS: AN UPDATE

Bob Rendler

Six Imagen 8/300 laser printers are now in place for use by the user community. The Imagen prints 8 pages/minute at a resolution of 300 points/inch on ordinary office copy machine paper. As currently configured, the Distributed Printing System has the Computer Center's VAX UNIX machines, the CSA Cluster, and CSR's lbl-csam machine as user nodes. The current server nodes are

- **lbl-is1**, an Integrated Solutions Inc., Optimum 5/10, Motorola 68010-based system, and
- **lbl-is3**, an Integrated Solutions Inc., Optimum V24, Motorola 68020-based system.

Both server nodes run a version of Berkeley 4.2 UNIX.

To invoke troff, use the *itroff* command. The *itroff* command accepts arguments specifying the target device (**ip2** for the Imagen printer located in 50B-1275, Central Computer Facility) and the macro package to be used (e.g., *-me*). Preprocessing through *soelim*, *tbl*, and *eqn* is automatic, and in that order. Sample control call:

itroff -P ip2 -me filename

For printer files the *imprint* command is used. This command calls *pr* or *cat* on the input files and queues the output, with appropriate switches to the Imagen printer. Sample control call:

imprint -Pip2 filename

For graphics output the *ipr* command is used. The Imagens accept graphics instructions in Tektronix format. Sample control call:

ipr graphics_file -Pip2 -Ltektronix

For T_EX output (dvi) files the *lpr* command is used.

Sample control call:

lpr -Pip2 -d filename

The current Imagen printers and their locations are:

PRINTER	LOCATION
ip1	50B-3222A
ip2	50B-1275
ip3	90-3136
ip4	90-3136

ip5 50B-5204

ip6 70-300B

If you do not specify the printer device on the command line via the *-P* printer flag, or by setting the environmental variable (e.g., "**setenv IP ip2**") in the *.login* or *.cshrc* file of your HOME directory, the output will default to the printer device **ip2**, located in 50B-1275, the Central Computing Facility.

Users should see the **help** articles on these commands to see how to specify the target printer. For detailed online information see the manual entries *itroff*, *imprint*, *ipr*, *ipq*, *lpr*, and *iprm*. There is no default printer for the *lpr*, *lpq*, and *lprm* commands. You may specify the printer for these commands, either by the "*-P*" printer flag or by the environmental variable "**PRINTER**". Forward VMS comments and questions to Marty Gelbaum, **lbl:M_Gelbaum**. and UNIX comments and questions to Bob Rendler (**ren@ux4**).

GKS IS HERE

Jerry Borges

We have received a version of the Graphical Kernel System (GKS) from ISSCO, and will install it on CSA2 in December. GKS, an adopted International and American National Standard, provides for multiple levels of input and output functionality, and contains an accepted set of basic functions for computer graphics programming. Taken as a whole, these functions constitute GKS, and define a language-independent nucleus of a graphics system. For integration into a programming language (e.g., Fortran), GKS is embedded into a language-dependent layer (binding) obeying the particular conventions of that language. Applications written with a particular level of GKS can be ported to any installation supporting a GKS of the appropriate level in the language binding used by the application. GKS currently defines a Fortran binding and others are being developed. The GKS standard, as adopted, is a two dimensional standard, but efforts are under way to add three dimensional extensions.

The current release of ISSCO-GKS is at level **1B** and contains a Fortran binding. The suite of more than 250 graphics device drivers available to TELL-A-GRAF and DISSPLA users is available with ISSCO-GKS, and an interface is provided between DISSPLA, TELL-A-GRAF and ISSCO-GKS through DISSPOP, a Post-

Processor utility program.

If you are planning to develop a graphics application, we recommend you become acquainted with GKS. For certain types of two-dimensional applications, particularly those involving portability considerations, GKS may prove to be a valuable productivity aid. The following references are available in the Computer Center Library (50B/1245A) for your perusal, and can be ordered by the Librarian (x5529).

- American National Standards documents **ANS X3.124-1985** and **ANS X3.124.1-1985**
- "Computer Graphics Programming, GKS - The Graphics Standard" by Enderle, Kansy and Pfaff
- The ISSCO-GKS Command Reference Guide

For further information, contact Claudette Lederer (x6945) or Jerry Borges (x5568).

GRAPHS ON TALARIS

Marty Gelbaum

The Talaris laser printers on the CSA VMS cluster can now print Tektronix 4010 and Tektronix 4014 graphics files. To send such files to the Talaris, you first need to define the following symbol (which may be put in your login.com file):

```
tek := @sys$common:[syshlp.examples.tektronix]tek
```

Given that your Tektronix graphics file is named "graphics.file", type

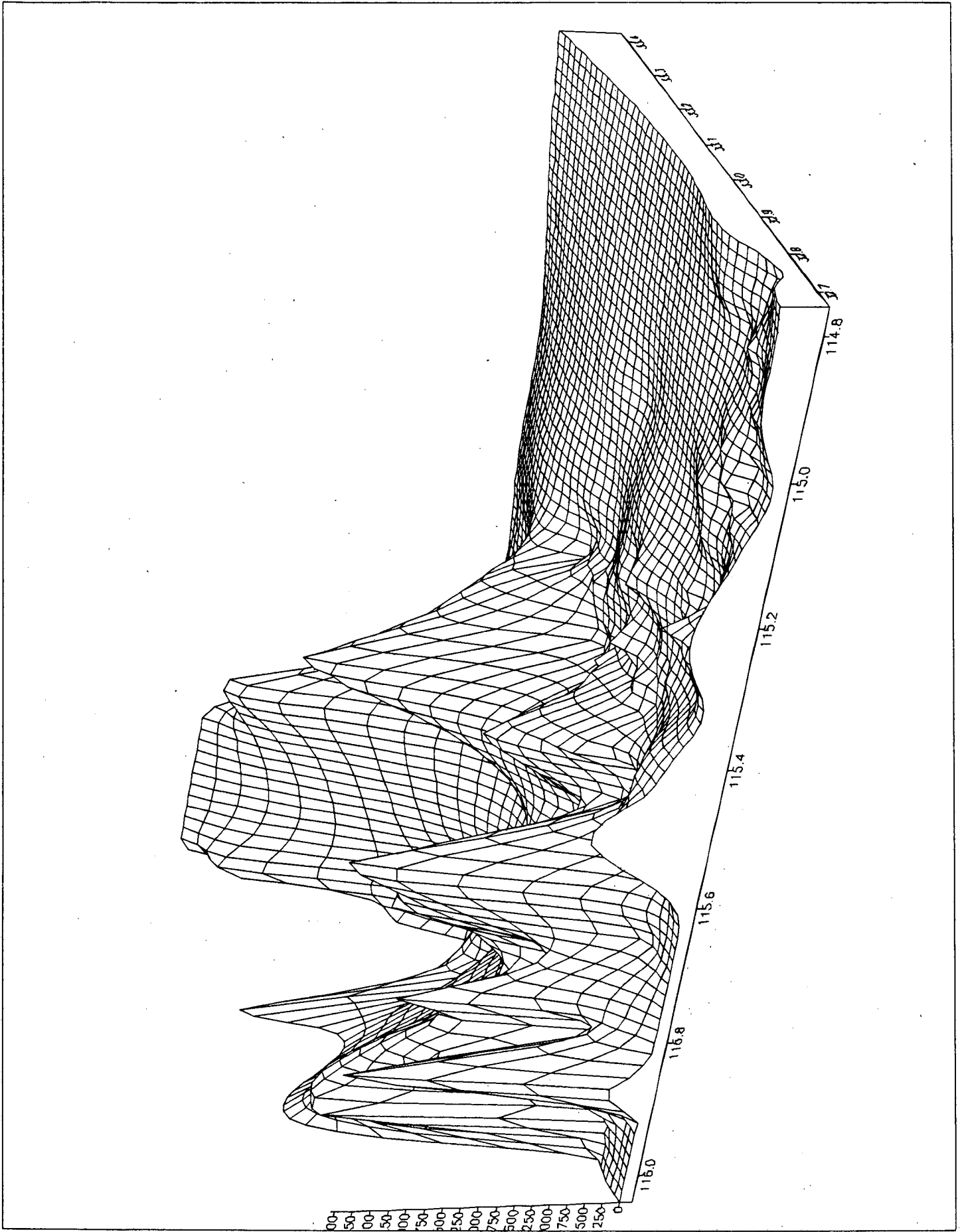
```
tek graphics.file
```

and your file will be sent to the Talaris.

NOTE: Do NOT use wildcards with this symbol. This method will process one file at a time. This information is contained in the on-line help article, "tektronix".

The basis for the following graph is a file of Tektronix output which was printed on the Talaris laser printer using the new procedure described in this article. It shows a surface of constant concentration of calcium-carbonate ions in ground-water in various locations in the Imperial Valley of California. The horizontal axis shows the longitude and the vertical axis shows the depth in meters where the specified concentration was found. The third axis shows the latitude.

Future Newsletters will provide more information about how to direct the output of graphics packages into files to be printed on the Talaris.



WORKSTATION NEWS

[22.12.1].....

• HP LASERJET + PRINTER

Hewlett Packard has loaned the Workstation Group an HP LaserJet + (LaserJet Plus) Printer with three font-cartridges. The LaserJet + comes with 512Kbytes of memory that can be used for downloading fonts; the memory will also support up to one-third of a page of graphics at full resolution. It is available for demonstration and evaluation. Many commercial word-processing programs now support this printer. (We use an updated *Volkswriter DeLuxe*, V 2.1). We will gladly give you a demonstration and show how to print out your *Volkswriter DeLuxe* Word Processing text and *Lotus* worksheets with it. To arrange for a demonstration, contact Richard LaPierre (x4692).

[22.12.2].....

• PROM UPGRADES FOR THE HP LASERJET +

If your LaserJet + is one of the earlier models, chances are that it is not printing at its full potential of eight pages per minute. To determine if your LaserJet + is one of the applicable models hit the "self-test" button and examine the last line of the printed output. If the first 12 characters of the bottom read "HPN3c8504240", you need to have a chip (PROM) upgrade. Contact HP representative Jim Manning (3-119-460-1503), and request the upgrade.

[22.12.3].....

• PRICE INCREASE FOR HP LASERJET UPGRADE

The cost of an upgrade kit (to convert the old HP LaserJet to a LaserJet + with 512Kbytes of memory) is scheduled to increase from \$1000 to \$1333 on January 1. For additional information contact Workstation Group member R. LaPierre (x4692).

[22.12.4].....

• MACINTOSH FANS

RTSG has a supply of cooling fans for the Macintosh. They are produced by Beck-Tech and slip into the carrying handle without any modifications to the Macintosh. The fans lower the internal temperature of the Macintosh by 50 degrees F when running at room temperature. Cost is about \$75. To obtain one, call Jim Harvill (x6411).

[22.12.5].....

• WORDPROCESSING NEWS

WORDPERFECT

The Workstation Group has received a copy of Satellite Software's *WordPerfect* version 4.1.

WordPerfect is a very powerful wordprocessing package which has received rave reviews in many of the computer publications in the last few months. It contains several interesting features, including

- support of newsletter columns (such as you are now reading). Up to five columns can be processed and viewed on the screen with automatic wrapping from the bottom of one column to the top of the next column.
- split-screen editing of two documents, and
- an extensive UNDO facility.

VOLKSWRITER

Volkswriter users! Don't despair - the Workstation Group should have received a copy of the new *Volkswriter 3* in time for Christmas. It will include an integrated spelling checker, automatic hyphenation (you do not have to indicate where it goes), and multiple ruler lines that allow you to change your text layout anywhere in the document. From what we have heard about this new release, we think most *Volkswriter* users will want to order the upgrade (cost ~ \$99).

To arrange for a short-term loan of either of these packages contact Workstation Group member Dan Van Zile (x5589).

[22.12.6].....

• KERMIT NEWS

KERMIT has become the most popular file transfer/terminal emulator program in the IBM-PC/XT/AT world at LBL. To help support our users, the Workstation Group has created a directory on the CSA cluster to make it easy for most users to get updates for KERMIT. The command

"set def ibmpckermi"

will move a logged-in user the latest release of KERMIT and its MS-DOS documentation. The latest release is version 2.28 and is named KERMIT.228. Enhancements, bug fixes, differences, etc. are described in a file named UPDATE.DOC Any version of KERMIT can be used to download a more recent version to a PC. Remember to rename the executable file from KERMIT.228 to KERMIT.EXE in your PC.

For all the Apple Mac users, we have done much the same thing for you. The CSA command

"set def mackermi"

will move you into a directory where a Mac version of KERMIT resides. 'Macput' can be used to download the executable KERMIT. The advantages of KERMIT over *Macterminal* or *Versaterm* are that KERMIT is free and it allows the use of wildcards for file names.

For more information on KERMIT in its various manifestations, contact Workstation Group Member member Dan Van Zile (x5589).

[22.12.7].....

● COMMAND EDITOR FOR PC-DOS

CED is a neat public domain program. It gives PC-DOS users a way of going back several commands and repeating, or editing, previous commands without having to retype long strings. CED takes about 7Kbytes when it is loaded. If you would like to try it out, you can download the two files from the 'ibmpcsoftware' sub-directory named "ced" on the CSA cluster. (The basic procedure for getting files via KERMIT from CSA is -

- (1) From a PC running KERMIT, connect and login to CSA You'll get a VMS prompt ("CSA#>").
- (2) CSA#>set def ibmpcsoftware
CSA#> set def ced
(Move to desired subdirectory)
- (3) CSA#> KERMIT
Run KERMIT on CSA
- (4) Kermit-32> server
Put KERMIT into 'SERVER' Mode
- (5) (Ctrl-) C
'ESCAPE back to PC
- (6) Kermit-ms> get CED*
Get files to PC Disk
- (7) Kermit-ms> finish
Stop Server
- (8) Kermit-ms> C
Re-connect to CSA
- (9) lo Log out
- (10) (Ctrl-) C
'ESCAPE' back to PC
- (11) Kermit-ms> E
Exit KERMIT

For further information or questions, contact Workstation Group member member Dan Van Zile (x5589).

[22.12.8].....

● TRAINING ON THE IBM PC

Training is available for those who are new to the PC. It is designed to familiarize employees with the components of the microcomputer system, the PC-DOS operating system, and PC terminology. For those users who pass this stage, training is also available in all the commonly used software packages.

Two kinds of training are available.

(1) CAI's

We can offer free Computer Aided Instruction. The Laboratory has a site license for computer training courses (on floppy diskettes) from a company named CDEX. As reported in previous newsletters, these diskettes can be obtained by contacting Workstation Group member, Dan Van Zile, x5589. The CDEX courses include:

- Introduction to PC-DOS,
- Introduction to Lotus 1-2-3,
- Advanced LOTUS 1-2-3, and
- Dbase II.

(2) Classroom training is available through many different organizations. The Workstation Group has information on many of them (organizations, courses, prices, etc.). We have negotiated discounts for LBL employees for some of these courses.

UC Berkeley's Administrative Information Services Training Center offers, in our estimation, the best prices and classes we have found for most of the commonly-used software packages. Many LBL employees have already completed these courses and the reviews have been excellent. Prices range from \$95.00 to \$150.00 for an eight-hour class. To obtain class schedules and reservations for classes contact Cheryl Bannister (642-8388). Cheryl will send you a confirmation form which you should send with a completed Offsite Training Request to Carol Yoshimoto, (Bldg. 90, Rm. 1042). For more information on specific training requirements, contact Buck Koonce (x5739).

[22.11.9].....

● SOFTWARE RATINGS

The Workstation Group subscribes to a monthly RATINGS NEWSLETTER that makes comprehensive tests and evaluations of the more popular programs in a selected category. For example, in the Sept. '85 issue, there is an evaluation of TIME LINE (see 22.11.8). In the June '85 issue, there is an evaluation of dBase III. The June '85 issue is devoted to spreadsheet programs. If you wish to see how your favorite software package is ranked by the "experts", contact M. Morley (x5529) at the computer center library for a short-term loan of the RATINGS NEWSLETTER.

[22.11.10].....

● GOOD READING!

The Whole Earth Software Catalog, Stewart Brand's first-rate compendium of recommended software, hardware, magazines, books, accessories & online services for personal computers, is available for browsing

at the Computing Services Library, (50B/1245, x5529, x6919). Drop on over. Check it out.

[22.12.11].....

• DANGEROUS PUBLIC DOMAIN SOFTWARE

The following information was forwarded to the Workstation Group As mentioned in last month's article, **Hacker Alert**, there are some individuals who are actively trying to penetrate and (often) to destroy computer systems. The following information, plus an article in *Time Magazine*, (Nov. 4, 1985), has prompted us to alert you to the dangers associated with using software obtained from places where the author and results are unknown.

> *From the editors of PC Magazine (July 23, 1985):*

"Beware of EGABTR, a program that claims to show you how to maximize the features of IBM's Enhanced Graphics Adapter. It has also been spotted as a new super-directory program. It actually erases the file allocation tables (FATs) on your hard disk. For good measure, it asks you to put a disk in Drive A:, then another in Drive B:. After it has erased those FATs too, it displays,

" Got You! Arf! Arf! "

Always examine programs of unknown origin first with DEBUG, looking for all the ASCII strings and data. If there is anything even slightly suspicious about it, do a cursory disassembly. Be wary of disk calls (INTERRUPT 13H), especially if the program has no business writing to the disk. Run your system in Floppy only mode with write protect tabs on the disk or junk disks in the drives.

> *From the ARPANET:*

Making the rounds of the bulletin boards is a program called VDIR.COM. It is a little hard to tell what the program is supposed to do.

What it actually does is trash your system. It writes garbage onto ANY disk it can find, including hard disks, and flashes up various messages telling you what it is doing.

It's a time bomb: once run, you can't be sure what will happen next because it doesn't always do anything immediately. At a later time, though, it can crash your system.

Additionally, two new files have been reported to be causing problems for some Bay Area users. They are CRIBBAGE.BAS and CRAZY8.BAS. Please be careful.

> *From the Flint Board:*

- (1) STAR.EXE presents a screen of stars then copies RBBS-PC.DEF and renames it. The caller then calls back later and downloads the innocently named file, and he then has the SYSOP'S and all the Users passwords.
- (2) SECRET.BAS This file was left on an RBBS with a message saying that the caller got the file from a mainframe, and could not get the file to run on his PC, and asked someone to try it out. When it was executed, it formatted all disks on the system.

If you have any questions on this topic or know of other programs to beware of, please contact Workstation member Buck Koonce (x5739), or Computer Protection Program Manager, D. F. Stevens (x7344).

[22.12.12].....

• WANG WP ON THE PC

The Computing Division is converting its WANG users to WANG's recently-announced product running on IBM PC's. The Workstation Group has been evaluating various versions of this software for two months. While early versions had a few bugs, the latest releases have performed well. The package from Wang consists of software and a new keyboard.

- The keyboard and software create a system that is identical to newer Wang equipment already in use at many offices at LBL.
- The keyboard also allows complete functionality for standard PC software.
- Where there is a conflict between key meanings, both options are labeled. (Wang labels are in black and IBM in blue.)

All screens and commands are the same as on the OIS systems currently used here. Wang has NOT provided a way to attach the PC to the OIS system, but has provided a connection for PC's to VS systems so an OIS fix could be close behind. No guarantees however.

The Computing Division's switch should be complete by mid-December. The WANG Word-processing Stations will be connected to a 3-COM network for shared file and print service. If you would like more information or a demonstration, contact Workstation member Buck Koonce (x5739).

YES I would like to receive the Computing Newsletter

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The Computing Newsletter, published monthly, provides much useful current information to our users and is mailed to them free, upon request.

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