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LBL Computing Newsletter Vol 23 No 9

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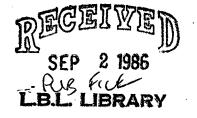**Author**

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DISCLAIMER

Volume 23, Number 9
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L B L
COMPUTING
NEWSLETTER

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"The Game isn't over till it's over."

. . . Lawrence Peter Berra

SEPTEMBER 1986

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
Head: Leroy Kerth (LTKerth) 7474   50B - 2232E
Deputy: Sandy Merola (AXMerola)..................4389   50B - 2232C

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

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CENTRAL ELECTRONIC MAIL FACILITY

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

DEVELCON

DEVELCON **Access Names**

| VAX 8600's (GENERIC)...............................CSA |
VAX 8600 (VMS) CSA1
VAX 8600 (VMS) CSA2
VAX 8650 (VMS) CSA3
VAX 8600 (VMS) CSA4
VAX 8600 (VMS) CSA5

VAX 11/ 780 (UNIX4)................................UX4
VAX 11/ 750 (UNIX5)................................UX5
VAX 11/ 750 (UNIX6)................................UX6
IS V-24   (UNIX8)................................UX8

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

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

LBL's TYMNET Sitename is .... lbl

LBL's TYMNET Password is .... berkeley

MFE Consulting Number is 422-1544

NOW WE'RE THE INFORMATION & COMPUTING SCIENCES DIVISION

Maggie Morley

The Computing Division has been renamed the Information and Computing Sciences Division (ICS), effective July 21. This new name reflects the expansion of the Division's range of activities brought about by its amalgamation with LBL's Information Services Department.

Until this merger, Information Services, with responsibilities for the LBL Libraries, Conference Coordination, Graphic Arts and the Technical Information Department, had been part of the Facilities Management and Technical Services Division.

Roy Kerth, recently reappointed as Associate Director and Division Leader, spoke to all the employees in the new Division at a "get-acquainted" meeting early in August. There will be no present structural changes with the consolidation, he said. There is one change in job assignment -- Sandy Merola's appointment as

Divisional Deputy.

Information Services' merger with the Computing Division is a logical step, according to Kerth, since both groups are, to some major extent, in the business of processing information. "It's the sort of amalgamation that is occurring in a number of places." he added. "It seems to be the wave of the future."

"The integration of these functions at the Laboratory brings together those activities dealing with information. The manipulation of information is what science is all about. The generation of a scientific paper, the collection and reduction of experimental data, and the modeling of a physical system are all fundamentally information manipulation," Kerth concluded. "I believe this gives us an exciting opportunity to bring it all together."

COMPUTER CLASS SCHEDULE

Jerry Borges

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

DATE	TIME	DESCRIPTION	INSTRUCTOR
Sept 4	11 AM - NOON	Electronic Mail	William Jaquith
Sept 8, 9, 11	9 AM - NOON	Introduction to VAX/VMS	Rosemary Allen
Sept 18	11 AM - NOON	Electronic Mail	William Jaquith
Oct 8, 10. 15, 17	10 AM - NOON	Introduction to TEX	Jerry Borges
Oct 21, 23, 28. 30	9 AM - NOON	Introduction to VAX/UNIX	Dave Cleveland
Nov 3	10 AM - NOON	Introduction to SPSS	Elon Close
Nov 17, 18, 20 17	9 AM - NOON	Introduction to VAX/VMS	Rosemary Allen

TEX ON IMAGEN PRINTERS FROM VMS AND UNIX

Marty Gelbaum
Bob Rendler

TEX dvi output files are printed on the IMAGEN printers from VMS and UNIX by using the 'lpr' command specifying the -d flag on the command line. Arguments following the -d flag are options which are passed directly to the IMAGEN dvi processing program.

Options:

- -P *ipn*   Imagen printer ($n = 1,....,9$)
- -L   Print in landscape mode.
- -S *m*   Sets first page to be printed to *m*.
- -E *n*   Sets last page to be printed to *n*.
- -c*n*   Print *n* copies.

In the following examples the printer used is the default *ip2* printer located in 50B-1275.

Examples:

Print file.dvi

lpr -P ip2 -d file.dvi

Print file.dvi in landscape mode.

lpr -P ip2 -d -L file.dvi

Set first page to be printed for file.dvi to page number 5 and print to end of file.

lpr -P ip2 -d -S 5 file.dvi

Set first page to be printed for file.dvi to page number 5 and print through page number 7.

lpr -P ip2 -d -S 5 -E 7 file.dvi

Print 2 copies of file.dvi

lpr -P ip2 -d -c2 file.dvi

Set first and only page to be printed for file.dvi to page number 9 and print 2 copies.

lpr -P ip2 -d -S 9 -E 9 -c2 file.dvi

Forward comments and questions to

VMS Mail:	lbl::M_Gelbaum
UNIX or Software Tools Mail:	M_Gelbaum@lbl.arpa
VMS Mail:	lbl::RERendler
UNIX or Software Tools Mail:	RERendler@lbl.arpa

TROFF ON IMAGEN PRINTERS FROM VMS AND UNIX

Marty Gelbaum
Bob Rendler

Troff output files are printed on the IMAGEN printers from VMS and UNIX by using the *iroff* (ditroff) or *itroff* (old troff) command. Options are specified on the command line.

Options:

- -P *ipn*   Imagen printer ($n = 1,....,9$)
- -L   Print in landscape mode (*iroff* only.)
- -o*list* Print pages in comma separated list. A range n-m prints pages n through m; a -n prints from start of file to page n; a n- prints from page n to end of file.
- -c*n*   Print *n* copies.

In the following examples the command used is the *iroff* command and the printer is the default *ip2* printer located in 50B-1275.

Examples:

Print filename in landscape mode.

iroff -P ip2 -L filename

Print only page 3 of filename.

iroff -P ip2 -o3 filename

Print pages 1, 3, and 5 of filename.

iroff -P ip2 -o1,3,5 filename

Print pages 3 through 5 of filename.

iroff -P ip2 -o3-5 filename

Print from beginning (page 1) to page 5 of filename.

iroff -P ip2 -o-5 filename

Print from page 5 to end of filename.

iroff -P ip2 -o5- filename

Print 2 copies of filename.

iroff -P ip2 -c2 filename

Forward comments and questions to

VMS Mail:	lbl::M_Gelbaum
UNIX or Software Tools Mail:	M_Gelbaum@lbl.arpa
VMS Mail:	lbl::RERendler
UNIX or Software Tools Mail:	RERendler@lbl.arpa

BEWARE THE "@" SIGN ON UNIX SYSTEMS

Dave Cleveland

Users should exercise a degree of caution when including the "@" character in file or directory names on UNIX systems.

The UX8 system, and other Integrated Solutions UNIX systems, give "/@" and "@" a special meaning if either appears at the beginning of a file or directory name. The special meaning is that the file is not on the local system, but resides on some remote computer system whose name is the string of characters immediately following the "@" character. When users try to access such a file or directory, they're usually told by the system that it does not exist.

Also, all UNIX systems have some commands, particularly Bourne Shell scripts, that treat the "@" character as special if it appears at the beginning of a file or directory name. The results of such file or directory references can be very unpredictable.

VMS VERSION 4.5 DELTA TIME & SUBMIT

Eric Beals

The following DELTA (relative) time specifications work in all versions of VMS:

    SUBMIT/AFTER="+1:" job
    ("job" starts one (1) HOUR later.)
    SUBMIT/AFTER="+1-" job
    ("job" starts one (1) DAY later.)

In Version 4.4 of VMS, the command

    SUBMIT/AFTER=+1 job.

made the job start one (1) HOUR later. In Version 4.5 of VMS, (the current VMS version on the CSA cluster), this command starts the job one (1) **DAY** later.

These changes in the SUBMIT command were made so that its use of DELTA time would be consistent with the use of DELTA time and other VMS commands.

VAX NOTES UP ON CSA3

Maggie Morley

After a month of trial and evaluation, we have decided to get **VAX Notes**, a computer conferencing software product allowing users to conduct conferences, discussions, meetings, etc. electronically by computer. **Notes** resides on CSA3. (See the August 1986 Computing Newsletter).

As a participating member in a conference, you can introduce new topics of mutual interest or comment on existing ones. All topics or comments can be seen by everyone participating in the conference.

Another teleconferencing tool, PORTACOM, had also been up on the cluster for trial and evaluation during the summer (See the June 1986 Computing Newsletter for more info). However, it was felt that **Notes** was the more desirable product for this site because it is a supported DEC product and it allows others who also have **Notes** at their sites to join conferences here over DECnet. It also has the ability to use standard editors.

Once logged onto CSA3, anyone can use **Notes** on the cluster. There is an extensive on-line help facility for it. A two-page document describing basic **VAX Notes** commands, which may be typed or printed, is available in the file **sys$help:notes_shortguide.mem**. Access this conferencing product (on CSA3 only) by typing

    CSA> **NOTES**

FALL DECUS SYMPOSIUM

Rosemary Allen

The Digital Equipment Computer User's Society (DECUS) U.S. Chapter will be presenting the Fall 1986 Symposium from October 6 to 10 at the Moscone Center in San Francisco. (Pre-symposium seminars will be held on Sunday, Oct. 5.) Registration must be received in the DECUS office by September 19 to qualify for pre-registration fees. There is a *sizable* increase in fees for walk-in registration. Student registration is available. Additional information can be obtained from the DECUS Registration and Information book available in the Computing Services Library. This book also contains a preliminary program of the Symposium.

TWO AUTODIALERS NOW ON THE CLUSTER

William Jaquith

There are now two Racal-Vadic 3451 auto dialers ("TXJ1" and "TXJ2") installed on CSA4. They accept connections at 300, 1200 and 2400 bps and allow you to connect to remote systems from LBL through a modem. You should use FTS phone numbers or TYMNET connections whenever possible.

The service is being carried as an overhead item. You are asked to use it judiciously.

Here is a sample session. (This example is for TYMNET only. Most connections are different. It is up to you to research the remote phone numbers and remote login procedures.)

SAMPLE SESSION

Log on to CSA4. Set speed (300, 1200 or 2400 BPS) to match that on the remote modem.

YOU TYPE	WHAT YOU SEE	WHAT's HAPPENING
	CSA4>	The System Prompt.
set host /dte txj1: or set host /dte txj2:		This signals the system that you wish to dial out.
	%REM-I-TOEXIT connection established type ^\ to exit.	"^\" is really "<ctrl> \"
<ctrl> e <return>		This starts the connection.
	HELLO: I'M READY *	
d		"dial"
	NUMBER ?	
9k4302900		Type the number you wish to "dial." (We've used the Oakland Tymnet number in this example). See HELP TYMNET for larger list of Tymnet numbers. "9" signals for an outside line. "k" says WAIT FOR A DIAL TONE.
	DIALING ANSWER TONE ON LINE 1200 NO ERROR CONTROL SELECTED SPEED UNAVAILABLE x||x'˜ |xxx<xx<˜ x˜ xx..	 !ignore this !ignore this too
a		Generic terminal identifier for TYMNET.
	-4175-010 Please log in	To get to the Lab, type "LBL" after Tymnet prints these two lines.

lbl <return>		
	Password:	Enter your password
berkeley <return>		
	P12 LBL IS ONLINE	These two lines tell you that (a) you're connected to Tymnet and (b) you're now at LBL. To get to DEVELCON, type a carriage return after them.
	Request:	You're now at the DEVELCON switch.
CSA4		You can ask for the CSA4 computer.
	CSA4 VMS4.4 8600 CLUSTER	
	· Username	
jruser		Login normally and proceed with an interactive session. Log off when you're finished.

The "/log" qualifier is useful. ("set host /log=txj.test/dte txj1 creates a copy of your session.) For more info, see **SET HOST/DTE** or **Dial_modem** in VMS HELP.

ISSCO GRAPHICS
REGIONAL TRAINING

Claudette Lederer

ISSCO is giving Regional Training Classes in several cities throughout the country July through December 1986. The following courses will be offered in San Francisco at the Galleria Park Hotel, 191 Sutter St., S.F.:

COURSE NAME	No. of DAYS	LEVEL	DATES in DEC
TELL-A-GRAF	2	I	15-16
TELL-A-GRAF	1	I	15
TELL-A-GRAF	1	II	16
DATA CONNECTION	1	I	17
TELLAPLAN	1	I	18
TELLAPLAN	1	II	19
DISSPLA	1	I	17
DISSPLA	1	II	18
BASIC CHART DESIGN	1	I	---
GKS/DYNAMICS	1	On-Site only	---

For additional info and course descriptions, type ISSCO_NEWS on CSA2 or CSA4. For hardcopy on the Talaris printer, type PRINT 'ISSCO_NEWS' at the CSA2> or CSA4> prompt.

Class size is limited to a minimum of 5 and a maximum of 30 students per class. The tuition is $250.00 per student per day, with all course materials and lunch provided by ISSCO. Registration should be made no later than three weeks in advance of the course. Late registration will be accepted if possible. To register telephone ISSCO Training Department (619) 587-3429.

Cancellations:
Registrants may cancel up to one week prior to a course, after which time the course fee will be non-refundable. Personnel substitutions may be made at any time. ISSCO reserves the right to cancel a course should attendance fall below the minimum enrollment of 5 or for any reason beyond the control of ISSCO. In such cases, ISSCO shall be liable only for the return of the registration fee.

Discounts:
There is a tuition reduction for taking more than 2 classes: - 3 class days $225.00 tuition per day - 4 class days $200.00 tuition per day - 5 or mor class days $175.00 tuition per day

If you register more than one month in advance of a course session you receive a $25.00 discount per student per class day.

In addition, ISSCO can provide these classes at LBL, on any date, for a cost from $275 to less than $100 per day per student, depending on the number of students and the number of days. If you are interested in such classes at LBL, call Claudette Lederer, (× 6945) or Jerry Borges, (× 5568). Forward comments or questions to

VMS Mail:	lbl::JTBorges
UNIX or Software Tools Mail:	JTBorges@lbl.arpa
VMS Mail:	lbl::CELederer
UNIX or Software Tools Mail:	CELederer@lbl.arpa

* * * * *

"An active field of science is like an immense anthill; the individual almost vanishes into the mass of minds tumbling over each other, carrying information from place to place, passing it around at the speed of light."

. . . Lewis Thomas, *Natural Science*

WORKSTATION NEWS

[23.9.1]...

● WORKSTATION GROUP ELECTRONIC MAIL

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

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

We hope this alternative (to the telephone) will be helpful to users who have problems or would like to forward helpful hints.

[23.9.2]...

● ELECTRONIC AIRLINE GUIDE

As announced at a Travel Department meeting in June, a new service from Thomas Cook is available that allows Lab employees to access the Online Airlines Guide Electronic Edition (OAGEE). Instructions on how to access the service -- with your terminal or micro through Develcon or a modem -- are available from the Travel Office or from Workstation Group member Buck Koonce (×5739).

[23.9.3]...

● DECNET DOS FOR PC's

DECnet DOS is a Digital Equipment Corporation product which runs under PC-DOS in an IBM PC-XT or AT or compatible. This group of programs allows a PC to communicate with other computers over the Ethernet using DECnet protocol. It provides fast reliable file transfer and convenient interaction. One of its best features is its ability to create a 'virtual disk' of up to 32 megabytes in size on a VMS VAX system. This virtual disk acts just as a real disk without some of the inherent problems such as initial cost, back-up needs and relatively delicate nature of any hard disk. It is possible to have up to 4 of these virtual disks on a PC. They may be used just as real hard disks for data or program storage. Images may be executed from them. If they are created on CSA cluster disks that are backed up regularly, then the user does not have to contend with the problem of backups.

A PC may be accessed for file I/O remotely by starting the FAL (File Access Listener) which will listen on the DECnet for requests and respond appropriately. Note that with the present DECnet mainframe configurations, DECnet is not a very fast terminal emulator; it will seem noticeably slower than a terminal running at 9600 baud through Develcon.

Early problems with DECnet DOS all seem traceable to DECnet DOS's requirement that its port address be less than 256. (Mainframe DECnet allows port addresses up to 1023.) At present, the requirements for running DECnet DOS are an XT or AT with at least 1 megabyte of hard disk space (for DECnet DOS files), a 3-COM Ethernet card, an Ethernet connection and a valid port address less than 256.

Costs for the needed hardware and software are about $415 for the 3-COM card, $500 for DECnet DOS plus the Ethernet connection whose cost depends on distance and complexity. Typical costs run around $450.

For more information or help, contact Workstation Group member Dan Van Zile (×5589).

[23.9.4]...

● WREN II - NEW HALF-HEIGHT DISK DRIVE FROM CDC

We have been testing a new half-height 50Mb (40Mb when formatted) disk drive from CDC. The new drive, called the "WREN II", is about twice as fast as the 30Mb "WREN I" drives that we have been using. This may be a plus depending on your particular application. The WREN II is available for less than $900.

To get the full potential out of the drive, you must also purchase a device driver that overcomes the operating system's (PC-DOS's) inability to deal with a drive that is over 32Mb.

Contact the Workstation Lab (×6858) for more information.

[23.9.5]...

● PERSONAL PURCHASES OF MACINTOSH MICROS

As this Newsletter goes to bed, there is still no date for the reopening of the Scholar's Workstation or its replacement. A temporary agreement has been arranged with UCSF to supply LBL employees with comparable discounts on new equipment and upgrades for Apple Macintoshes and peripherals. The Workstation group has the UCSF forms and pricing information. Contact Buck Koonce (×5739) or Dan Van Zile (×5589) for a copy. The phone number for the UCSF Group that is handling this business is (415) 476-5061, Monday through Friday, 9 AM to 5 PM.

[23.9.6]...

- **XEROX LASER PRINTER FOR TRIAL/EVALUATION**

T he Workstation Group has received a XEROX 4045 CP laser printer for evaluation. This unit, which weighs in at a hefty 140 pounds, is about 50% larger than an HP LaserJet. It has an option allowing it to function both as a printer and as an office copy machine.

AS a printer, it will emulate either a XEROX 2700 laser printer or a DIABLO 630 daisywheel printer. As we have no PC software to drive a XEROX 2700, we are using it in the DIABLO 630 mode.

The unit certainly seems to function quite well as a 630 emulator. It seems to be able to do anything you'd expect of a daisywheel printer (such as over-strike) without changing the printwheel. The output is crisp and clear.

We are not aware of any graphics software which would allow us to use this device with the common PC software packages (Lotus 1-2-3, etc.), and do all the wonderful graphics that one expects to do with a laser printer. Perhaps drivers will be available eventually.

As a copy machine, it is capable of copying only single sheets of paper; books and magazines cannot be copied. The copies produced are not the faithful reproductions of the original that one might wish.

ISD

Along with the 4045, we received a handy little gadget called a XEROX 280 Interface Sharing Device (ISD). **This device allows up to two printers to be shared between as many as four PC's.** The box supports both serial and parallel connections.

The ISD is "transparent" to the connected PC's.

A 256 Kbyte buffer is used to provide queuing of jobs from the various input devices. The ISD may, in some cases, be considered as an alternative to a local area network for situations where the only resource to be shared among a small number of users is a printer.

[23.9.7]...

- **NEW PC-VT SHAREWARE**

A new version 8.4 of PC-VT is now available for our IBM or compatible users. This is a shareware package which allows an IBM PC or compatible to emulate DEC VT-100 terminals. The most important new feature is that it now supports KERMIT file transfer protocol as well as the XMODEM protocol. Copies may be obtained by contacting Workstation Group member Dan Van Zile, (×5739) or by downloading the files in the directory **LBL109:[util.micro.ibm.pcvt]** on the CSA cluster.

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                                        Berkeley, CA 94720
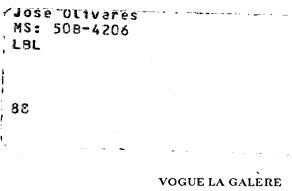
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The Computing Newsletter, published monthly, provides much useful current
information to our users and is mailed to them free, upon request.

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VOGUE LA GALERE
... Rabelais