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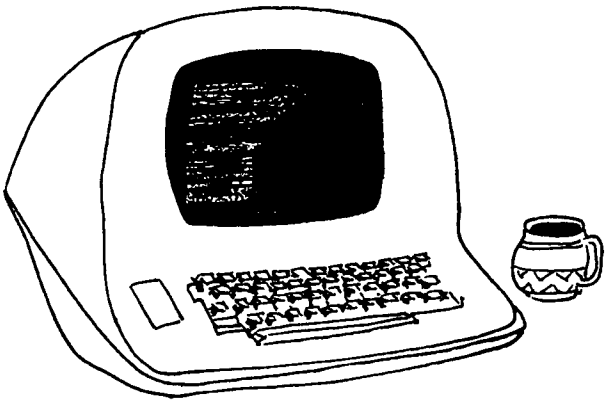
PUB-429



LBL COMPUTING NEWSLETTER

Lawrence Berkeley Laboratory
University of California, Berkeley

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Vol. 20, No. 8, August, 1983

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To get on the mailing list for the LBL Computing Newsletter, contact Dortha Hines, 50B/1129, x6094.

Newsletter Closing Date is August 17, 1983.

Address all communications for the Newsletter to Maggie Morley, 50B/1245, (415) 486-5529; or to login **mam** on VAX and/or UNIX.

PUB-429

Lawrence Berkeley Laboratory is an equal opportunity employer.

NAMES AND NUMBERS TO KNOW

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

	COMPUTER POLICY BOARD
50D/106 .....x6722	William A. Lester, Jr., *Chairman*
50A/4112.....x5511	Walter D. Hartsough
50B/3238.....x5313	Paula K. Hawthorn
50A/4119.....x5131	George L. Pappas
90 /3215.....x6286	Henry Ruderman
50 /137 .....x7087	Mark Strovink
90 /1106.....x5728	Chin-Fu Tsang
71 /259.....x4825	Michael S. Zisman
	OFFICE OF COMPUTING RESOURCES
50A/4112.....x4764	Robert J. Harvey, *Head*
50B/2258A.....x5739	James A. Baker
50B/2258B.....x7344	David F. Stevens
50B/2258C.....x7083	Kenneth G. Wiley
	COMPUTATION DEPARTMENT
50B/2232E.....x5224	Paul Rhodes, *Department Head*
50B/2232A.....x5775	Howard White, Deputy Department Head
50B/2232B.....x6287	Margaret Yamada, Administrator
50B/2232C.....x6296	Everett Magnuson, Budget Manager
50B/2262C.....x5455	F. Marvin Atchley, Computer Operations & Networks
50B/2232D.....x5351	Eric Beals, Consulting & User Relations
50A/1127A.....x5568	Jerry Borges, Operating Systems & Product Set
50 /209A.....x6019	John Colonias, Applications
	DEPARTMENTAL SERVICES
50B/2232.....x5871,2	Central Office Number
50B/1245.....x5981	Consultants' Office
50B/1245A.....x5529	Computation Department Library: Maggie Morley
50B/1215.....x6211	Operations
x5311	Coke/Cope Operator
50B/2249.....x6205	Expediter Services: Irene Bernal
50B/2215A.....x6256	Keypunch Service
50B/2249.....x6219	PSS (Program Storage System): Tape Services
50B/1245.....x6094	GSS Tape Repair Service: Dortha Hines
50B/1245.....x6094	Sticky Label Service: Dortha Hines
90 /3136.....x6494	Building 90 Remote Job Entry (RJE) Station
50B/2276.....x6310	To open or change an account, Fran Permar
50B/2232.....x5654	Guest cards, locker space, & parking permits: Gean Broughton
50B/2249A.....x7444	To connect a remote terminal (RJE or interactive): Ann Mills
50B/2259.....x5354	Terminal or Port Repair: Electronics Maintenance
50B/1237A.....x7005	UNIX System Manager: Chuck Cooper
50B/2262.....x6720	VAX System Manager: Randall Bean
50B/2262A.....x5234	VAX System Manager: Gil Johnson
50B/1245A.....x5529	Introductory seminars: UNIX: Maggie Morley
50B/1245.....x6094	WRITEUPS & HANDBOOK on fiche: Dortha Hines

PUB-429 12-82/1200

Prepared for the U.S. Department of Energy under Contract DE-AC03-76SF00098

TERMINAL SWITCH ACCESS NAMES

COMPUTER	DEVELCON DIRECTORY NAME	- - - GANDALF CLASS CODE - - - 300 bps	1200 bps	9600 bps
VAX Program Development Machine	**PDM**	na	na	na
VAX Numerical Modeling Machine	**NMM**	na	na	71
VAX Interactive Graphics Machine	**IGM**	na	na	73
PDP 11/70 (UNIX 1)	**UNX1**	15	na	11
PDP 11/70 (UNIX 3)	**UNX3**	55	na	51
CDC 6600B, 6400C	**RECC**	05	03	01
IBM 4341 (UCB)	**CCDB**	na	na	na

(1) **na** means NO DIRECT ACCESS. However, Indirect access from **GANDALF** to all computers is available via **DEVELCON.**

GANDALF class code **67** connects you to **DEVELCON.**
(Then) enter **return** (<cr>) so that **DEVELCON** can determine your terminal speed.
DEVELCON responds with **Request:**
(Then) you enter your **DEVELCON** directory name and a carriage return.

(If you use this method more than occasionally, please contact Sig Rogers, x6713).

‡‡ **Note**: There are many additional hosts operated by other groups that are available on the terminal switches. To gain access, you should make arrangements directly with the appropriate group representative.

(2) **ACCESS FROM GANDALF/DEVELCON**

GANDALF -- with TSB[ϕ]

1. Turn on terminal.
2. Push button on TSB.
3. When green light comes on, hit **<cr>** (return).
   GANDALF will prompt with an asterisk (*)
5. Enter class code (e.g., "51" for UNX3) & **<cr>**
   GANDALF will prompt with **SERVICE XX START"**
6. Another **<cr>** will get you the host prompt.

GANDALF -- without TSB[ϕ]

1. Turn on terminal.
2. Hit **BREAK** key.
   GANDALF will prompt with an asterisk (*)
3. Enter class code (e.g., "11" for UNX1) & **<cr>**
   GANDALF will prompt with **"SERVICE XX START"**
4. Another **<cr>** will get you the host prompt.

DEVELCON

1. Turn on terminal.
2. Push button on TSB[ϕ]. When green light comes on, hit **<cr>**.
3. When you get a **Request:** prompt, enter host directory name (e.g., **unx1**), followed by a **<cr>**.

(3) **DIAL-UP ACCESS** to **DEVELCON** is available.

486-4959 -- 300 BPS
486-4979 -- 1200 BPS
VA-3400 & 212A equivalent.

. . . Sig Rogers, x6713

[ϕ] (Blue) Terminal Support Box

NEWS OF LOCAL USER GROUPS

Lab folks who are interested in establishing a Local User Interest Group on site should contact Dennis Hall, x6053.

DATATRIEVE LUG NEWS

The next meeting of the Datatrieve User Group will be held at 1:30 PM Monday, August 15, in the Bldg. 70A Conference Room (70A/3377). There will be discussion of appointment of group officers. For more information, contact LUG facilitator . . .

. . . Valerie Sherriffe, x5362
or x4460

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VAX LUG NEWS

The next meeting of the VAX Local User Group, will be held at 2 PM Tuesday, August 9, at the Director's Conference Room, Bldg. 50A, Rm. 5132. For more information, contact LUG facilitator . . .

. . . Nancy Deerinck, x4691
or x6411

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GRAPHICS LUG NEWS

Users who are interested in organizing a GRAPHICS Local Users Group at LBL are requested to contact Maggie Morley (x5529, mam/MAM on unx/VAX) or . . .

. . . Jim Miller, x6255
(**JMILLER** on IGM)

= = = = =

RT-11 LUG NEWS

The next meeting of the RT-11 User (Lunch) Group will be held at noon on Thursday, August 4 in the Bldg. 46A Conference Room. For more info, contact . . .

. . . Mike I. Green, x4607

PERSONAL COMPUTER LUG

After the recent IBM PC (extended) and APPLE LISA demonstrations, several users expressed interest in forming a Personal Computer Local User Group.

The contact person at UCB for pricelists and discount packets is Penny Gee, 642-5205; the contact person at LBL is Kathleen Handron, x5474.

Those interested in initiating an organizational meeting should contact Maggie Morley, x5529 (mam/MAM on unx/VAX) or . . .

. . . Jim Miller, x6255
(**JMILLER** on IGM)

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SICBIG AUGUST MEETING??

The August Meeting of the Special Interest Committee on Large High-Speed Computers (established in the Golden Gate Chapter of the Association of Computing Machinery) is tentatively scheduled for Wednesday, August 3, 1983. Location and Speaker/Subject to be announced.

Those who would like to participate in a carpool to the meeting should contact Frank Olken (LBL, x5891)

For more info, contact Frank or

Mary Fowler
(Technology Development of America,
Advanced Computation Facility,
233-3 NASA Ames Research Center
Moffett Field, CA 94035

(415) 965-6515

= = = = =

RSX LUG NEWS

Users interested in attending the August meeting of the RSX Local User Group should contact . . .

. . . Everett Harvey, x6411

Take an object. Do something to it. Do something else to it.

. . . Jasper Johns

VAX CLASSES IN AUGUST

VAX user classes will be given in August from 10 AM to noon in the NRCC Conference Room, Bldg. 50D, Rm. 116.

Wednesday	August 3
Friday	August 5
Wednesday	August 10
Friday	August 12

The number of participants is limited, and advance registration is required. To register, please contact Lisa Long, x5947.

. . . Noel Brown, x4387

POSTING ... POSTING ...

Helpful documents, designed to facilitate the progress of the Computation Department users, have been posted on two local bulletin boards -- as follows:

(1) The **GETTING STARTED** handouts are now at eye-level on the bulletin board outside the Computation Department Library, Bldg. 50, Rm. 1245.

(2) Documents explaining the capabilities of -- and operating procedures for -- our graphics systems are now posted outside the Graphics Lab, Bldg. 50B, Rm. 2267.

We welcome further suggestions for helping users make most efficient use of our facilities.

. . . Jim Miller, x6255

APPLICATIONS GROUP NOTES

Since the announcement of the retirement of the CDC computers, the Applications Group has been busy converting some of those computer codes having general application to accelerator design to run on the PDM VAX 11/780 computer. Even though we are far from completing the job, we have already converted the following codes:

(1) **MAFCO** -- A 3-D magnetic field calculation program (with no iron). This program allows the user to design coils of arbitrary 3-D geometry. (a better version of **MAFCO**, called **EFFI**, will also be converted).

(2) **TRAJECTORY** -- This is a general purpose orbit calculation code. This version, running also on **PDM VAX 11/780**, is interactive and requires a graphics terminal, (either a **TEKTRONIX 4000** series or our **ADM3A** with a retrographics board).

(3) **MESH** -- This is a general purpose two dimensional mesh generator code, and it makes up the first part of a general nonlinear magnetostatic program called **TRIM**. The second part, named **FIELD**, is presently being converted.

If anyone needs assistance in converting from the **CDC** to **VAX**, please give me a call and discuss your problems with me. Also, if you would like to use any of these programs, please call

John S. Colonias, x6019
Bldg. 50B, Room 2274A

The Applications Group has also accumulated a lot of experience in the use of micro-computers -- presently, two such systems, a **NORTH STAR** with a 5 mbyte hard disk, and a PDQ-3 (a **PASCAL** 16-bit microcomputer) have been been purchased and many Physics application codes have written in an attempt to investigate their respective usefulness in performing such calculations.

If you are interested in micros, and if you have questions regarding what type would best meet your needs, & what pitfalls to watch for -- or if you have general application-type questions, we will be glad to assist you.

. . . John Colonias, x6019

ZETA-1453SX HARDCOPY IS NOW AVAILABLE

The Computation Department presently has a Nicolet Zeta Model 1453SX digital drum plotter attached to the IGM VAX. This Zeta uses 4 colored pens and a plotting area of 11 inches by up to 144 feet. A VAX procedure called **PLOTSEND** is now available for users of DI3000 and TELL-A-GRAF (and their products) who want to output to this Zeta plotter.

For DI3000, GRAFMAKER, or CONTOURING users to output to the Zeta, type (where '*filename*' is the name of your user program)

$ DI3
!To define DI3000 logical symbols.
$ FORTRAN *filename*
!To compile your user program.
$ LINK *filename*, **'DI3A','ZETA'**
!For a DI30000 user.
$ LINK *filename*, **'GRAPH','ZETA'**
!For a GRAFMAKER user.
$ LINK *filename*,**'CONTOUR','ZETA'**
!For a CONTOURING user.
$ RUN *filename*

The DI3000 Zeta driver will output data to a file in your executing directory named FOR017.DAT. In order to send this data to the Zeta, while in the same directory in which it was created, type

$ PLOTSEND

You will be queried by this procedure for information necessary to process and label your output. When this procedure asks for a file name, type

FOR017.DAT
(or whatever you may have renamed this file.)

TELL-A-GRAF users who want to use the Zeta are reminded to create a TAGPRO.DAT which specifies MODEL 1453 and a COLOR CHOICE of less than or equal to 4. Let's say you have chosen UNIT=17 for the Zeta graphs, then to send these graphs to the Zeta, after a normal exit from TELL-A-GRAF, and while in the directory in which file FOR017 was created, type

$ PLOTSEND

You will be queried by this procedure for information necessary to process and label your output. When this procedure asks for a file name, type

FOR017.DAT
(or whatever you may have named this file).

For CUECHART users, type

$ CUEZETA

This procedure uses TELL-A-GRAF and PLOTSEND, and you will be queried by this procedure for information necessary to process and label your output.

On completion, the graphs will be labeled with the user name and account number. Unless the ROUTING INSTRUCTION option in procedure PLOTSEND is used, the graphs will be filed near the Computation Department I/O counter on the 1st floor of 50B.

The current standard operating media for the Zeta is liquid roller pens numbered 1 thru 4 (color order: black, red, green, blue), and a translucent roll of white paper.

The following options are available on the Zeta thru the query SPECIAL INSTRUCTIONS in procedure PLOTSEND. However, jobs using any of these options can expect the turnaround time to increase.

(1) TRANSLUCENT FAN-FOLD (perforated every 8.5 inch) white paper to be used with liquid roller pens. This option produces graphs suitable for notebooks.

(2) HIGH QUALITY BOND paper in the ROLL or FAN-FOLD (perforated every 8.5 inch), which is coated on one-side with a glossy, brilliant white finish. This paper used with liquid roller pens produces crisp striking graphics.

(3) ACETATE FILM, for overhead projector viewgraphs. For this you must use nylon tip pens containing acetate film-type ink.

When specifying one of the above options, the user need only name the change in paper, as this dictates which of the two types of pens will be used.

Users planning to publish Zeta 1453 graphs are advised to run the preliminary versions at the Computation Department and then direct the final version to the Technical Information Department plotter.

. . . Claudette Lederer, x6945

The aim of science is to seek the simplest explanations of complex facts. We are apt to fall into the error of thinking that the facts are simple because simplicity is the goal of our quest. The guiding motto in the life of every scientist and natural philosopher should be "Seek simplicity and distrust it."

. . . Alfred North Whitehead

UCLBL Computation Department
PM Schedule
Effective AUGUST 1, 1983

7600 (CDC) Mondays
CDC ..... 0500 - 0800
Thursdays
CDC ..... 0600 - 0800

6600B (CDC) Tuesdays
CDC ..... 0500 - 0800

6400C (CDC) Mondays
CDC ..... 0500 - 0800

UNIX1 Wednesday, August 10
RTSG .... 0030 - 0600
Thursday, August 11
RTSG .... 0030 - 0600

UNIX2 Sunday, August 14
RTSG .... 0030 - 0600

UNIX3 Saturday, August 20
RTSG .... 0030 - 0600

IGM Monday, August 22
RTSG .... 0030 - 0800

NMM Friday, August 26
RTSG .... 0030 - 0800

PDM Wednesday, August 10
RTSG .... 0030 - 0800
Thursday, August 11
RTSG .... 0030 - 0800

ATL Thursdays
Maint ... 0600 - 0800

COM Tuesdays
Maint ... 0700 - 0900

PSS Wednesdays
CDC ..... 0600 - 0800

SYSTEMS PERFORMANCE IN JUNE/1983

7600
Systems Availability 92.16%
Median Service Interval 13.60 (hrs)

6000B
Systems Availability 96.38%
Median Service Interval 32.14 (hrs)

6400
Systems Availability 93.84%
Median Service Interval 18.88 (hrs)

UNIX1
Systems Availability 95.28%
Median Service Interval 23.50 (hrs)

UNIX3
Systems Availability 95.51%
Median Service Interval 47.58 (hrs)

PDM
Systems Availability 96.57%
Median Service Interval 84.42 (hrs)

NMM
Systems Availability 95.49%
Median Service Interval 23.42 (hrs)

IGM
Systems Availability 90.47%
Median Service Interval 22.50 (hrs)

- - - - - - - - - - - - - -

Total No. of Jobs Processed: **54,450**
6000's - **22,747** : 7600 - **31,703**

- - - - - - - - - - - - - -

7600 TURNAROUND TIME

% of RUSH jobs returned

20 min	**2 hrs**	**4 hrs**
89.70	99.02	99.57

% of ALL jobs returned

20 min	**2 hrs**	**4 hrs**
86.53	95.19	96.85

% returned, CU limit = 100

20 min	**2 hrs**	**4 hrs**
89.21	100.00	100.00

% returned, CU limit = 500

20 min	**2 hrs**	**4 hrs**
90.08	98.35	100.00

% returned, CU limit ≥ 1000

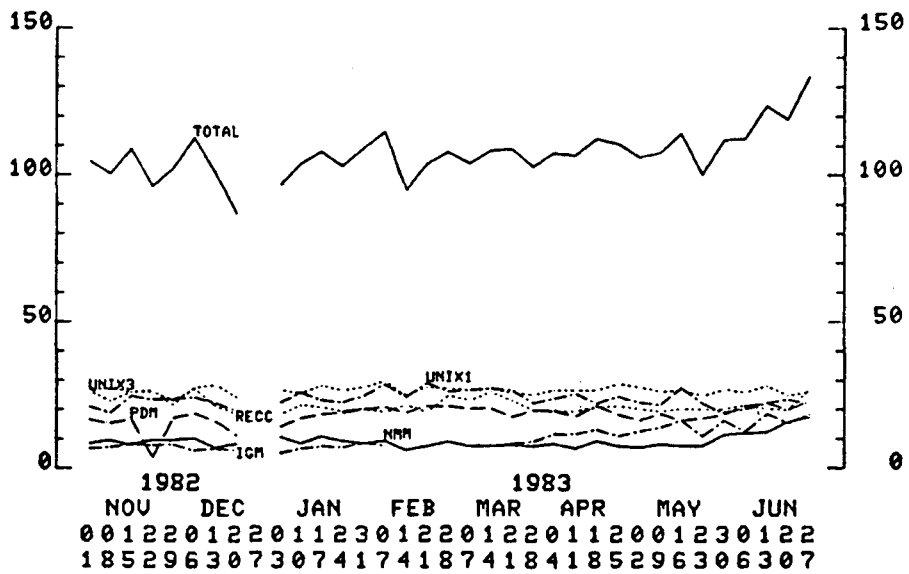
20 min	**2 hrs**	**4 hrs**
49.12	70.64	77.35

INTERACTIVE STATISTICS

LBL COMPUTER CENTER
PERFORMANCE MEASURES

INTERACTIVE TERMINAL ACTIVITY

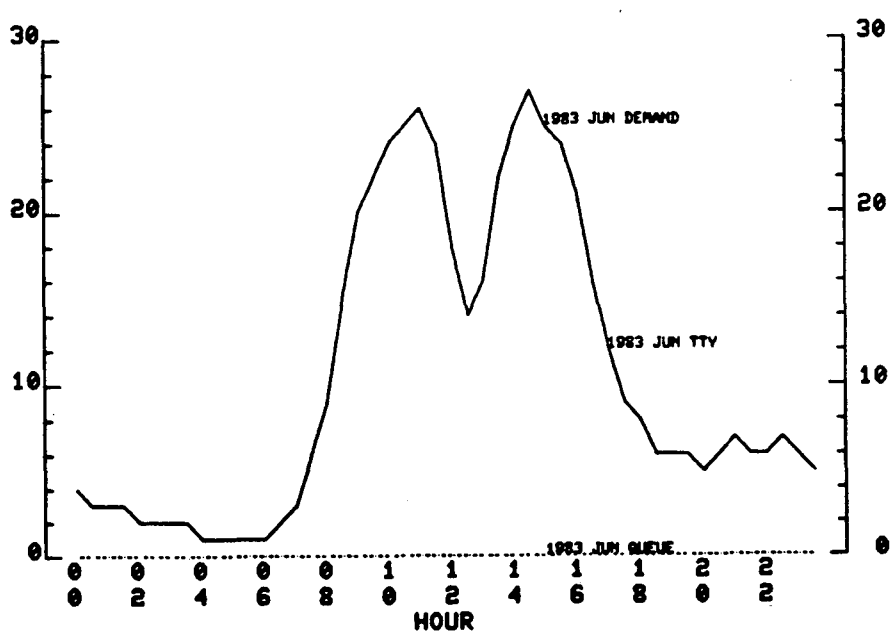
AVERAGE NUMBER OF TERMINALS CONNECTED
SAMPLED AT HOURLY INTERVALS, PRIME USE PERIODS, WORKDAYS



LBL COMPUTER CENTER
PERFORMANCE MEASURES

RECC CONNECTIONS AND UNSATISFIED DEMAND
6600 AND 6400 COMPUTERS

JUN 1983 WORKDAYS



Computation Department Library
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