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DISCLAIMER

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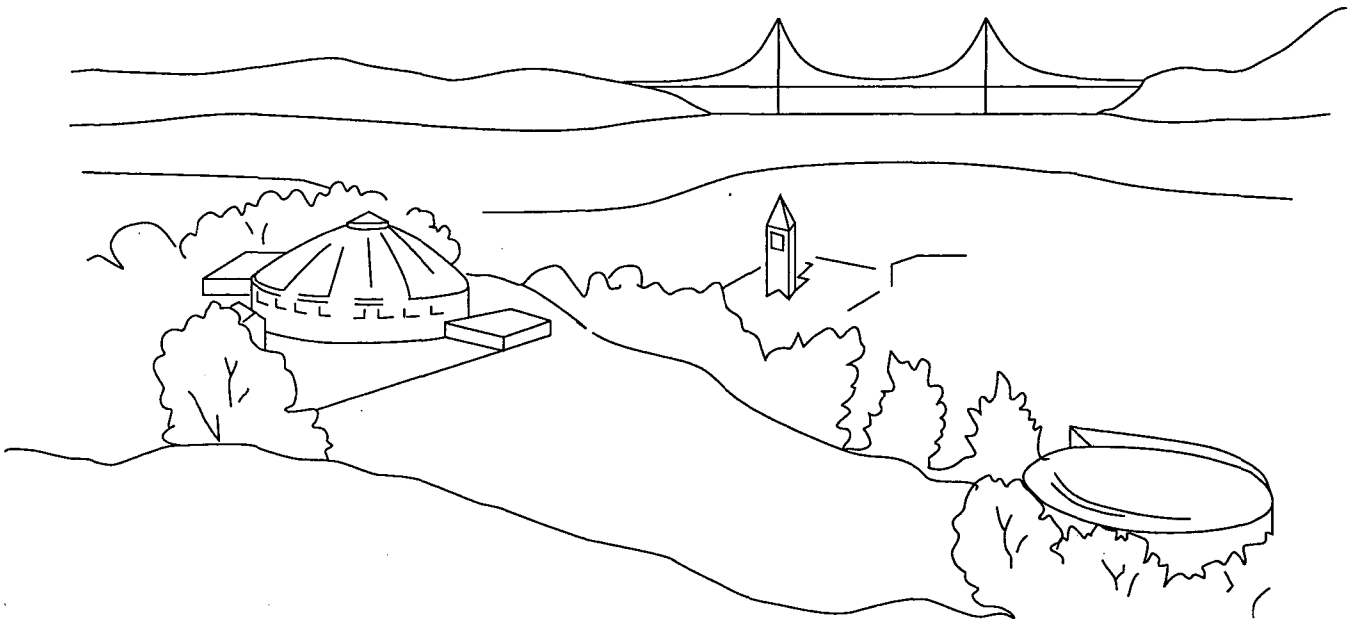# LB COMPUTING NEWSLETTER

COMPUTER-DRIVEN MOVIE-MAKING

SENDING FAX VIA E-MAIL

LOW EMISSION MONITORS

MACs & PCs SHARING DATA

LAWRENCE BERKELEY LABORATORY
BERKELEY, CALIFORNIA . . . 94720

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ICSD TRAINING SCHEDULE
October - November 1990

COMPUTING SERVICES CLASSES
Bldg. 50B, Rm. 1237

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

Electronic Mail: Survey	Oct. 26 10 AM - Noon	Intro. to C Programming	Nov. 19, 20, 26, 27 10-12 AM

If there is sufficient interest (we need to hear from at least 10 people), we'll schedule an **Introduction to Unix** class in early November. Please contact Pat Bean at x7008 to sign up.

* Prefer current UNIX or VMS account.

WORKSTATION CLASSES

The following courses are 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 (*) prepended are already full.)

IBM-PC: Bldg. 50B, Rm. 1237

Microsoft Word for the IBM/PC	Nov. 12, 13, 19, 20 3 - 4:30 PM

NEW

Introduction to *Windows* for the IBM/PC	*	Oct. 9, 11 9 - 10 AM
		Nov. 1 & 2 9 - 10 AM
Introduction to PC-DOS	*	Oct. 9, 11 1 - 2:30 PM
		Nov. 13, 15 1 - 2:30 PM

NEW

Microsoft Word for Windows	Oct. 16, 18, 23, 25 3 - 4:30 PM

Macintosh: Bldg. 50B, Rm. 1229 (cont.)

Basic Macintosh		Oct. 10 12 - 1 PM no sign-up req.
Intro. to *MacDraw*		Nov. 13, 14, 15 10:30 - Noon
Basic Intro. to *FileMaker*		Nov. 14, 16 1 - 3 PM
Beginning *Microsoft Word*	*	Oct. 16, 17, 18 10 - Noon
		Nov. 13, 14, 15 1 - 3 PM
Beg. *Excel* Spreadsheet		Oct. 22, 24, 26 9 - 11 AM
		Nov. 26, 28, 30 9 - 11 AM

NEW

Introduction to *PowerPoint*	Oct. 16, 17 1-2 PM

The Workstation Group also offers **noon time classes** (no sign-up required) in the following subject:

Basic Macintosh Class 10/10   50B/1229

See Workstation Scene Newsletter Articles for more details on these workshops.

UNIX NEWS

. . . At Your Service

SCIENTIFIC WORKSTATIONS IN THE TRAINING ROOM

Computing Services has acquired 10 Sun color SPARCstation 1+ workstations and has installed them in Bldg 50B, Rm. 1237. We'll be offering a full range of training on these new workstations; we'll also make them available for vendor presentations of new products or for orientations. The training facility can be reserved by groups within the laboratory.

The current training lineup includes offerings from Sun Microsystems and Informix, as well as Computing Services. Here's the initial schedule of classes[1]:

DATE	TIME	SUBJECT
Oct. 11	10 AM - Noon	Product Overview (offered by **Informix**)
Oct. 23 Oct. 25	10 AM - Noon 10 AM - Noon	Intro to Workstation Computing I Intro to Workstation Computing I (offered by Sun Microsystems)
Oct. 26	10 AM - Noon	Electronic Mail: Survey
Oct. 30 Nov. 2	1 - 3 PM 1 - 3 PM	Orientation: **OpenLook** Windowing I Orientation: **OpenLook** Windowing I (offered by Sun Microsystems)
Nov 19, 20,26,27	10 AM - Noon	Introduction to C Programming (4-part series)

Enrollment in these classes is limited, so sign up early! For Sun/Informix classes, contact Rita MacLean at x5872. For Computing Services classes, contact Pat Bean, x4008.

Forward comments and questions to me at x6569or

	Unix or
Software Tools Mail:	**CAEades@lbl.gov**
VMS Mail:	**lbl::CAEades**

HARD ROCK OR HARD DATA

Craig Eades

The CD-ROM, with its large storage capacity (800 MBytes), its superior ability to retain data, and its low cost, promises to be a highly desirable medium for distributing large amounts of data at a reasonable cost. The CD Player has made significant inroads into the vinyl record industry in the past few years, and now it is taking on the acetate tape industry as the standard conveyer of digital information for computers.

Most of the industry adheres to the ISO 9660 standard, and CD-ROM players have become available for Sun, IBM, HP and DEC workstations, and even MS-DOS machines—at very reasonable prices. The software available ranges from Database library entries to bootable operating systems.

Computing Services has software which will format your data into the ISO-9660 standard format; this can be copied onto 8mm tape and then pressed to CD ROMs (by the outside vendor of your choice).

Prices for copies start as high as $120 per disk for small quantities and go down to $1.20 per disk in quantities of 100. Prices vary from facility to facility, and each has different charges for artwork and packaging.

Forward comments and questions to me at x6569or

	Unix or
Software Tools Mail:	**CAEades@lbl.gov**
VMS Mail:	**lbl::CAEades**

SUN SLCS AVAILABLE

Craig Eades

Tired of waiting for delivery of your new workstation?

Computing Services customers can take immediate delivery of Sun SLCs. We've acquired a limited number of these workstations to help our customers get the computing they need when they need it and avoid delivery delays. Payment can be either LTO or outright purchase. Computing Services system management is required for these workstations.

The SLC Desktop workstation is completely silent and features a 10-MHZ CPU for 12.5 MIPS performance, 8 MBytes of memory and a 17" monochrome monitor. It is available for immediate delivery.

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[1] See also Pg. 4 of this newsletter

. . . E-mail notification

'E-MESSAGES':

LITE E-MAIL ON MACINTOSH

Bill Benson

E-Messages, a versatile new message service from the University of Melbourne, is now up and running on UX1, UX3, UX5, CSR, & clients. You can send personal messages from one Mac to another, and/or be notified whenever new e-mail arrives at your Computing Services UNIX account.

On Macintosh

Macintosh software consists of a control panel/startup document for receiving messages and a Desk Accessory for sending messages. Messages can be exchanged among any Macs on LBLnet where this software is installed.

Messages must be limited to short communications—about 500 bytes—and will appear on the receiver's screen in a small scrolling dialog box, together with an icon, the time, and an OK button. The dialog box goes away if not acknowledged in 60 seconds (to accommodate screensavers), but reappears when you move the mouse. Up to 16 messages will be queued and optionally saved to a log file.

Messages are truly "lite" when compared with real e-mail. Messages can only be exchanged locally; users can decline to receive them, with no indication to the sender, and (as mentioned above) they must be very brief. On the other hand, communication is intuitive instead of intimidating; no accounts are needed; and the software is free.

On UNIX

A complementary message system on UNIX enables some interesting applications. Particularly useful: Mac users are informed when e-mail has arrived for them at their UNIX account; principal headers and the first few message lines are passed to the users' Macs.

E-mail notification is a feature presently lacking both in *TechMail,* (a full-featured Mac-based e-mail program) as well as on those UNIX hosts which have disabled *biff* for security reasons. See the June Newsletter, Pg. 10, for a discussion of *TechMail* (or look in WKSG Server ! in the lbl zone, in the Graphics Folder).

If your UNIX login is <u>myname</u> , your Macintosh User Name is <u>my name,</u> and your zone is <u>myZone,</u> then you only need to put the following in your **.forward** file.

myname, "I/usr/local/macmail 'my name@myZone'"

Open the Chooser to find which zone you're in, and to see or change your User Name.

Installation and Usage

Four files ("Messages", "Messages DA", "Message Log", and "my ICON") are available from the Workstation group file server, WKSG Server 1, in the *lbl* zone, in the Graphics folder.

To receive messages, copy "Messages" to your System Folder and reboot; a mailbox icon at boot time indicates successful installation.

If you don't want to receive a particular type of message, you can set this with the Control Panel.
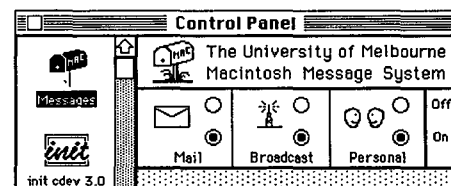
To send messages, use Font/DA Mover to install the "Messages DA" in your System. Run the DA to send a message: if necessary select a zone, choose a user; type a message in the text window, use RETURN for new lines, and ENTER or OK to send it (or double click a single user name for the same result).
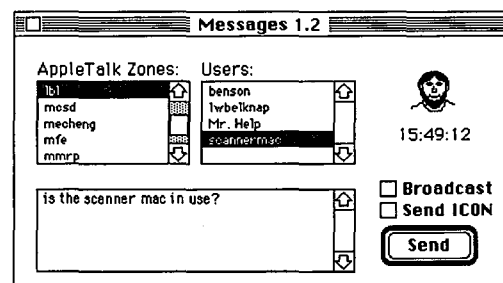
Copy "MessageLog " to your System Folder if you want to accumulate a log. You can include an icon with your message by copying "myICON" to your System Folder. Use RESEDIT, for example, to personalize your icon.

Forward comments and questions to me at x5703, or

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

VMS Mail: **lbl::WHBenson**

SEND FAX VIA E-MAIL

Craig Eades

Researchers at LBL can contact almost any colleague via electronic mail. Now they can send them a FAX as well!

Computing Services now has software which allows our customers to transmit FAXes via e-mail. The software, from Perfect Byte, requires the inclusion of certain keywords in the text of the mail (these are stripped out later). These keywords (a) define the phone number to send to, (b) define the user's name & other FAX attributes and (c) provide the password of the user to the FAX software. Although the software is still in Beta test, our experience indicates that it performs this function very well.

Facsimile transmission is not new; in fact, document transmittal via phone lines predates electronic mail. However in the last few years the consumer marketplace has seen an explosion of FAX machines offered at prices much lower than ever before. FAX machines are now found in many businesses and even in many homes. FAXes can be used to order supplies, request or provide information, and perform almost any task you might use a document for.

A facimile or FAX machine scans and encodes a document into electrical signals, transmits these electrical signals over a telephone line. The receiving FAX machines reconstructs the signals to print an exact duplicate of the document.

Users will need to be added to a user data base before sending FAXes. Contact Pat Bean at x7008 for more details.

LARGE MEMORY VERSIONS OF TeX AND LaTeX AVAILABLE ON UX5/1/3 & CSR

Martin Gelbaum

"**bigtex**" and "**biglatex**" are now available on the Computer Center UNIX machines (UX5/1/3) and CSR. These programs are "large-memory" versions of TeX and LaTeX; their internal memory and buffer sizes are much larger those of the standard TeX and LaTeX programs.

Invoke these programs by typing
    bigtex
      and
    biglatex
respectively.

The commands "biglatex" and "bigtex" are used exactly like "latex" and "tex", respectively, and enforce the same rules for source files.

CREATE LARGER CAPTIONS IN LaTeX

The large-memory version of LaTeX is perhaps most useful because it allows you to create larger captions than does the standard version of LaTeX; captions with over 300 characters will usually cause an error message like this:

**! TeX capacity exceeded, sorry [main memory size=65531].
<recently read> \endtemplate**

**l.386 -2.5 & 5.0 & 1.5 &
       y & 4.66 & 8.49 & 1.99 & 1.37 & 13.8 & 13.3 & ...**

**If you really absolutely need more capacity,
you can ask a wizard to enlarge me.**

(This limit on size of captions is stated on page 177 of the LaTeX User's Guide and Reference Manual.)

"biglatex" is a version of LaTeX where this capacity has indeed been increased and this program can handle much larger captions than the standard version.

Another [miserable] error message:

Unable to read an entire line—bufsize=500

(LaTeX then simply quit processing the file.)

The "large-memory" version of LaTeX ("biglatex") processed the same input file without problems and the resultant DVI file printed just fine.

Forward comments and questions to me at x4749 or

Unix or
Software Tools Mail: **martyg@lbl.gov**
VMS Mail: **lbl::martyg**

NEWS OF MATH LIBRARIES

Don't call it SPSS-X anymore

SPSS 4.0 NOW ON CSA

Martin Gelbaum

SPSS Release 4.0, a new release of SPSS for VAX/VMS, has been installed on the CSA cluster. Version 4.0 is much improved from the version we have been running (SPSS-X Version 2.2, which will be phased out by Nov. 11). This new version no longer uses the name SPSS-X; it is simply called SPSS. However, the vast majority of SPSS-X procedures will continue to work with SPSS 4.0.

SPSS is a comprehensive tool for managing, analyzing and displaying information; among the features available with SPSS are:

- Ability to read and analyze complex file and record structures such as indexed, nested, or hierarchical files.
- Extensive file management capabilities including the ability to split files, save files, and to match and merge multiple files.
- Extended data management capabilities including the ability to define and manipulate long string variables, do conditional data transformations, and perform a wide variety of numeric functions.
- Wide range of statistical analysis routines.
- Great latitude in data display, incorporating Report as a standard feature.

To access SPSS Version 4.0, FIRST invoke this DCL symbol, which defines various names and symbols needed for SPSS Version 4.0:

setup_spss

You may put this in your login.com as

$ setup_spss

Then, to run the new version of SPSS, type

spss40 (or simply **spss**)

You can access a large library of HELP articles from within SPSS by typing "?" at the "SPSS> " prompt. You can also access this HELP library by typing

help/libr=spss_ihelp

at the CSA prompt. (To end an interactive SPSS session, enter Crtl-Z, EXIT, QUIT, or FINISH at the "SPSS>" prompt).

The old version of SPSS (called SPSS-X) will be available until November 11.

After you have invoked the logical names for the new version,

help/libr-spss_ihelp release notes

will explain the most important changes and additions in it.

Manager Mode

One entirely new feature is a so-called "manager" mode, which is a menu driven front-end for SPSS This mode uses a screen-driven menu, resembling in some ways the screen mode of the EDT or EDIT/TPU editors; you need a terminal in the VT100 or VT200 or VT300 series to use this feature. Invoke this menu-driven mode by typing

spss/manager

NAG LIBRARY ON CSA UPDATED TO MARK 14

Martin Gelbaum

The CSA copy of the NAG Fortran library of mathematical, statistical, and special function routines was updated to Mark 14 (from Mark 13) on Monday, September 17, 1990. For details, please see

help math_librariesnag,
subtopics Mark14_News, Examples_and_documents

(which explains where to find many example programs), and

withdrawn_routines.

This library contains DOUBLE-PRECISION Fortran routines; the single-precision version is NOT available on CSA. Therefore, when using the examples from the NAG documentation, remember to declare all parameters as DOUBLE PRECISION if the documentation declares them as REAL (explicitly or implicitly).

Please note that the vast majority of the routines in the library will continue to be used as in Mark 13; the HELP article and documentation explain how to replace any routines that have been withdrawn. (Notice about all routines withdrawn at Mark 14 was given six months ago).

The LINK statement for using NAG will NOT change and programs already linked with the NAG library will CONTINUE to work. As in the past, link your object code to this library by

link object-file, [object-file,...,] sys_nagd/lib

For a brief period, you will be able to link with the Mark 13 library using the logical name OLD_NAGD; we plan to remove the Mark 13 version of the NAG library from public access in a month.

Forward comments and questions to me at x4749 or

Unix or	
Software Tools Mail:	**martyg@lbl.gov**
VMS Mail:	**lbl::martyg**

GRAPHICS NEWS

COMPUTER-DRIVEN MOVIE-MAKING SYSTEM

Wes Bethel

Computing Services' Graphics Group is pleased to announce the addition of movie making facilities to its existing group of hardcopy devices, now located in Bldg. 50B, Rm. 1275.

The movie system consists of several pieces of hardware and software which may be used to create and record video frames onto VHS tape.

The recording hardware consists of
• a VHS tape recorder/player,
• a Sony RGB Videodisk with processor, and
• an AT-compatible personal computer with a Vista framebuffer.

We presently use a Stardent 3000 graphics supercomputer to produce the image sent to the recording subsystem. The rendering and recording systems are physically connected via an Ethernet link.

The software used in the movie system consists of two major pieces.
• **Scry**, a network-based software system for the transport and recording of video images, is used to move the finished video frames from the rendering system to the recording system and onto the recording media.
• **AVS**, Stardent Computer's Application Visualization System, augmented with enhancements conceived and implemented at LBL, is used to perform data rendering. (It should be noted that the data rendering phase may be performed by any number of software products, but that AVS is used in this case).

Scry was developed at LBL by David Robertson and Bill Johnston of the Imaging Technology Group. A related piece of software, designed to manage the activities of AVS, was developed at LBL by Wes Bethel of Computing Services' Graphics Group.

The movie system has been designed and built to provide scientists with a cost-effective and easy-to-use method to generate and produce animation sequences.

A typical pipeline from raw data to animation involves two steps.
• First, the software package AVS is used to construct a data flow model, whereby various filtering, mapping and rendering operations may be applied to the data. At this stage, the scientist is able to experiment with different methods of viewing the data.
• Next, an animation controller is used to generate a "script" which directs the activities of AVS over time. The animation controller is used in concert with the Scry system to record the video frames onto tape.

Forward comments and questions to me at x6626 or

Unix or
Software Tools Mail: **EWBethel@lbl.gov**
VMS Mail: **lbl::EWBethel**

WHAT'S IN THE NEW GRAPHICS/WORKSTATION LAB

Maggie Morley

As announced in our August '90 issue, all graphics hardware and workstations residing in Bldg. 50B, Rm. 1232 (the "old" Graphics/Workstation Lab) have been moved to Bldg. 50B, Rm. 1275.

Here's what you'll find there now:

1. Movie-making facility (see accompanying article).

2. "Poirot" - a Stardent 3000, 128-MIPS 4-processor **graphics workstation**, running AVS (Application Visualization System). It runs AT&T UNIX with BSD extensions.

3. A Kodak XL7700 Continuous-tone "**True Color**" thermal dye 200 dpi **printer** attached to Distributed Printing. It is capable of making 2 sizes of transparencies and paper (8 ½" × 11" and 11" × 11").

4. "Nellie" - Model GS1000 **graphics workstation** from Stellar. It has a full implementation of AVS.

5. A **SPARCstation** Model 4/460 — an 8-bit, 256-color, 16 MByte workstation.

6. A **Sun 3/50** workstation with 6 MBytes of memory.

7. An **IBM RISC-based** System 6000 workstation with 16 MBytes of memory and a 24-plane color system.

8. A **DECStation 3100**, a RISC-based workstation running Ultrix, with16 MBytes of memory, 256 colors, performance rating of 14 MIPS, and a 19-inch monitor.

9. A **VAXstation 3100** Model 38 256-color workstation with a graphics accelerator.

10. A **Tektronix 4208** color terminal connected to a Tektronix 4696 color inkjet printer and **Tektronix 4957** bitpad.

This room is open between 7 AM and 5 PM every working day. You can access the area during off-hours with the same key card you use to get into Rm. 1232.

Forward comments and questions to Nancy Johnston at x5093 or

VMS Mail: **lbl::NEJohnston**

Unix or
Software Tools Mail: **NEJohnston@lbl.gov**

NOTES FROM TROUBLE MAIL

Maggie Morley

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

MESSAGE

Is there a way to direct all incoming messages through
the Mail utility? I would prefer to never use msg!

RESPONSE

In your main directory create a file called

   $MAILINTERFACE.

Note that the filename starts with "$" and ends with a
period ("."). Put the word "vmsmail"—in lower case
and starting in Column 1—in that file. (That's the only
thing you need to put in it). From then on your mail
should come through VMS mail only.

MESSAGE

Every time I access CSA remotely (e.g., to copy CSA files
while logged into BEVAX) a server process is created
that stays in the system for about 5 minutes, although it
is not needed anymore. Isn't that a waste of resources
and computing money?

RESPONSE

The process is there just in case you want to copy more
files; that way the system doesn't have to create the
server process again. If you use two copy commands,
you will notice that the response time of the second one
is much better than the first one. The process doesn't use
much memory (<200 pages in the working set). It's idle
if you don't copy anything, so it's not wasting much.
Also you don't pay anything extra because the process is
idle.

MESSAGE

When I use "Spell" on csr and a misspelled word comes
up, I type "? <return>". Then Spell comes back with
"Try one of these:". Then absolutely nothing happens.
Can that be fixed?

RESPONSE

Spell is working as advertised on csr, although I must
say it is not the most user-friendly program ever written.
If you use the "?" response to a misspelled word, you

MUST follow the "?" with a space and a pattern that
Spell will use to get a list of possible replacements from
its dictionary. For example, **Spell** finds the string
"countrz" in a file and replies with

   countrz ?

You reply

   ? count

[thus, your terminal will display]

   countrz ?? count
   Try one of these:
   account
   accountant
   count
   countdown
   countenance

[and many other words with the character string
"count" in them.]

MESSAGE

I would like to use the DCL "swing" program. Does
VMS Version 5.3-1 support SWING?

RESPONSE

SWING is a one of the Physics Utilities that's supported
by the Physics Division.

If you execute (include in your Login.Com) the line

   @Physics$Manager:Setup_Phys

you can access any of those Physics Utilities, including
SWING. Just type

   swing <cr>.

(NB: SWING receives only minimal maintenance).

MESSAGE

Mathematica seems to have left csr. Please get it back.
Thanks.

RESPONSE

As it happens, we did not have a license for *Mathematica*
on csr. We have bought one and installed it there; we
also have it running on UX5 and UX1.

MESSAGE

I have *biff y* set in my .login. In the last week or so, it
hasn't been doing anything . In addition, I'm not
informed when new mail arrives, unless I'm in mail

when it happens. Why I don't get the one line notification that (I thought) was independent of *biff*.

RESPONSE

Sorry, *biff* has currently caused a security problem and has been disabled until Sun fixes the problem.

A command like the following in your .cshrc will make the mail system check every 600 seconds for new mail for you

set mail = (600 /usr/spool/mail/login-name)

The system will print this short message on your terminal if you are logged in:

You have new mail.

(The new mail will be stored in the file /usr/spool/mail/login-name).

MESSAGE

I have what appears to be a bug in f77. I get a segmentation violation whenever I do an unformatted sequential write for a record that is larger than 8 KBytes. The sample is listed below.

```
<UX5: 6>rtest
enter n: 2100
*** Segmentation Violation = signal 11 code 3 . . .
```

RESPONSE

We've just installed the latest patch to Sun FORTRAN (1.3.1); it cleared up this problem.

MESSAGE

Is there a way to effectively set host from CSA to SLAC? I can connect to SLAC on some terminals by typing "SCSM' at the "Enter destination Number >" prompt on some terminals. Is there any way to connect to SLAC from a VAXstation, for instance?

RESPONSE

• One serial line path to SLACVM (the SLAC IBM). is the ISD data switch directory "SCSM".

• Another path available from CSA and UNIX is

telnet switch.slac.stanford.edu.

If you type "HELP" in response to the prompt from the "switch", the machine displays useful phone numbers for the SLAC Computer system. The SLACVM address for "trouble" or "system" mail is "sos@slacvm.bitnet" or "servdesk@slacvm.bitnet".

The SLAC Service Desk number is (415) 926-2406 (from 09:00 to 17:00 PST). You can call (415) 926-2030 about Communications and terminal troubles.

I'll make sure to have this available under "HELP NETWORKS".

MESSAGE

I have a question about DEC MAIL. I created a new folder by moving a message to a nonexistent folder:
    MAIL> **MOVE 3 CHESS**
This created a file CHESS.MAI, rather than an additional folder in MAIL.MAI as I expected. In any event, now I want to read the message by changing my current folder from MAIL to CHESS. When I do so, I get an error message "FOLDER CHESS DOES NOT EXIST" or something to that effect. How do I access this new mail file?

RESPONSE

(1) Read mail in the your file CHESS.MAI by using the command
    MAIL> **SET FILE CHESS.MAI**
(Pg. 11 of the VMS Mail Utility Manual.)
(2) Create a folder in the file MAIL.MAI by
(a) Reading some message, say #4
(b) Then, use the command
    MOVE TESTFOLDER
    The program will prompt you to confirm that you want to create the new folder. Respond with a "y". Message #4 will be moved to a folder named "testfolder" in your MAIL.MAI file.
(c) You should be able to read that message after you use the command
    SELECT TESTFOLDER

MESSAGE

I'd very much like to print graphics generated by TOPDRAWER on the nearest LaserWriter, at54. I tried the following command file:

```
$ set noverify
$ td 'p1' imgn300
$ pg54 imgn300.ugs
$ set noverify
```

where td is defined somewhere else, and pg54 is defined in my login.com by
    $ pg54:=='ipr' -limpress -pat54 'p1'
but it didn't work (I get a runaway series of error messages). FYI, if I replace pg54 above by pg defined by
    $ pg:=='ipr' -limpress -pip8 'p1'
then it works fine (the output goes to ip8, which it's OK except that it's too far away).

RESPONSE

You have two problems here:

(1) at54 (and all the other Apple LaserWriters of which I am aware) cannot print IMPRESS files; LaserWriters can print only PostScript files; even text files sent to these printers are translated into PostScript by the distributed printing software so that these printers will print them. The only printers here that print IMPRESS files are IMAGENS, such as ip8.

(2) 'p1' does not mean anything special or useful in the definitions for either PG or PG54; make the definition

    $ pg8:=='ipr' -limpress -Pip8

(PG54 is useless.)

MESSAGE

When I try to use *dvips* to print a PostScript figure from within a LaTeX-generated .dvi file, it only works if I have used the complete path name of the **figure.ps** file in the **\psfig** command. Is there some path variable I can set for *dvips*, so it will search my home directory first? (it apparently tries to search / first). Thanks.

RESPONSE

I verified your problem and called the *dvips* vendor (ArborText) about it; the technical support person I consulted finally confirmed that this is indeed a bug.

For the time being, please use "./file.ps" to read in "file.ps" in the current directory or "figs/file.ps" to read in "file.ps" in the subdirectory "figs" of the current directory.

MESSAGE

Are there any charges for mounting a disk (e.g., the GKS disk on the UNIX system) by another machine when that GKS disk is ReadOnly.

RESPONSE

I gather you are referring to mounting ux3:/graphics_export/atcgks/lib_sun4 on your machine. You will be charged something on the order of $50 per month to import this file system from UX3.
Please contact Craig Eades (x6569, e-mail address: craig@lbl.gov) for the details.

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.

NEWS OF PHYSICS LIBRARIES

Werner Koellner

```
┌─────────────┐
│   ON UX5    │
└─────────────┘
```

● **CERN LIBRARY**
Selected CERN Libraries are available on UX5 and may be copied to SUN SPARCStations. Work is in progress to port some additional libraries to UX5, and to port supported libraries to the STARDENT workstation. Note that porting libraries to Silicon Graphics, IBM RISC-6000, and Convex machines is also supported at Cern.

For information about the status of these efforts, as well as instructions on using these libraries, see the man entries
  man cernlib
  man paw — and
  man geant

For the time being, some dummy routines are required to avoid loader errors, and you need to include them in your f77 statement. Here's the prescribed procedure:

define the environment variable

  setenv CERN_ROOT /home/ux5/ux5c/phyd/cern

and include that path in your PATH statement. Then include the dummy routines via

  $(CERN_ROOT)/src/pdum.f and/or **gdum.f.**

We are working to eliminate the requirements for dummy routines and to reduce the sizes of executable images.

ATC-GKS is the supported graphics interface for programs using Cern routines. For details, see the man entry
        man gks .

The following libraries are available (versions as on CSA):

LIBRARY	PACKAGES
KERNLIB	kerngen, kernnum
PACKLIB	epio, ffread, hbook4, iopack, kapack, kuip, minuit, zbook, zebra, zcedex
GENLIB	gen
GRAFLIB_ATC	hplot5, higz_atc, gkspack
GRAFLIB_SUN	hplot5, higz_sun, gkspack (not supported)
PAWLIB_ATC	paw_atc, comis, sigma
PAWLIB_SUN	paw_sun, comis, sigma (not supported)

ISAJET	p-p, pbar-p Monte Carlo
JETSET73	LUND Monte Carlo (Jetset73 + Pythia54)

● **PAW**
As on CSA, PAW is supported with ATC-GKS graphics. The standard program may be executed by merely typing PAW_ATC. For further details consult the man entry
        man paw

● **GEANT**
Only the latest GEANT Version (3.14 with ATC-GKS graphics) is supported on UX5. For details about linking your executable image, consult the man entry
        man geant

```
┌─────────────┐
│   ON CSA    │
└─────────────┘
```
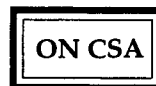
● **PHYSICS UTILITIES**
On the CSA Cluster, and on LAN workstations, if the required disks are mounted, you can access the Physics Utilities, including the CERN Library, the PAW (Physics Analysis Workstation) Library, and the various Physics Utilities HELP Libraries by executing the DCL command

        @Physics$Manager:Setup_Phys

We recommend that you include this line in your Login.Com file.

● **HELP**
When you type

        Help @Physics_Utilities

you'll see a list of utilities for which help text is available under "Additional information available." You may also type

        Help 'subtopic'

where 'subtopic' is one of the utilities listed, to get help directly on a particular utility. A newly added subtopic, **WHAT**, is intended to help you find specific utilities by listing available ones under very general topics. Type

        Help What

to see what is available under the auspices of the Physics Division.

● **APS_LaTeX**
Submit articles to the PHYSICAL REVIEW in machine readable LaTeX compuscripts by using the APS "compuscript toolbox." Type

> **Help Mis_Phys Aps_Latex**

for more information.

● **APS_WHATS_NEW**
Weekly news capsules, issued by Robert Park of the American Physical Society, are available in APS_WHATS_NEW. Please type

> **Help Mis_Phys Aps_Whats_New**

for further information.

● **CERN LIBRARY**
Object libraries are updated at unpredictable times. Changes are documented in the "Program Library News" section of the CERN Computer Newsletter. Past, current, and sometimes future issues can be found in **Cern$Inform:PROGLIB.CNLxxx**. Of particular interest are news items regarding the status of obsolete routines. Additional information can be found in various files in **Cern$Inform**, in **Cern$CernHlp**, and via online HELP for selected products. In some cases a previous version of an object library is available as **xxxxx.OLD**. In particular, type HELP CERN LIB to see a small description of the library packages and current versions that are available. In some cases a previous version of an object library is saved as **xxxxx.OLD**.

The recommended method to access the latest standard object libraries is to use logical names **CERN$*_LIB**. For these names and other details, please see the help text in **HELP CERN**.

The following object libraries and programs have been updated recently.

This executable is in CERN$CERNEXE
    CMZ .... Version 1.34

These packages are in Library CERN$GEANTATC_LIB
    GEANG .... Version 3.14/16
    GEANH .... Version 3.14/13
    GEANT .... Version 3.14/15
    GEANX .... Version 3.14/14

ISAJET .... Version 6.36

These executables are in Paw$Library (relinked for ATC-GKS 3.2)
    PAW_ATC.EXE
    METAPAW.EXE

● **CERN_NEWS**
Cern News is a facility which allows remote access to News Items (for instance, the latest LEP News), that are posted by a number of research groups at CERN on either the VAX or IBM machines at CERN.

To see the list of available News Groups, type

> **Cern_News/INQ**

To scan news of the LEP group, type

> **Cern_News LEP**

and follow the instructions. Once in CERN_NEWS, you may send the current news item to the default printer, or fetch the file into your default directory.

For additional information, type

> **Help Cern_News**

● **COMPUTER PHYSICS COMMUNICATIONS**
Computer Physics Communications of Belfast, Northern Ireland, maintains the CPC Program Library, a large collection of Physics-related programs. Indexes of added programs can be found in

> **Cern$Inform:Cpc_Lib_mmyy.Index.**

● **GKS**
As explained in the August Newsletter, Version 3.2 of ATC-GKS, which became the default, no longer supports the VAXstation (VWS/UIS) driver 4300. Please note that the old version remains available in **Sy_Graphics:[OLD_ATCGKS]**. To link and run with the old version, redefine GKS logicals

> **@Sy_Graphics:[OLD_ATCGKS]OLDGKS**

● **GEANT**
GEANT, a system of detector description and physics simulation tools, is available as part of the CERN Libraries. A sample Program, using ATC_GKS to demonstrate graphics and other capabilities, is available. The current default, accessed via the logical name **Cern$GeantATC_Lib**, is the latest release of Version 3.14. The recommended link procedure

> **Cern$Library:Geant.Lnk**

uses one of the linker options files

GEANTI_ATC.OPT,
GEANTB_ATC.OPT for ATC-GKS graphics, or
GEANTI.OPT or **GEANTB.OPT** for simple MGKS
    graphics.

The difference between **I**(nteractive) or **B**(atch) is just the inclusion of the main program GXINT in the interactive case.

Besides ATC-GKS, GEANT is also available with the DI3000 graphics interface. To link that version, <u>on CSA2 only,</u> use

> **@Cern$Library:Geant_Di3000.Lnk.**

METAFILE graphics output is available. For additional information please type

> **Help Geant**

● PAW

At LBL, the program PAW is being maintained primarily in the full GKS version, named PAW_ATC, although the mini-GKS version, as well as a DI3000 version, are available. PAW_ATC uses the ATC-GKS interface, whereas PAW_DI3000 uses the Precision-Visuals DI3000 interface, which can be used <u>only on CSA2.</u> Both versions make a large number of output devices available to the user for graphics output. Standard executable programs of PAW_ATC, METAPAW, PAW_DI3000, as well as PAW, are available in **PAW$LIBRARY.**

To use the PAW with the old ATC-GKS, please see the section "GKS" above, and

> **Run Paw$Library:Paw_Oldatc.exe**

If desired, users may link their own versions by using or modifying the procedures

> **PAW$LIBRARY:PAW_ATC.LNK** or
> **PAW$LIBRARY:PAW_OLDATC.LNK** or
> **PAW_DI3000.LNK** or
> **PAW.LNK**

These procedures use corresponding linker options files, e.g. PAW_ATC.OPT. With PAW_ATC, graphics output may be directed simultaneously to the screen or to a Metafile for subsequent processing via the program METAPAW, and also simultaneously, and selectively, to a PostScript file.

Most recent PAW_ATC improvements are documented in files **Cern$Inform:Paw.News***. The latest of these is PAW.NEWS1081. Manuals for PAW, including a fancy new User's Manual, are available from the Computer Center Librarian (Bldg. 50B, Rm. 1232B - x7008). Type

> **Help Paw**

for more information.

Forward comments and questions to me at x4398, or

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

LBLnet NEWS

LBLnet NEWS

Bob Fink & Sig Rogers

Network Traffic Data

Kinetics (Shiva) FastPath Maintenance

The maintenance of Kinetics (now Shiva) FastPath AppleTalk gateways is now being done by the RTSS/50B Electronics Maintenance Shop.

This shop, headed by Paul Murray, will provide maintenance Monday through Friday, 8 AM to 5 PM, workdays. No support will be provided on weekends and holidays, unless specially arranged on a specific case-by-case-basis.

Efforts to diagnose problems automatically with FastPaths (Kboxes) have been implemented. An automatic program checks daily; every Kbox must answer a query to assure that it is alive. If it does not respond, electronic mail is sent automatically to a list of maintenance people, initiating repair procedures on the next available workday morning.

Users are reminded that once a Kbox is installed on LBLnet, it is considered to be LBLnet equipment and thus subject to RPM 1.04 A. —COMMUNICATIONS MANAGEMENT AND POLICY—which provides for the efficient and cost-effective provision of shared communications resources.

The LBLnet Kbox maintenance effort will provide a spare as necessary. However, the user will continue to bear the cost of the repair, just as the user already does for LocalTalk.

Certainly, if users ever need to remove "their" Kbox from LBLnet for some other use, they will be provided with a Kbox equivalent to the one they originally ordered. It is only in this way that an effective maintenance/support equipment pool can be operated.

50LAN Statistics

Statistics for a 6 day interval, 4 - 9 September 1990:

Packet rates averaged over interval:

Packets/Sec	411 pps
Collision rate	2.1 %
Broadcasts/Sec.	3.6 pps
MultiCasts/Sec	27.7 pps

Packet size as percentage of total packets:

64-127 byte packets	48.3 %
128-255 byte packets	16.3 %
256-511 byte packets	.6 %
512-1023 byte packets	8.3 %
1024-1518 byte packets	26.4 %

Packet Type as percentage of total packets:

LAVC	50.8 %
IP	43.5 %
DNA	3.4 %
LAT	.5 %
ARP	.6 %
Bridge Mtrg	.2 %
XNS	.2 %
ISO	.1 %

LBLnet Bridged Backbone
128.3.252

Lawrence Berkeley Laboratory
LBLnet Overview

R.L.Fink - Network Systems   13 September 1990
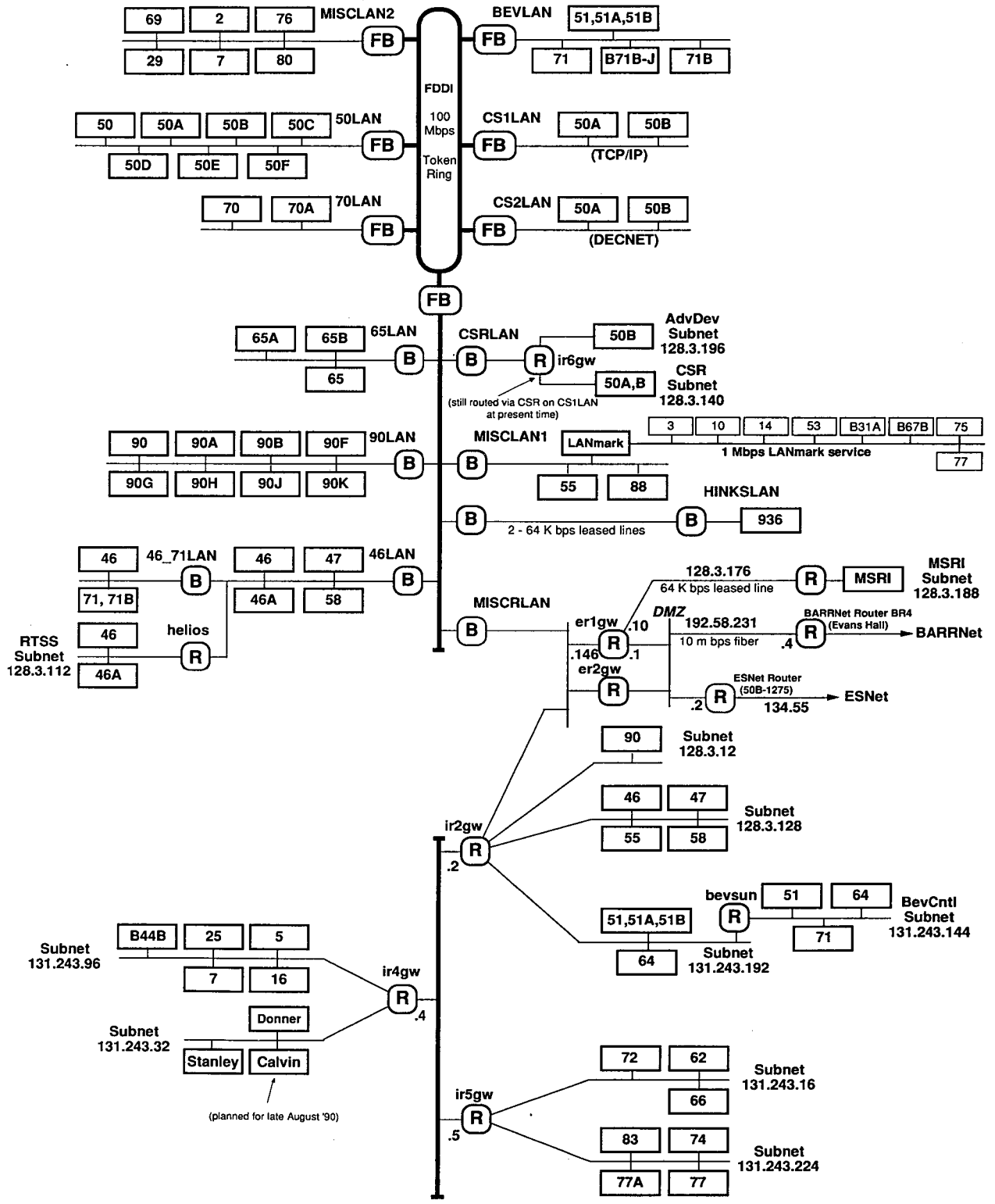
LBLnet Routed Backbone
131.243.128

Legend:
— 10 Mbps Ethernets
(FB) Bridge - FDDI to Ethernet
(B) Bridge - Ethernet to Ethernet
(R) Router
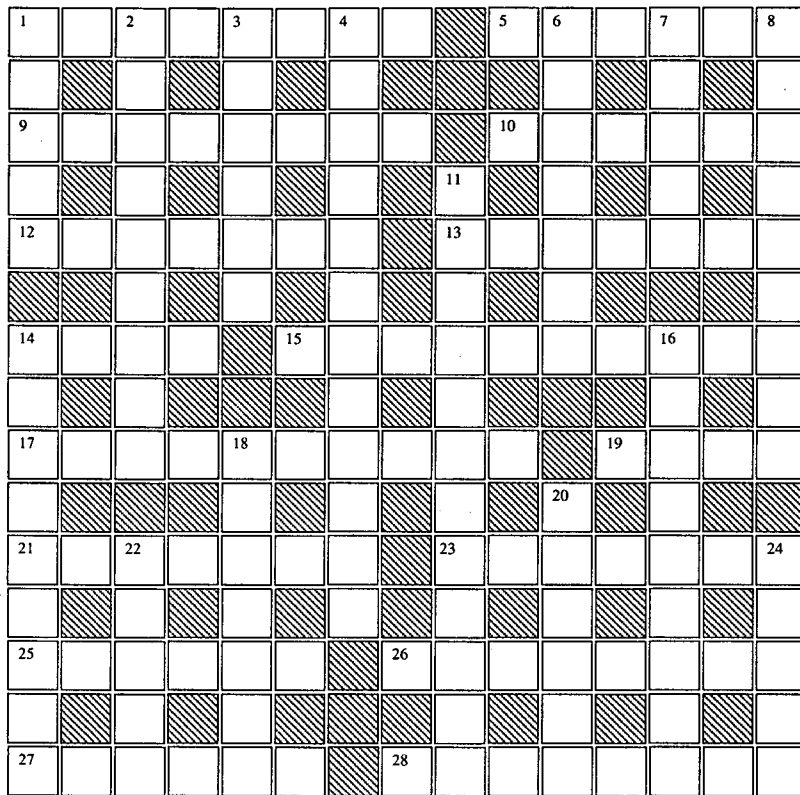
CRYPTIC CROSSWORD

Cryptic Crossword: Misprints

D. F. Stevens
(After Ximenes)

Half the across and half the down clues contain a misprint of exactly one letter each, always occurring in the definition part of the clue; these answers are to be entered into the diagram correctly. The rest of the clues, both across and down, are correctly printed; these answers are to be entered into the diagram with a misprint of exactly one letter each. No unchecked letter is to be misprinted, and each twice-used letter is the correct letter in at least one of the words to which it belongs. All subsidiary indications lead to the correct forms of the words required, not to misprinted forms. Answers include one proper name.

Across

1. Pigment distorts man's path. (8)
5. Clement I in blue-flowering plant. (6)
9. Proverbially foolish copper hindrance. (8)
10. Driven road in mind. (6)
12. Diluted turbulent high-tech water. (7)
13. A pound of uranium takes a little while to become a soluble protein. (7)
14. Bulgarian peninsula loses one ridge. (4)
15. Cue notches bothered bearing holder. (10)
17. Waterproof family nonsense occurs after eccentric revolver returns. (10)
19. There's energy within reason in mild serum. (4)
21. Funny uncle, 51, holding embryo sacs. (7)
23. Heavy service at 5 isn't loud. (7)
25. Do in never after. (6)
26. Fall sport features a rounder runt with no degenerate. (8)
27. Aquatic creature has consumed vulgar object of reference. (6)
28. Is love restorative or isosmotic? (8)

Down

1. Avian heavyweight calls for preserve. (5)
2. Spirited salmon in scattered lilac. (9)
3. Fouled furrow's up on offer. (6)
4. Three-dimensional solid measure thus backed the company picture. (12)
6. A report of discordant cembali. (7)
7. Bury the orphaned artist? (5)
8. To achieve the latest thing, clean up, O dirty men! (9)
11. Dance covers all in a hash of meat and bones. (12)
14. Waltz, for instance, wherein no minimum makes ascendency. (9)
16. A mere help in trouble lives but a day. (9)
18. Enslaves me in foundering liners. (7)
20. Upbraid a skate. (6)
22. British turn out for the biggest wart. (5)
24. Great bards from Northern Esthonia. (5)

Notes to Solution

	#	Loc of misprint	Misprinted word	Solution	Notes
Across:	1.	clue	*p*igment (f)	phantasm	[man's path]*(anag)*
	5.	clue	*C*lement (e)	barium	b + ar[I]um
	9.	clue	*f*oolish (c)	cucumber	Cu + cumber
	10.	diagram	her*t*ed	herded	he[rd]ed
	12.	clue	*w*ater (h)	Luddite	diluted*(anag)*
	13.	diagram	albumi*r*	albumin	a + lb + U + min
	14.	diagram	*d*alk	balk	Balk[an]
	15.	diagram	esc*l*tcheon	escutcheon	[cue notches]*(anag)*
	17.	diagram	mackinto*t*h	mackintosh	cam*(rev)* + kin + tosh
	19.	clue	mil*d* (k)	whey	wh[e]y
	21.	diagram	nu*b*elli	nucelli	uncle*(anag)* + LI
	23.	diagram	mass*m*ve	massive	mass + [f]ive
	25.	clue	a*f*ter (l)	neuter	ne[ut]er
	26.	clue	s*p*ort (h)	underrun	[ro]under run[t]
	27.	clue	re*f*erence (v)	fetish	f[et]ish
	28.	diagram	isotoni*s*	isotonic	is + 0 + tonic
Down:	1.	clue	A*v*ian (s)	picul	pickle*(homophone)*
	2.	diagram	alco*d*olic	alcoholic	lilac*(anag)* + Coho
	3.	diagram	tu*m*bid	turbid	rut*(rev)* + bid
	4.	diagram	stereosc*t*pic	stereoscopic	stere + so*(rev)* + Co + pic
	6.	clue	re*p*ort (t)	alembic	cembali*(anag)*
	7.	diagram	inte*m*	inter	[pa]inter *(with no Pa)*
	8.	diagram	modern*n*ty	modernity	[O dirty men]*(anag)*
	11.	clue	*c*overs (l)	balletomanes	[meat + bones]*(anag)* + all
	14.	diagram	dominanc*f*	dominance	d[0 + min]ance
	16.	diagram	ephemera*n*	ephemeral	[a mere help]*(anag)*
	18.	clue	en*s*laves (c)	inliers	[I + liners]*(anag)*
	20.	clue	s*k*ate (t)	assert	[tress a]*(rev)*
	22.	clue	*w*art (p)	brunt	B + turn*(anag)*
	24.	clue	*b*ards (i)	ernes	[North]ern Es[thonia]

THE WORKSTATION SCENE

[27.10.1]
TRADING POST

Items advertised here are for Laboratory use only and must be purchased with a valid account number. If you have items you wish to advertise in the Trading Post or if a contact name does not appear with an ad below, call Bruce Burkhart; x6858.

1. For Sale: Apple Tape Backup 40SC unit, w/SCSI cable & data cassettes, it's slow, but reliable, $350.

2. For Sale: IBM XT personal computer, 10 MByte Hard Disk, & CGA Color Monitor, $595. Contact: Richard LaPierre, x4692.

3. For Sale: IBM XT personal computer, 10 MByte Hard Disk & Mono Monitor, $549. Contact: Richard LaPierre, x4692.

4. For Sale: PageMaker 4.0 for the Macintosh; unopened-unused, $250. Contact: Robert Jahnigen, x5579.

5. For Sale: Sun Microsystems Software: Sun Paint-Write-Draw v1.1, 1/4" tape, for Sun workstations, $199.

6. For Sale: DaynaTALK network Interface box for LocalTalk, 3 ea, brand new, half price! $70 ea.

The Workstation Group Laboratory, home of several Workstation members as well as the *Workstation Evaluation Library* is located in Bldg. 50B, Rm. 2231. The hours are:

Mon	8 AM - 1 PM
	3 PM - 5 PM
Tues - Fri	8 AM - 5 PM

You can also reach us from the Computing Division's UNIX machines or the VMS cluster by sending mail to:

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

We're here to help; please call us at x6858.

[27.10.2]
WARNING: DON'T COPY
THOSE PROPRIETARY PROGRAMS!

We'd like to remind users that reproducing licensed software without authorization violates the U.S. Copyright laws. It is a Federal Offense and subject to civil and criminal penalties. Lab employees may be subject to disciplinary and/or legal action if they are found to be party to violation of software license terms and conditions.

In other words:
- DON'T copy or remove Licensed Software on Training Room machines.
- DON'T leave your software on Training Room machines.
- DON'T swap "nifty" software with your pals.
- DON'T copy or keep copies of evaluation software.
- DON'T mass-copy proprietary programs.
- DON'T keep proprietary programs in Public Folders. These folders are easily checked by Laboratory personnel.
- DON'T blithely ignore this warning. Some carefree (read reckless) users have had to pay stiff penalties.

[27.10.3]
NEW VLF MONITOR
FROM SIGMA DESIGNS

. . . from WKSG member Bruce Burkhart

In early October, Sigma Designs will begin shipping their low emission monitors in the U.S.[1] "Low Emission" means that their entire line of monitors meets the Very Low Frequency (VLF) guidelines as established by the Swedish Measurement and Test Advisory Board (MPR). There is yet another emission level, Extremely Low Frequency (ELF). The MPR has not, as yet, established guidelines for ELF emissions (estimate: late 1990); however, Sigma will incorporate MPR's guideline for ELF emissions in their monitors by the first quarter of 1991.

This is not to say that other monitor manufacturers are not following Sigma's lead. Just the opposite; MegaGraphics, SuperMac, Radius, and many others are planning to adhere to the Swedish standards very soon.

As you are probably aware, safety standards for workers who use computers have become a major issue. There is concern about the potential radiation levels; there is also

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[1] For the past two years, Sigma has been supplying monitors which meet the MPR VLF standard to the Scandinavian market.

concern about repetitive motion injuries and other physical health problems. For additional information, contact your Environmental Health & Safety Group at LBL (x5251).

[27.10.4]

Mac ♥ PC
Sharing Data

. . . from WKSG member Nancy Travis

TRUE OR FALSE? Now that Macintoshes and IBM PCs can both use the same 3 1/2" floppies, disks can easily be interchanged between the two machines.

The answer: True — and with ease since the introduction of the Macintosh Superdrive. All Macintoshes sold in the last year and all new model Macintoshes have a high/low density Superdrive, which can read and format both Mac and PC disks. Using Apple File Exchange, the data can often be translated to the application of choice, e.g. *1-2-3* to *Excel*.

Just as PC users learned long ago, you have to pay attention to drive densities and disk formatting if you are going to exchange data seamlessly. If you format the disk for the wrong density, it may look good to you but will be unreadable by another machine.

The Golden Rule for formatting disks is "Know Thy Drive." You need to know whether your 3 1/2" floppy drive is a high or low density drive.

• Your drive is a high density drive if it is a PS/2 or a new Macintosh (not a Mac Plus).
• Your drive is a low density drive if it is an old Macintosh or a Mac Plus.
• If you have a DOS laptop computer, it depends on what you bought. Try reading a high-density disk and see if it works.

Is it that simple? Yes! Know your drive and you're halfway home!

If you have a high density drive you can format both high and low density floppies.

TRUE OR FALSE? Do you need to use high density disks to share data?

Answer: No! No! No! Unless you need to put a great deal of data on a floppy disk, a high density floppy is a very expensive choice which can only be read on another high density drive.

Low density ("normal density" would be a better name) disks are the most commonly used . They can be read by ANY drive (you don't have to worry about what another person has!) Low density disks are also called double-sided/double-density disks. It's easy to see why low density disks are so popular: they're low in cost and compatible with all drives.

You can identify a high density disk by the extra notch opposite the write protect notch (see figure).
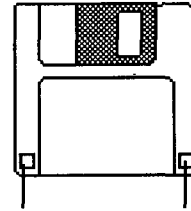
write   high
protect   density
notch   notch

COMMON WRONG FORMATS:

We see the following problems so often that they are easy to spot. Will your boss be as understanding if you give him a worthless disk?

• **Macintosh users with low density drives should not format high density disks!**
  It looks OK, but half the disk is wasted. It is also unreadable by a Superdrive.

• **PS/2 users should not use the default "format" command when using low density disks.** An IBM PC 3 1/2" drive does not determine the density. The format a: command will try to format a high density disk. To format a low density disk you must type
  format a:/n:9/t:80.

[27.10.5]

TIMELY TIP: FALL BACK
(PC USERS)

PC Users. Daylight Savings time is over. If you have a standard AST Board, you run the AST-supplied program SET-CLOCK.COM as follows (what **you** type is in boldface):

      C> SETCLOCK

It will respond

resident DATE/TIME processor loaded

      Current date is 11/04/89
      Current time is 02:01:22.07

Now, issue the following DOS Time command

      C> time <cr>

It will respond with the current time and prompt you to enter the new time.

      Current time is 02:01:22.07
      Enter new time; **01:02 <cr>**

PC-AT Owners: If you're using PC-DOS Version 3.3, just use the **Time** Command. If your PC-DOS is Version 3.2 or earlier, you must run the Setup program to set your clock. The program is on the Diagnostics disk supplied with your system. The disk is usually stored in the rear of the Guide to Operations manual.

Note : Network file servers get their time settings from the name server, so there's no need to worry about manual adjustment.

[27.10.6]
GRAPHICS STARS
COREL DRAW & *CHARISMA*

(The Workstation Group has evaluation copies of both.)

✔ *Corel Draw*, 1.21, from Corel Systems Corporation, $595 (list); requires *Windows* 3.0.
A color paint and drawing application, *Corel Draw* pretty much has it all. The program itself does all the usual paint and draw things, but in an advanced way. For example, it supports specification of corner types (bevel or rounded), and allows color specification by Pantone or CYMK models. PostScript support is extensive. Operation is smooth. The outline mode of operation makes screen refresh sprightly.

Import/Export options include TIFF, PCX, HPGL, Illustrator, PIC, GDF. Mac PICT, EPS, DXF, CGM, SCODL, GEM, and Windows Metafile.

Bundled with *Corel Draw* are an autotrace program, font conversion program, tons of clip art, four symbol character sets (including Greek/Math) and a host of other fonts (including Aardvark). A videotape tutorial and coupons worth $2500 round out the package.

✔ *Charisma* 2.0 from MicroGrafx, $99.95, requires *Windows* 3.0

Charisma is presentation software and incorporates basic word processing and charting. It includes Bitstream outline fonts and can output to the TeleGrafx slide service.

Import/Export options include CGM, Lotus, Micro-Grafx, DXF, EPS, GEM, HPGL, PICT, PCX, TIFF, Windows Metafile and Text.

Chart types include area, bar, column, line, pie, scatter, and table. There is also support for linear regression analysis.

A set of nice looking templates completes this package.

. . . Claudia Madison

[27.10.7]
STATISTICS & PLOTTING

✔ *Axum*, from TriMetrix, $495.

Our thanks to TriMetrix for the evaluation copy.

Axum is a menu-driven plotting and data analysis tool. Statistics include description, correlation, frequency, ANOVA and regression. It supports numeric, relational, and string transforms on the data. Plot types are surface, contour, polar, Smith, Box, spline, and log. It allows multiple plots per graph and multiple graphs per page. There is PostScript support and it can print to disk.

Axum imports data in Lotus, dBASE, FASCII and ASCII formats; it exports ASCII, GEM, PIC, HPGL, EPS, and TKF.

Axum is a memory hog, will not run under *Windows* and will not run with 3Com drivers loaded.

. . . Claudia Madison

[27.10.8]
TIMELY TIP: FALL BACK
(MAC USERS)

Mac Users: Daylight Savings time is over. If you didn't Fall Back yet, here's how to set your clock:

(1) Select the Apple icon

(2) Select Alarm Clock

(3) When the Time window opens, click on the flag on the right side of the window. That will open Time and Date Set functions.

(4) Click on the Clock (not the Alarm Clock) icon. Select numbers in the hour portion. Type in the new number. Select the numbers in the minutes portion. Type in the new number (if you need to). Select numbers in the seconds portion. Type in the new number (if you're that fussy).

(5) Click on the Clock again.

(6) Close Alarm Clock.

[27.10.9]
LBL PHONEBOOK,
FILEMAKER VERSION

A *FileMaker* version of the LBL Phone Book is now available on the WKSG server. The October update is located in the LBL PhoneBook folder. There are four layouts:

1) a data entry layout
2) a large screen card view
3) a columned report
4) a small screen card view.

You must already have purchased a copy of *FileMaker* to run this database. The phone book will be updated each month and placed on our server. If you have any questions or suggestions about this database, please call Carole at x6858.

[27.10.10]

FILE FORCE:

✔ *File Force* 1.01, from Acius; $232

File Force is a data management system for the Macintosh which accommodates relational and hierarchical data structures and complex layouts. It is highly programmable with a Pascal-like structured language or with a flow-chart program editor. For its power, *File Force* is easy to use, which does not mean that it is easy to use in the way that *FileMaker* is.

In fact, *File Force* is the kid sister of Acius's *4th Dimension* and has all the functionality and features of 4D's design and user environments. What does 4D do that *File Force* doesn't? (1) Create custom menus, and (2) Run applications stand-alone (with the run-time module, or as compiled applications).

Who should use it? Whoever is (a) bumping their head on *FileMaker*'s flat-file-only and/or non-programmable nature and (b) doesn't want to create stand-alone applications.

The Workstation Group has a copy for evaluation.

[27.10.11]

NORTON VS. MACTOOLS

For your own protection, Norton's Utilities and MacTools DeLuxe are not available in the Workstation Evaluation Library. Drop by the WKSG lab; let's talk.

. . . WKSG Member Tom Pope has this to say about Norton's Utilities

✔ **Norton Utilities** for the Macintosh, $149 list
Disk failure is a fact of life. If you haven't had a disk go bad on you yet, you will. And if you have, you will again. But not to worry, Peter Norton Computing, longtime leader in disk rescue utilities for the DOS world, has now brought their expertise to the Macintosh.

Recovery
Norton provides several levels of disk recovery and repair, from recovering accidentally-deleted files to individual bit-twiddling. The UNDELETE feature is aided by a startup document (INIT) called **FileSaver** which creates a record of your disk's contents and can be configured to save that record on shutdown or after a given period of use. The record is about 1% of the disk size and takes 10 seconds or less to update. Norton's

UNERASE and FORMAT RECOVER programs then use this record to retrieve any accidentally deleted files or to reconstruct the damaged disk. UNERASE also does a creditable job on disks which do not have the FILE-SAVER record installed, like floppies.

Media Medicine
The cornerstone of the Norton Utilities is the Norton DISK DOCTOR. This is what really sets this package apart from the competition. The DISK DOCTOR scans your disk, locates any problems, explains them to you in plain language (well, as plain as you can get with computers) and fixes them, with no complex decision-making required of the user. This is totally unique in Mac disk utility programs; where others prompt you for information on what type of disk you're fixing, which drive it's in, etc, DISK DOCTOR automates the entire process.

Hard Disk Tune-Up
Fragmentation is not usually a big problem, but when it gets severe it can hinder the performance of your hard disk, and so your computer. Norton's SPEED DISK is a good, fast, reliable disk optimizer that can defragment an 80 MByte hard disk in less than 40 minutes. There are better optimizers out there, most notably DiskExpress from Alsoft, but SPEED DISK does a fine job and is acceptable for most people's needs.

For the Heavies
Beneath all the Mac's icons and windows lurks a world of ones and zeros. Many will never wish to visit this mysterious and forbidding realm, but those of strong will and sturdy pocket protector will rejoice in the Norton DISK EDITOR. With it you can examine and change many of a file's hidden attributes and even manipulate bits and bytes on a disk. This is potentially very dangerous but DISK EDITOR always asks if you want to save changes before doing anything permanent. Why, you might ask, would I ever want to use this thing? Well sometimes it's the only way for an expert to determine what is wrong with a disk or file; and besides, snooping around a disk is fun.

Bonus Goodies
No utility package would be complete without a few handy whiz-bang gadgets and Norton is no exception. Included along with all the disk rescue and upkeep software are:
- DISKLIGHT, a startup document that keeps you informed of disk activity;
- DIRECTORY ASSISTANCE, which adds "Finder-like" capabilities to your Open and Save dialog boxes;
- LAYOUT PLUS, an application that allows you to customize your Finder;
- KEYFINDER, a sort of backwards KEY CAPS (which makes much more sense); and
- FAST FIND, (my favorite), a desk accessory that performs amazingly fast disk searches.

And a good manual too

Norton's manual is well-written, clever and informative. I'm looking forward to the Norton Disk Companion, an in-depth examination (and hopefully demystification) of the Mac and its disks.

===

. . . WKSG member Walt Fong has this to say about MacTools DeLuxe

✔ *MacTools Deluxe* by Central Point Software (LBL cost:$59).

With all this commotion and hype about Norton Utilities for the Macintosh (finally being shipped by Symantec), everyone seems to have forgotten about *MacTools Deluxe.* Started as a small subset of the Copy II Mac package, this data-recovery utility has been expanded; it's now a brand new program, packed with other useful utilities. *MacTools Deluxe* is a collection of utilities that provides data recovery, hard disk backups, disk optimization and partitioning, and data security.

Data Recovery

If it can go wrong, it will. Murphy said it; I think of it as the computer user's motto. Anything that can go wrong usually does — and at the worst moment.

MacTools RESCUE utility is designed (a) to analyze and repair crashed disks (hard drive or floppy), (b) undelete trashed files, and (c) repair damaged files. RESCUE performs these functions in conjunction with a cdev called MIRROR which keeps a hidden record of your file system on your Macintosh. This hidden record helps RESCUE recovers any lost information by (a) remembering which files were trashed and (b) maintaining a master directory of your volume's contents.

. . . but wait!

All this sounds great, but what a program is designed to do and what it actually does are two different things. I tried RESCUE to undelete information on several disks (one hard drive and several floppies), with a zero success rate. RESCUE attempts and succeeds in producing a copy of the deleted file, but this copy is as worthless as the lint in your pocket if you can't open it with the file's creator. The same applies when RESCUE is used to repair damaged disks; the program claims the repairs are done, but in reality they aren't. This is not our first choice for file recovery.

Disk Optimization

MacTools OPTIMIZER is a very good disk optimizer with its special features. OPTIMIZER defragments files, consolidates free space and places all applications in one location to improve your disk access time. And for those security conscious users, it has an added feature of writing 1's and 0's to free space so prying eyes can't undelete files that may still be written there.

A helpful reminder though; you should <u>always</u> back up your drive before optimizing it. Also, plan on doing something else (read a book) while optimizing your drive; it's time consuming. Average time for a severely fragmented 40 MByte drive is thirty to forty-five minutes (make it Proust).

Disk Backup and Other Features

- MacTools BACKUP gives you an easy way to back up your hard drive to floppies, other hard drives, and tapes.
- MacTools SECURE is a desk accessory which encrypts and decrypts sensitive information on your Macintosh. Be forewarned: this utility works only some of the time.
- MacTools FASTCOPY is a utility that copies or initializes multiple floppies. This handy utility creates copies considerably faster than does the Finder.
- MacTools LOCATE is another desk accessory designed to replace the Find File under the Apple menu. Basically it does the same thing as Find File with an added option of viewing a file's content without opening the application that created it.

MacTools Deluxe vs. SUM II /Norton Utilities for the Macintosh

Comparing MacTools to SUM II/Norton Utilities is like comparing a Pinto to a Ferrari. SUM & Norton are the leaders in data recovery and have proven themselves time and time again. They're more reliable and, when put to the test, outperform MacTools in repairing disks and undeleting files.

Overall View

I've gone through MacTools Deluxe and all I'll say is that Central Point Software is headed in the right direction, but it won't get there until it remedies its data recovery problems and other bugs. It's a good all-around disk utility package for the money; its best features are a well written disk primer in its manual (which I think they should publish and sell) and a speedy disk optimizer.

[27.10.12]

CLARIS UPGRADES

✔ *Claris CAD* 2.0 upgrades and new packages are now available in the Workstation Lab, Bldg. 50B, Rm.2231, x6858. A new *Claris CAD* 2.0 package is $149; the v2.0 upgrade packet is $40. Fourteen LBL users (who met the Claris cutoff date) will receive a free upgrade (we'll call you). To pick up an upgrade, bring in your original disks and a valid account number. The new upgrade includes

- New features that improve drawing efficiency.
- Several new tools, methods, and modifiers.
- Improvements to existing tools, methods, and modifiers.
- New options in the Location bar that work in conjunction with tools and modifiers.
- Floating and resizeable windows.

✔ *Claris FileMaker Pro* upgrades are still delayed at the time this Newsletter goes to bed; however there is a fair chance they will be available by October 1. The new *FileMaker Pro* package is $85; the upgrade packet is $40. There will be free upgrades to some LBL people (we'll call you).

[27.10.13]

HYPERCARD CORNER

. . . by HyperFan Bruce Burkhart

HyperCard 2.0 ... the saga ends??

Version 2.0 of HyperCard was to ship last July, and there have been many explanations for the delay. In the final analysis, it will probably ship when it's "reasonably" ready—and that time seems at hand. During an early September BMUG meeting, a hot rumor surfaced that testers and developers had a "golden beta" in their hands. In software slang , this means "if there are no major errors left in the code—it's done—ship it." If true, Release 2.0 should appear in mid-October (read: October 15). It takes about a month from final beta for Apple to amass sufficient quantities to ship.

A related item? If you've been following the daily computer news in the business section of the SF Chronicle, MacWeek magazine, and other sources—Apple is introducing three new low-cost Mac computers on October 15—coincidence or what! Will the new models ship with HyperCard 2.0? More than likely...

Interesting sidelight: the delay has given third-party HyperCard developers needed time to polish and refine their Version 2.0 products. Several I've contacted told me they were ready to ship when Version 2.0 ships. Developers have been using beta releases from Apple to develop both utilities and full applications using the XCMD and XFCN connection. Several of these products are mentioned later on in this column.

End those "Not Enough Memory" messages...

I've said it before. I'll say it again. It's time for a Mac RAM memory upgrade. With many of the latest software updates, the software documents often suggest that their programs will run more efficiently with 2 MBytes or more of RAM memory. With the introduction of System 7.0 in the first quarter of next year, 2 MBytes of RAM and a hard disk will be the minimum requirement to fully implement the new system. 1 MByte chips are available in the low $80 range—a good buy. Think about upgrading your Mac soon, to 4 MBytes if possible. If you have any questions, please feel free to call us at the Workstation Lab, x6858.

HyperSpeller: a mini-review...

As we mentioned in last month's column, *HyperSpeller* is now shipping (LBL price is $39) and it's available in the WKSG Software Evaluation Library (Bldg. 50B, Rm. 2231). Stackheads have been waiting for a long time for this one. It gets a four-and-a-half-mouse rating (very high) from MacUser magazine. This spell-checker works with all current versions of HyperCard and will work with Version 2.0. Installation is easy and performance is very good; its speed is a function of HyperCard itself (slow at times). It uses the same Microlytics dictionary that *MacWrite* II and other applications currently use.

HyperSpeller is very easy to use. Just bring up the Message Box (with "Command-M") and type "SpellCheck." Now, all fields in the stack will be checked. There are several parameters that can go with the SPELLCHECK command (they are explained in the nicely-written documentation).
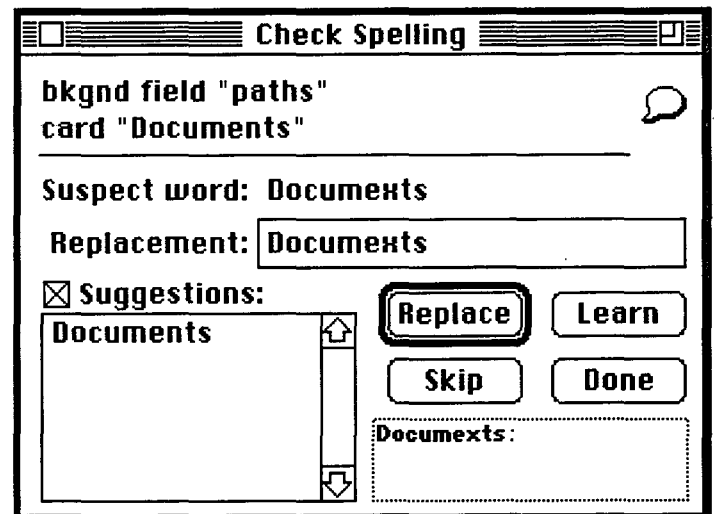
After you enter SpellCheck (and an optional parameter), hit Return, and the Check Spelling dialog box will appear when it thinks it has found a misspelling. In the example Check Spelling dialog box, SpellCheck has found a suspect word "documexts." If the "Suggestions" box is checked, the word suggested is "documents." Click the "Replace" button to enter the correctly-spelled word. *HyperSpeller* works in much the same manner as other spell-check programs. Remember, though, you don't want to spell check mailing lists or other fields that don't have "normal" text.

The search and replace feature called "FindChange" is a real bonus. Type FindChange in the Message Box. The Find/Change dialog box appears and you can begin finding or changing. In the example dialog box, we want to do a global search and replace.

Find/Change

Find: a word or phrase

Change to: a 'change to' word or phrase

⊠ Whole word   ☐ Match case

Find Next   Change, then find   Change   Change All
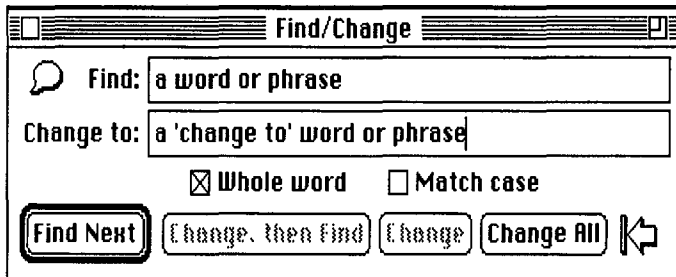
We type in our entries in the **FIND** and **CHANGE TO** boxes and select the **CHANGE ALL** button. The button changes all instances of the FIND text to the CHANGE TO text from the current field to the end of the stack.

This is a great HyperCard utility, I highly recommend it. Now, if it only included a Thesaurus and Grammar Checker . . .

ADDmotion
2-D animation for HyperCard 2.0
Would you like to have a stack that contains a variety of external commands (XCMDs) that let you create path-based 2-D animations? According to a short announcement in MacWeek (Aug 21,'90), you should try *ADDmotion* ". . when 2-D is what you need." It provides HyperCard 2.0 users with 2-D and many other important animation features. Up to now, "flip-book" effects were just about all you could do to get animation. With this new product, you'll have "in-betweening," object acceleration and deceleration, and the capability to set up backgrounds and foregrounds. *ADDmotion*, by Motion Works Inc. (604-732-0289), will be a light-year advance for animation. It's pricey—$295 list—and (of course) will ship when HyperCard 2.0 ships.

DB/Write
Word processing XCMD for HyperCard 2.0
An add-on word processor for HyperCard? It seems HyperCard will eventually have hundreds of add-ons. Reason: a completely re-written HyperCard 2.0. Developers now have new "hooks" to get into Version 2.0 and create a completely new variety of programs. For instance, *DB/Write*, by Metropolis Software, Inc. (415-322-2001)—$129 list. This word processor has initially been advertised as a mail-merge and document-creation utility. However, after a call to the author, we learn that *DB/Write* has some interesting extensions. If importing graphics, super- and sub-scripts, headers and footers are necessary in your stackwork, *DB/Write* may be important add-on to your HyperCard library. It too will ship when HyperCard 2.0 ships.

MultiMedia Expo...a final reminder
It's too late for early registration, but it's not too late to make plans to attend Oct. 9-11 at the San Francisco Civic Auditorium. I have some brochures that include details on the SuperSessions, Seminars, half-day Workshops, and exhibits. The sessions and workshops are pricey, but the exhibit-only fees are reasonable. If you would like a copy showing all the details and prices, stop by the Workstation Lab and pick one up.

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VAX 6410 (VMS)	CSA3
SUN-3/280 (UNIX 1)	UX1
SUN-3/180 (UNIX 3)	UX3
SUN-4/490 (UNIX 5)	UX5
SUN-3/180 (ISD)	ISD

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3/12/2400 BPS	9600 BPS	486-7900
9600 BPS	9600 BPS	486-7996

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San Francisco	974-1300	543-0691
Santa Clara	408-432-3430	432-8618
Palo Alto	415-366-1092	361-8701
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