



The ACSS

Newsletter

University of Minnesota
Twin Cities
September 1987

Announcements

Minnesota in Apple's Challenge 2000

Mary Dickel

The University of Minnesota is one of 12 universities Apple Computer, Inc., has invited to submit ideas on computer technology in the year 2000.

The competition is open to all University of Minnesota students and will be held during the Fall 1987 quarter. Students will submit their entries to a campus advisory group, which will select the two best Minnesota entries and send them to Apple.

The Contest

Here's what Apple wants: Students should describe, in 20 pages or less, what they think computer technology will be like in the year 2000. Their papers should explain the purposes of such computers, the technologies they believe will be available, and how people will use these computers.

Students should begin preparing their entries immediately, for submission to the campus advisory group **by October 21**.

The Judging

Apple will accept two papers from Minnesota and from each of 11 other campuses: the University of Michigan, the University of Illinois, Stanford, Cornell, the University of California at Berkeley, Dartmouth, Brown, Drexel, Carnegie Mellon, Cal Tech, and Princeton.

In This Issue . . .

As faculty prepare for the new academic year, Marisa Riviere provides information on **using our VAX VMS machine, the VX, for instructional computing**. The ACSS Contract Services Group **helps faculty develop instructional software on microcomputers**; Polina Shur tells you more.

Sharon Krmpotich tells statistics users how to **transfer SPSSX system files** from the CYBER CA to the VAX VX.

This issue also contains our **fall quarter short course schedule**; this quarter's schedule offers a large number of **mainframe computing courses** — and all these courses are free.

**CYBER MD to NV:
NOS/VE
Conversion
September 13**

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The Help Page

General Consulting

Walk-in: 128C Lind Hall, East Bank; 10 am to 4 pm weekdays except 10 am to 11 am Wednesday
140 Blegen Hall, West Bank; 2:15 to 4:45 Monday, 12:15 to 2:45 Tuesday, 11:15 to 2:45 Wednesday, 1:15 to 4:15 Thursday, 2:30 to 4:30 Friday

HELP-Line: 626-5592, 8 am to 5 pm weekdays

Specialized HELP-Lines



HELP-Line	Phone Number	Hours
Artificial Intelligence	625-8332	3 to 4 pm weekdays
Data Bases	626-1887	10 to 11 am weekdays
Microcomputers	626-4276	9 am to noon & 1:30 to 4 pm, Monday, Tuesday, Friday; 9 am to 4 pm, Wednesday and Thursday
Statistics	626-1893	1 to 3 pm weekdays
Text Analysis	625-8332	3 to 4 pm weekdays
Text Processing	625-1391	10:00 am to noon, Tuesday, Wednesday, Thursday

Consulting by Mail



Consulting is now available via the mail facility on all ACSS systems (the CA, NV, VX, and UX). Send mail to user name CONSULT for questions after hours and for low-priority questions that are not critical to your immediate computing work. Replies will be sent to your account through the mail facility on your system.

Instructional Computing Consultant

Department instructors may call 626-0200 for assistance in choosing ACSS systems (CYBER/NOS, CYBER/VE, VAX/VMS, ENCORE/UNIX), software, and for answers to any other inquiries on using computers for instructional computing.

Computing Information Center

128A Lind Hall, 625-7397, YZE6075@UMNACCA or MAD@UMNACVX

Computing account and grant applications available for CYBER, ENCORE, and VAX computers.

Short course enrollment. Short course schedules and class descriptions available.

Assistance in ordering vendor documentation. Vendor documentation is not always available in the University bookstores and may be ordered directly from the company.

Complete documentation collection. Reference copies of vendor and all other documentation for ACSS software.

Free ACSS documentation available.

Computing Newsletters. Subscribe to the *ACSS Newsletter* or the *ACSS Microcomputer Newsletter*. Newsletters from other computing centers are also available for reference.

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From these 24 entries, engineering directors at Apple Computer will select the five best papers. The five teams of semi-finalists will then be flown to California for the final judging at Apple's Cupertino headquarters.

The panel of judges who will select the best paper includes

Ray Bradbury, the noted science fiction writer
Alvin Toffler, futurologist and author of *Future Shock*
Alan Kay, a pioneer in the design of personal computers
Steve Wozniak, co-founder of Apple Computer
Diane Ravitch, a nationally known expert in education

The Prizes

Each student on the winning team will receive a summer internship with Apple and \$2000 toward the purchase of Apple Computer products. The winning institution will receive a multi-workstation Macintosh valued at more than \$20,000.

For More Information

For more details, contact the Microcomputer HELP-Line in 125 Shepherd Labs.

Xerox 8700 Format Defaults Change September 20

Dave Bianchi

On September 20, we will change some of the defaults on the Xerox 8700 laser printer, located at our Lauderdale facility.

As of that date, all output printed on the 8700 will be in **duplex** mode (printed on both sides of the page) on **three-hole punched paper**. The text will be **shifted** one-quarter of an inch on the page to allow for the three-hole punch. As before, output will be in "landscape" mode (printed across a horizontal page) instead of "portrait" mode (printed on a vertical page, like this newsletter).

This new default has several advantages. For users, output in this format will be less cumbersome, because duplex printing reduces by half the number of pages a print job requires. You will also be able to insert your output into a three-hole binder immediately.

We also hope that this change will reduce the time required to get your output to you. As things now stand, our Operations staff have to switch the 8700 to three-hole punched paper many times each day. This process delays printing. Changing the default to three-hole punch will reduce the number of delays caused by changing paper in the printer.

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Printing in Other Formats

If you are sending a file to the 8700 and want to override these format defaults, you can do it by using the appropriate parameters on the printing command you use. On the CYBER CA, you need to use several parameters of the **PRINT** command, depending on precisely the format you want. On the VAX VX, use the **/FORMS** parameter of the **PRINT** command.

On the CA, for example, use the following format of the **PRINT** command to get simplex output (printing on only one side of the page) without shifting or three-hole punching:

```
PRINT, filename, UJN=BC*100, S, NP, NS
```

The **S** parameter causes simplex printing. The **NP** parameter causes printing on unpunched paper. The **NS** parameter turns off shifting. The file is printed, by default, at Lauderdale on the Xerox 8700 printer, and, because of the **UJN=BC*100** parameter, it is delivered to Lauderdale bin 100.

If you customarily send your CYBER output to a campus printer with the **UN** parameter (**UN=EA** for the Lind Hall laser printer or **UN=EB** for the Anderson Hall laser printer), you don't have to worry about the **S**, **NP**, or **NS** parameters because neither of those printers can shift, handle punched paper, or print in duplex mode. Defaults on these printers will not change.

On the VX, use the following format of the **PRINT** command to get simplex output (printing on only one side of the page) without shifting or three-hole punching:

```
§ PRINT/FORMS=SIMPLEX /NAME=BC.100 filename
```

The **/FORMS=SIMPLEX** parameter causes simplex, unshifted printing on unpunched paper. The **/NAME=BC.100** parameter gets your output delivered to bin 100 at Lauderdale.

If you customarily send VX output to a campus printer with the **QUEUE** parameter (**QUEUE=LIND128B** for the Lind Hall laser printer or **QUEUE=LRC** for the laser printer at the Diehl Hall Learning Resource Center), you don't have to worry about the **FORMS=SIMPLEX** parameter because neither of those printers can shift, handle punched paper, or print in duplex mode. Defaults on these printers will not change.

Other options are available from both the CA and the VX. For details, see **WRITEUP,PRINT** on the CA or **MOREHELP XEROX /FORMS** on the VX.

User Services

Faculty Orientation Seminar

Peter Oberg
BITNET: PJO@UMNACVX

There will be a Faculty Orientation Seminar about all Information Systems facilities on Wednesday, September 16, at 10:15 a.m. in 215 Lind Hall. This will a good time for new faculty to find out about the computing services available at the University. We also invite existing faculty to come to learn about changes to the systems and to talk with us about your computing needs. If you have any questions, please call our Faculty Computing Consultant at 626-0200.

Planning for the Fall: Instructional Use on VX

Marisa Riviere

A year ago, in the September issue of this *Newsletter*, we announced that ACSS software was available to administrators of classroom accounts on our VAX/VMS system, the VX. Since then, approximately 2000 student accounts have been established on the VX.

We have been working with instructors and class administrators to evaluate validation, software installation, file space, and other needs for the software used in several classes. The results, which showed an increase of the number of student users on the system, were very satisfactory.

We look forward to working with VX instructional users in the coming academic year, and we expect to see an increase in the number of departments using the VX. To provide better service, we now ask instructors and administrators to discuss their plans and needs with us before fall quarter starts.

The following information about the VX may answer some of the questions instructional administrators have about the system and its instructional use:

Administration

There are mechanisms on the VX that instructors and administrators can use to observe and control students' use of the system. See the on-line document **Instructional.Admin** on ACSS\$Writeup. To view this document at your terminal, type

```
$ type ACSS$Writeup:Instructional.Admin
```

In addition to the ACSS tools for instructor/student communication that are described in this on-line document, the VX system has an easy Mail utility and an electronic conference/bulletin board package, VAXNotes. (An on-line description of VAXNotes is also available on ACSS\$Writeup.)

To open student accounts on the VX, contact ACSS Accounting. For information on VX software, call the ACSS HELP-Line. If you have special questions or problems, contact the ACSS instructional coordinator at 626-0200.

Training

VX has on-line training software available for the beginning and the intermediate user. On the VX, type **Morehelp Training** for more information. A good manual, *VAX/VMS Users Introduction* (Digital Press publication number EY-1034E-SG-0002) is a general reference that can help students become familiar with the system. The manual costs less than \$25, and the University bookstores may be willing to order copies if instructors use it as a recommended or required text for classes. A copy of the *Users Introduction* is also available in the ACSS Computing Information Center, 128A Lind Hall, where staff can also help you order individual copies.

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In addition to the *Users Introduction*, the VMS HELP utility provides information on the different VMS commands, languages, and applications. Also, many VMS applications have their own built-in help facilities.

The VMS Interactive Debugger and the Language Sensitive Editor are useful and easy-to-learn program developing tools.

Printed Output

The Xerox laser printer is the default printer for the VX. Xerox printer output is distributed hourly from the Lauderdale site to campus. In addition to the Xerox printer, it is possible to print VX output on campus printers connected through the UX system. Type **Morehelp Printed_output** for information on using those printers.

Available Software

There is a large variety of software packages on the VX. For general information about available packages, type the **HELP** command, which will display a list of all the system commands and the packages from DEC, ACSS, and other vendors as well. The HELP library will also refer you to other on-line libraries for additional software. The ACSS instructional coordinator (626-0200) can help you evaluate the use of a particular piece of software on VX versus any of the other ACSS systems.

The Near Future

It is possible to establish on the VX system instructional user names that each student could keep throughout his or her course of study at the University. Although the Instructional.Admin writeup addresses the administration of student user names created typically for one quarter, most of its mechanisms can be expanded to handle user names of longer duration. Some further enhancements to the administrative software for this purpose are not immediately needed but could be made. We will contact administrators during fall quarter to plan an informal meeting to discuss the designing of these new tools.

Computer-Based Instruction on Micros

Polina Shur

Many University faculty and students are developing computer-based instruction (CBI) programs using funding provided by Project Woksape and Project MinneMac. Many other faculty have developed interesting and useful courses on their own. For example, Professor John Anderson of the School of Music has written programs for the IBM PC that teach students the fundamentals of music.

Recent improvements in microcomputer software and hardware have made developing CBI much easier. Not all University faculty and staff, however, are fully aware of how they can use computers in their teaching, which applications may suit their needs, and, simply, how to write programs that are user friendly.

ACSS's **Contract Services Group** has resources to help faculty develop CBI courseware. The following are some of the examples of our previous work in CBI:

Students in the Department of Classical Studies use the CBI program *Classics* for studying commonly used words and their Greek and Latin roots. The program is written as a series of drills; it displays instructions and questions, comments on the student's answers, and, after incorrect answers, reprompts the student for a new response.

Another program, *GreekText*, allows students to read a selection of text in Greek and, on request, displays the English meaning of a Greek word. This program could easily be converted for teaching courses in other languages, in the liberal arts, natural sciences, etc. Both programs run on a Macintosh computer.

More recently, we developed a data base program called *Conduct* for the IBM PC and compatibles for the Electrical Engineering department. This program allows faculty and students to set up a material parameter data base. A unique feature of this program is its ability to merge records entered by many independent users working on different computers. The data base will be used by electrical engineering faculty and graduate students in conjunction with other instructional software for teaching advanced courses on semiconductor materials and devices. Eventually this data base may be distributed on CD-ROMs.

The Contract Services Group can develop similar CBI programs for you on the Macintosh or IBM PC and compatibles:

- We can write CBI programs for your course complete with drills, tutorials, and on-line help.
- We can develop language instruction programs.
- We can set up custom data bases for your courses – from historical events to tables of formulas, from students' evaluations of your course to publication references for graduate courses.
- We can provide you with programs for analyzing the distribution of scores and keeping grades.

Moreover, utilizing recently developed commercial software and hardware, we can help University of Minnesota faculty with more ambitious projects.

Using such standard packages as *VideoWorks* and *MacMovies*, we can integrate videos of lectures with computer graphs, animation, and even stereo sound, using VCRs and new inexpensive video editing techniques. The resulting courseware might be used for language instruction, similar to what is being done at MIT's Athena Language Project with laser disks, but at a fraction of the cost, with much more flexibility in developing and editing lectures and tutorials, and incorporating feedback from students more easily.

The same software could be modified to teach Theatre Arts students stage design or directing, or to demonstrate to computer science students the process of designing a supercomputer. We can easily annotate your computer videos with notes and figures or use animation to explain new ideas and illustrate complex processes and developments; for example, we can demonstrate in an animated form the development of fine arts and architecture. This new medium can help to make the learning process effective and, at the same time, more lively and enjoyable.

If you are interested in developing such software, please call the Contract Services Group's manager Phil Kachelmyer at 625-2303.

From MD to NV: NOS/VE Conversion September 13

Dave Bianchi
CYBER Mail: DJB

We will convert the CYBER MD system to the NOS/VE operating system on September 13, 1987. This is a *tentative* date, and depends upon the timely delivery of Control Data's ICEM CAD/CAM (computer-assisted design and manufacture) software. If this software does not arrive in time, we will reschedule the conversion date to some time after fall quarter.

At the time of the conversion, the MD's system ID will change from MD to NV.

Current MD user accounts will cease to exist when we convert to NOS/VE, and permanent files will be archived and purged. Users who want to continue using NOS must move to the CYBER CA machine. If you do not have a CYBER CA account, you can obtain one by calling ACSS Accounting at 625-1511. You can move your permanent files from MD to CA by using the **SEND** command (see WRITEUP,SEND).

If you wish to use the NOS/VE system, you must obtain a NOS/VE account (see below).

Change in CYBER MD Operating Hours

In order to make the necessary changes to run NOS/VE by September 13, the ACSS systems group has expanded its hours for system testing. Starting the week of August 9, the MD system will not be available after 10 p.m. on Monday and Wednesday evenings. Other evenings, the system will be up normal hours.

If these changes cause problems for you, please contact Dave Bianchi at 626-1827 as soon as possible.

NOS/VE Accounts

CYBER MD accounts will not automatically be transferred to the NOS/VE system. To obtain a NOS/VE account, please contact the account administrator for your department, or call ACSS Accounting at 625-1511.

If you have questions or concerns about the upcoming conversion or information in this article, call Dave Bianchi at 626-1827 or send a mail message to DJB on either of the CYBERs.

Transferring SPSSX System Files from CA to VX

Sharon Krmpotich
VX Mail: SAK

A question we often hear on the Statistics HELP-Line is, "How do I export an SPSSX system file from the CYBER to the VAX?"

The version of SPSSX on the CYBER, Version 2.0, does not allow you to export a system file directly to disk. You must export the file to a magnetic tape, and then read the tape on the VAX. You must use an *unlabeled* tape to accomplish this transfer.

The first step is to run an SPSSX job that will create an export file out of your system file (named SYSFILE in the example) on the CYBER and write this file to tape. Listed below is a "submit" job that would accomplish this task:

```
/JOB
MYJOB.
/USER
A, SYSFILE.
LABEL, TAPE, VSN=vsn-number, ID=id-name, F=S, LB=KU, PO=W.
SPSSX.
RETAIN, OUTPUT=GOOD.
EXIT.
RETAIN, OUTPUT=ERROR.
/EOR
FILE HANDLE  SYSFILE
FILE HANDLE  TAPE
GET FILE  SYSFILE
EXPORT  OUTFILE=TAPE
FINISH
```

After you've run this job, you will have an export file residing on the tape you specified in your **LABEL** command. Your original system file (SYSFILE) will remain on the CYBER in its original format.

The next step is to run a VAX job that will read the tape and have SPSSX import the file onto your VAX account. You will need to type the following three commands in an interactive session on the VAX to accomplish the task.

```
$ GETTAPE vsn-number id-name TAPE
```

Note that the *vsn-number* and *id-name* must match those used in the **LABEL** command above.

```
$ MOUNT/FOREIGN/BLOCK=XXXX/SIZE=80 TAPE
```

If you do not know what size blocks (**BLOCK=**) are on the tape you should run **INSPECT** first.

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```
$ SPSSX/OUTPUT=TAPEJOB.LIS TAPEJOB.SPS
```

This command runs the SPSSX program (TAPEJOB.SPS) that imports the file.

Insert the following SPSSX commands into the program file TAPEJOB.SPS:

```
FILE HANDLE TAPE1/NAME='TAPE'  
IMPORT TYPE=TAPE/FILE=TAPE1/MAP  
FILE HANDLE XSYS/NAME='XSYS.SYS'  
SAVE OUTFILE=XSYS
```

After the completion of this job, you have imported the system file from tape to your file directory and named it XSYS.SYS on the VAX. It is now ready for use. The steps described here are currently the only option available to transfer SPSSX system files from the CYBER to the VAX. As noted above, if you do not know the block size of your tape, please run the VAX INSPECT utility on the tape. This is done by executing the following commands after the GETTAPE command shown above:

```
MOUNT/FOREIGN TAPE  
INSPECT/OUTPUT=MYTAPE.LIS TAPE  
DISMOUNT TAPE
```

The INSPECT utility will provide information about the format and block size of your tape. This information is written to MYTAPE.lis in this example. See HELP INSPECT for detailed information. If you have any questions please call the Statistics HELP-Line (626-1887) between 1:00 p.m. and 3:00 p.m., Monday through Friday.

Math and Engineering Packages

IFPS to be Deleted on CYBERs, Remains on VX

Michael J. Frisch
BITNET: MJFRISCH@UMNACVX

On September 25, we are deleting the IFPS (Interactive Financial Planning System) package from the CYBER systems as part of our agreement with the IFPS vendor. However, the IFPS/Plus Version 3 package is now available on the VX (VAX 8600 VMS) computer. It is intended to be upwardly compatible with the CYBER version.

To run IFPS/Plus under VMS, type

```
$ IFPS
```

Documentation for IFPS/Plus is on reserve in the Computing Information Center, 128A Lind Hall, 625-7397.

VAX LISP Upgrade

Ron Zacharski

BITNET: RAZ@UMNACVX

VX or UX Mail: raz

When we upgrade the operating system on the VAX VX to VMS version 4.5 on August 30, VAX LISP will simultaneously be upgraded to version 2.1.

The changes most visible to the user in this upgrade include VAX Workstation Software support, the fixing of a number of compiler and macro bugs, and the addition of a ROOM-ALLOCATION function. A number of functions have been added to provide most of the VAX Workstation Software features including the use of color on the VAXstation II/GPX, display list editing, the ability to store display lists in files, more flexible text display, and other graphics functions.

In previous versions of VAX LISP the CASE macro interpreted a null keylist as a keylist containing null, and a SETF method could not be created for a macro. Both these problems have been fixed.

Previous versions also had problems with compiling specific instances of the functions LET, MULTIPLE-VALUE-BIND, and with a THROW inside a CATCH; these have all been fixed.

A ROOM-ALLOCATION function has been added that allows a program to determine the amount of storage space that has been consumed. (The function does not cons.)

A more detailed explanation of the changes is available in a VX file. To view this file at your terminal, type

```
$ type ACSS$Writeup_:[VMS45_Notes]Lisp021.Release_Notes
```

ACSS's Free Documentation

Paula Goblirsch

BITNET: PMG@UMNACVX

ACSS publishes several short documents called *Briefs*. These free documents are available at the ACSS Computing Information Center in 128A Lind Hall. You can obtain multiple copies of the *XEDIT Summary* and *Computing Facilities Map* by calling Paula Goblirsch at 626-1093. Among the *Briefs* available this quarter are:

ACSS Central Configuration Diagram: Describes ACSS's mainframe computers with their attached storage and communications devices.

Artificial Intelligence Services: Describes artificial intelligence services currently available on ACSS's mainframe computers and on microcomputers.

Computing Facilities Map, Twin Cities Campus: Shows locations of campus computing facilities.

Computing Information Center and Documentation Services: Lists information and services available from the ACSS Computing Information Center.

Consulting Schedule: Lists hours, locations, and phone numbers for ACSS consulting services.

CYBER/NOS Access: Provides basic information for CYBER users.

Documentation Directory: Lists basic documentation available from ACSS.

ENCORE/UNIX Access: Provides basic information for ENCORE users.

EXPLAIN Information: Provides information on the new on-line documentation utility available on the NOS 2 systems at ACSS.

Full Screen Editor (FSE): Explains how to use the CYBER full-screen editor.

Getting Started: Provides basic information on research and instructional computing at ACSS.

Graphics Packages: Describes the graphics application software packages available on ACSS's CYBER and VAX computers.

Liberal Arts Computing: Summarizes software and services available for liberal arts research on ACSS's mainframe computers and for microcomputers.

Math, Engineering, and Statistics Software: Lists all math, engineering, and statistics packages available on ACSS's computers.

Phone Numbers: Lists important and frequently called ACSS phone numbers.

Short Course Schedule and Descriptions: Lists topics, descriptions, times, and fees for short courses available during the current quarter.

Software: Lists many of the software packages available on ACSS's CYBER, ENCORE, and VAX computers.

Tools for Administrators of VX Instructional Users: Provides information for administrators of VAX instructional accounts.

UNIX Software: Lists the software packages available on ACSS's ENCORE computer.

Using MAIL on the CYBER CA: Explains how to send and receive messages on the CYBER CA.

Using MAIL on the ENCORE: Explains how to send and receive messages on the ENCORE UX.

VAX/VMS Access: Provides basic information for VMS users.

WRITEUP Information: Provides information about an on-line documentation utility available on the CYBER CA.

XEDIT 3.1 Reference Summary: Lists all important XEDIT commands and parameters.

Xerox 8700 Fonts Available with Scribe: Describes the fonts for computerized text files that are available on the Xerox 8700 high-speed laser printer.

Consulting Corner

Getting Help from Contract Services

Phil Kachelmyer

Question:

I need to do some work on the computer but don't know how to do it myself. My budget allows for hiring someone to do the programming. Do you offer such a service, and, if so, what are the costs?

Answer:

ACSS has a group of professionals in its Contract Services Division available to perform almost any computing task on our mainframe systems or on microcomputers. Their rates are \$35 per hour for an Applications Programmer, \$40 per hour for an Analyst/Programmer, \$45 per hour for a Senior Analyst/Programmer, and \$50 per hour for a Supervising Analyst/Programmer. The Contract Services staff will provide a time and cost estimate prior to beginning your project. You may contact Phil Kachelmyer at 625-2303 to discuss your needs and how his group may be able to assist you.

Xerox Graphics Output Changes

Michele Lewis
BITNET: MAL@UMNACVX

On August 30, when we upgraded the VMS operating system to Version 4.5, we made significant changes in creating and printing graphics files on the Xerox 8700 laser printer. Previously, the **ENQUEUE** command was used to send the graphics file to the Xerox. Our computer operators copied graphics files to tape hourly and carried the tape to the Xerox for processing. The new system uses the **PRINT** command and files are sent on-line directly to the Xerox. This gives faster turnaround time and makes ACSS operation more efficient.

The previous files created by Precision Visuals' software were named FOR001.DAT. These files were further processed (gratis) by the system before being copied to tape. Under the new system, Precision Visuals' software includes the further processing of the file so that users may notice longer computation times and higher costs. The new output file is named PLOT.XER and the **PRINT** command to send it to the Xerox is:

```
$ PRINT/CHAR=IMAGE/NAME=site.bin PLOT.XER
```

The **site.bin** parameter tells the operator where to deliver the plot. Thus, **EA.425** means that the plot is sent to Lind Hall 128B, bin 425. Users with multiple files may want to rename the PLOT.XER file before printing it.

Under the new system, we can no longer process the old FOR001.DAT files. If you want to print any Xerox graphics files created before August 30th, you will have to relink and run the programs to create new PLOT.XER files.

If you have any questions or problems concerning these changes, please call me at 626-0314.

ACSS SHORT COURSE SCHEDULE

Fall 1987

Introductory Mainframe Courses

The following courses are *free*. To register call 625-7397.
Some classes have size limitations: Register early.

Introduction to Computing	Oct 5-16	MWF	3:15-5 pm
Introduction to UNIX Operating System	Oct 5-14	MWF	2:15-4 pm
Introduction to NOS 2 Operating System	Oct 5-19	MW	3:15-5 pm
Introduction to VAX/VMS Operating System	Oct 6-20	TTh	2:15-4 pm
Using Magnetic Tapes in NOS 2	Oct 20-29	TTh	2:15-4 pm
Electronic Mail (VAX, BITNET)	Oct 21-23	WF	2:15-4 pm

Advanced Mainframe Courses

SPSSX for SPSS Users	Oct 19	M	3:15-5 pm
Using SPSSX (Statistics)	Oct 23-30	MWF	3:15-5 pm
Beginning 'C' Programming	Oct 26-Nov 6	MWF	3:15-5 pm
Math and Engineering Software	Nov 3-5	TTh	3:15-5 pm
Beginning Pascal	Nov 3-19	TTh	3:15-5 pm
Using SAS (Statistics)	Nov 9-13	MWF	3:15-5 pm
INGRES (Data Base Management)	Nov 9-13	MWF	2:15-4 pm
PicSure Graphics	Nov 10-19	TTh	2:15-4 pm
Intermediate 'C' Language	Nov 16-25	MWF	2:15-4 pm

Microcomputer Applications Courses

The following IBM and IBM-compatible courses are absolutely limited to 10 people
Fees: 1) U of M Students, 2) U Staff/Faculty, 3) Non-University persons.

					(1) (2) (3)
Introduction to Micros: MS-DOS	Section 1	Oct 5-9	MWF	1:30-3:30	\$40,\$50,\$80
	Section 2	Oct 20-22	TWTh	10 am-noon	\$40,\$50,\$80
	Section 3	Nov 3-5	TWTh	10 am-noon	\$40,\$50,\$80
	Section 4	Nov 16-20	MWF	1:30-3:30	\$40,\$50,\$80
Introduction to WordPerfect*	Section 1	Oct 6-8	TTh	10:00-noon	\$25,\$35,\$60
	Section 2	Oct 27-28	TW	1:30-3:30 pm	\$25,\$35,\$60
	Section 3	Dec 3-4	ThF	10:00-noon	\$25,\$35,\$60
(* This course has an extra \$10 charge in class for workbook materials.)					
Managing Your Hard Disk	Section 1	Oct 13-15	TTh	1:30-3:30 pm	\$40,\$50,\$80
	Section 2	Nov 17-19	TTh	1:30-3:30 pm	\$40,\$50,\$80
Beginning Lotus 1-2-3	Section 1	Oct 12	M	1:30-4 pm	\$25,\$35,\$60
	Section 2	Nov 11	W	9:30-noon	\$25,\$35,\$60
Intermediate Lotus 1-2-3		Dec 2	W	9:30-noon	\$25,\$35,\$60
Introduction to dBase III	Section 1	Oct 21-23	WThF	1:30-3:30 pm	\$40,\$50,\$80
	Section 2	Nov 16-20	MWF	10 am-noon	\$40,\$50,\$80
Programming in dBase III		Nov 10-12	TTh	9:30-noon	\$40,\$50,\$80

These Apple Macintosh courses are **hands-on** courses in the lab. Limited to 10.

Introduction to MS (Microsoft) Word					
	Section 1	Oct 14-16	WF	9:30-noon	\$35,\$45,\$80
	Section 2	Nov 4-5	WTh	1:30-4 pm	\$35,\$45,\$80
	Section 3	Nov 30-Dec 1	MT	1:30-4 pm	\$35,\$45,\$80
Intermediate MS Word [New]		Nov 13	F	9:30-noon	\$25,\$35,\$60
Developing Software in Turbo Pascal		Nov 10-12	TTh	1:30-3:30 pm	\$25,\$35,\$60
Introduction to Excel		Nov 2-3	MT	1:30-4 pm	\$25,\$35,\$60
Intermediate Excel		Nov 24	Tu	1:30-4 pm	\$25,\$35,\$60

The following Macintosh class is demonstration only! **No hands-on.**

Preparing A Dissertation on a Mac	Oct 29	Th	9:30-noon	\$15,\$25,NA
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The following new Microcomputer courses are **free** demonstrations.

Micro/Mainframe Communications	Oct 9	F	9:30-noon	FREE
Strategies for Networking Microcomputers & Workstations	Oct 14	W	1:30-4 pm	FREE

Note: Thursday and Friday, November 26-27, are University of Minnesota holidays. No classes will be held.

ACSS Short Course Information

Prerequisites: Some short courses have prerequisites, and are designed to build on knowledge we assume you already have. Without this knowledge you may not be able to keep up with the instructor's presentation. This prior knowledge is your responsibility. The instructor will not be able to go back over material in previous classes. Our Short Course Brief, available in 128A Lind, provides information about prerequisites.

Limits: All microcomputer classes and many mainframe classes have limits to class size. Please try to register early to be sure of getting a place. If you decide to withdraw from a class, please do so as soon as possible, so that we may make the space available to others.

Registration: Register at ACSS's Computing Information Center, 128A Lind Hall. (Hours: 8:00 a.m. to 4:30 p.m., Monday through Friday) Fees must accompany registration. Mail registrations will be accepted. Deadline for registering is 4:00 p.m. on the last working day before the class begins. Please call and give us your name if you plan to attend a free class; also call to cancel if you later decide not to attend, so we know how many to expect. We reserve the right to cancel a course if registration is insufficient. For registration information, call 625-7397.

Fees: Fees following microcomputer courses above are for 1) University students, 2) staff and faculty, and 3) non-University persons. Course fees may be paid by cash or check, or *include* a signed University journal voucher with registration information. Fees *must* accompany registration.

No refunds will be made after the class has begun. A penalty — reduction of the refund — will be assessed if you withdraw from a class within three days before the beginning of the class. Microcomputer classes do fill up quickly: Please register early.

Charges for Tapes and Removable Packs on VX

Marisa Riviere

Due to increasing use of tapes and removable disk packs on the VX, starting August 1, 1987, ACSS began charging for those services. The charges are similar to those on the CA: 66 cents for mounting resident tapes (labeled or unlabeled), \$1.10 for transient tapes, and \$2.25 for removable packs. These rates will be reviewed some time this year.

The removable disk packs are RA60's with a capacity of approximately 400,000 blocks.

Currently, many users can use tapes on the VX in interactive jobs. As the demand for tape services increases, we may have to set some limits on this facility, such as restricting all tape jobs to batch jobs or charging more for interactive tape mounts. Please plan your future work accordingly.

Microcosm

The SUN Workstation: Software Distribution Program

Dave Burris

The University of Minnesota and SUN Microsystems have reached an agreement for a SUN software distribution program. This program saves departments money by centralizing the distribution of software at the Microcomputer and Workstation Systems Group. Your department could save over \$2000 by participating in this program.

The SUN program's annual fee is based on the total number of disked and diskless SUN workstations you have. The fee for the first workstation is \$100. For each additional workstation up to five, the total fee increases \$50 per workstation. For each additional workstation over five, the total fee increases by \$25 per workstation. The maximum annual fee is \$500.

If your department is interested in this program, or if you have questions about it, please contact Dave Burris, 625-2078.

Assessing Your Computing Knowledge

Lawrence Liddiard

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UX and VX Mail: lal

The directors of Information Systems (IS) computing centers (ACSS, Health Sciences, St. Paul, Duluth, Morris, Waseca, and Crookston) get together every four to six weeks to discuss, plan for, and rehash computing trends. This spring, major planning went into our Strategy for Focus document, "Focus on Computing," and in that thick report a major topic is the emphasis on services supporting distributed workstations. The still effective central systems would receive continuing, but diminished, support.

Just as individuals need to assess their talents and directions at various times in life, IS needed to survey the current abilities of its staff to respond to this changing University computing environment. I volunteered to put together a survey of our personnel's skill and knowledge that covered current and known future trends as represented by computing software and services for specific and general University needs. My original one- or two-page surveys were critiqued by several members of IS and the final three-page version is now being completed by every IS member. The shorter version in this newsletter is intended to help individuals assess their current and desired skills. The original IS survey also asked supervisors to rate their staff and indicate where they'd like to see improvement.

Goals and Limitations

For many years, the *Communications of the ACM*, a publication of the Association for Computing Machinery, has published self-assessment procedures. We used goals similar to the ACM procedures in our IS survey; the survey should

- inform readers and provoke their interest in its subject (in this case the breadth of computing activities in IS centers).
- be concise; readers should be able to complete it quickly.
- help readers enumerate their current computing knowledge, either in specified areas or in those provided by the readers.

Like most self-assessment procedures, this survey is not exhaustive and does allow for new entries. For example, my original list had *Jazz* and *Symphony* in the spreadsheet list, but I removed them after a critic in the micro group wrote me that "nobody uses these." Any reader who does use these packages can enter these on the appropriate blank in the "other" category.

We have not included any machine languages (COMPASS, ENCOMPASS, or assembler) or passé packages (like MNF). The next generation of "bit fiddlers" is going to be a more isolated group of programmers who like machine instructions. The categories we did include are those associated with the computing activities we expect most university members require now or will require in the near future.

Definitions

This survey tries to evaluate computing activities in relation to the words *skill* and *knowledge*.

By **knowledge** we mean *a range of understood information and principles gained through experience*, and by **skill** we mean *the ability to use knowledge effectively and competently*.

We thought the word *knowledge* was better than *comprehension* or *learning* and the word *skill* better than *proficiency*, *expertise*, *competence*, or *ability*. (*Wizardry* was a contender for certain categories, but was eliminated in the desire for a "scientific" study.)

Areas of Computing Skill and Knowledge

The first half of the survey is concerned with central system computing: operating systems, programming languages and tools, associated services, and interconnection. In the applications section in the second half, the emphasis is on workstations with categories that often reflect the top selling micro software packages. The applications area include these:

- **Word Processing** enables you to express yourself in writing without the erasures, whiteouts, and physical limitations of the pen or typewriter. With saved key paragraphs and general outlines, you reduce the drudgery of saying the same thing slightly differently (almost all programming and much professional writing are variations on a theme). Most word processors have the ability to import information and graphics from other software and provide desktop publishing features to use with the new laser printers. Spelling checkers and text processing software help you handle the mechanics.
- **Spreadsheets** place data in a matrix, using formulae, repetitive structures, and summations to produce quick results and accurate computation. Before his disappearance, an ancient Greek was heard to exclaim, "Give me a spreadsheet big enough and I can move the world!"
- **Data bases** are structures for keeping lists or data, with mechanisms to locate items, find relationships between them, and report back in user-produced forms and layouts all that information not easily kept on the back of an envelope or that you used to misplace in a file cabinet. With data bases you can actually find the needle in the haystack of information, and invoices, and mailing lists, and other collections of information are easier to manage.
- **Interconnection** is the network of mechanisms that enables computer users to reach beyond the specific systems they are using, sharing data with other researchers and communicating with electronic mail.
- **Programming Languages and Tools** are structures for organizing problems in the logical manner required to present them to a computer for solution. Surrounding a programming language are source and library management aids, as well as debugging "tools."
- **Operating Systems** are the necessary evils mediating between you and the computers; they allow you to use the computer application packages and to manipulate resources and files. They enable the computer centers to monitor computer use (and bill users for their use), to provide structure for networking and intercommunication among machines and individual users, and, generally, to manage the computer in an orderly manner.

continued on page 220

- **Statistical Packages** are proven mathematical approaches that reduce seas of data to manageable numerical summaries, thus permitting comprehension and insight.
- **Graphics**, complementary to statistics, enable you to summarize volumes of data as understandable images, to show interconnections and structures of complex information with the changing angles, patterns, and colors of charts and graphs, and to animate and show change over time.

Conclusion

If you're into computing, it's a good idea to take time out now and then to assess your current abilities and future needs in computer skills. Filling out the survey may remind you of neglected computing skills that you want to update or develop more extensively. As a result of the survey, perhaps you'll decide to register for a computing course, purchase a manual or tutorial, or even buy a package for your workstation.

I encourage you to file away your completed survey and look at it a year from now. Notice those areas in which you've made progress and those that need additional effort. And if you think the survey requires other categories or significantly different emphases, I am open to suggestions for a future article.

In IS we firmly believe that all University members will require computing skills to make Minnesota a greater university. Faculty and students will need computers to comprehend and manage complex and voluminous bodies of knowledge. Computing is a tool that should enable us to get through the thickets of ever-expanding knowledge and data and approach that state of "wisdom and understanding" that Solomon received when he asked for sound judgment and discernment.

U of MN, IS Computing Knowledge/Skill Survey

Before you begin the survey, list the four most important pieces of computing knowledge or software that you use daily.

1. _____
2. _____
3. _____
4. _____

Most of our skill/knowledge is the so-called "externals" of software and hardware; fewer have "internal" knowledge or developer ability. Where you have standard "external" computing skill/knowledge at Basic, Good, or Expert level, put an "E" mark in that entry. Use "I" for "internal" knowledge. If you are not involved in computing "internals," then a simple "X" will do.

EXAMPLE: An individual with general knowledge of Cyber PP routines and system flow, and wide knowledge of Cyber commands, utilities, and CCL programming would put an "I" [for Internals] in Basic and "E" [for Externals] in Good for NOS (Control Data) in Current Skills.

Skill/Knowledge Categories	Current Skill		
	Basic	Good	Expert
Operating Systems			
DOMAIN (Apollo)	()	()	()
Macintosh (Apple)	()	()	()
MS/DOS (IBM & Clones)	-()	-()	-()
OS/2 (IBM PS series)	()	()	()
NOS (Control Data)	()	()	()
NOS/VE (Control Data)	-()	-()	-()
System Support Package (IBM36)	()	()	()
UNIX (4.2 & 4.3 bsd, System V)	()	()	()
VM/CMS (IBM)	-()	-()	-()
VMS (Digital Equipment)	()	()	()
Other _____	()	()	()
Programming Languages & Tools			
Ada	()	()	()
APL	()	()	()
BASIC	-()	-()	-()
C	()	()	()
C++	()	()	()
COBOL	-()	-()	-()
Fortran	()	()	()
GPSS	()	()	()
Lisp	-()	-()	-()
Pascal	()	()	()
PL/1	()	()	()
Prolog	-()	-()	-()
Quickdraw	()	()	()
RPG-II	()	()	()
SIMSCRIPT	-()	-()	-()
SMALLTALK	()	()	()
SNOBOL4	()	()	()
Other _____	-()	-()	-()
Tools			
Debugger _____	()	()	()
Line Editor _____	-()	-()	-()
Performance Measure _____	()	()	()
Screen Editor _____	()	()	()
Source Prep _____	()	()	()
Services			
Accounting/Purchasing	()	()	()
Assistance/HELP Phone Line	()	()	()
Data Entry	-()	-()	-()
Hardware Maintenance	()	()	()
Marketing/User Contact	()	()	()
Newsletter/Technical Writing	-()	-()	-()
Training/User Education	()	()	()

	Current Skill		
	Basic	Good	Expert
Workstation Integration/Ordering	()	()	()
Other _____	()	()	()
Interconnection			
Electronic Mail	()	()	()
Local Area Networks (LAN's)			
Appletalk	()	()	()
Ethernet	()	()	()
IBM Token Ring	-()	-()	-()
Other _____	()	()	()
National Networks _____	-()	-()	-()
Supercomputer Access	()	()	()
TCP/IP, Ethernet Protocols	()	()	()
Terminal to Mainframe			
Kermit	()	()	()
ProComm	()	()	()
UMODEM	-()	-()	-()
XMODEM	()	()	()
Other _____	()	()	()
University Backbone Network	()	()	()
Application Packages			
Business Graphics			
Cricket Graph	()	()	()
Excel, Chart	()	()	()
Grafmaker	-()	-()	-()
Picture	()	()	()
Tell-A-Graph	-()	-()	-()
Other _____	()	()	()
Computer-Aided Inst _____	()	()	()
Data Base Systems			
CMS - TEAMMATE	()	()	()
Cyber DM	()	()	()
dBASE II, III	-()	-()	-()
Fact Finder	()	()	()
FileMaker	()	()	()
4th Dimension	-()	-()	-()
Helix	()	()	()
INGRES	()	()	()
NOMAD	-()	-()	-()
Omnis	()	()	()
ORACLE	()	()	()
rBASE	-()	-()	-()
SIR	()	()	()
System 2000	-()	-()	-()
Other _____	()	()	()
Data Retrieval and Reports _____	()	()	()
Desktop Publishing			
PageMaker	()	()	()
ReadySetGo	-()	-()	-()
X Press	()	()	()
Other _____	()	()	()
Document/Word Processors			
DisplayWrite _____	()	()	()
Microsoft Word	()	()	()
MindWrite	-()	-()	-()
Prose	()	()	()
Scribe	()	()	()
TEX	-()	-()	-()
WriteNow	()	()	()
WordPerfect	()	()	()
WordStar _____	-()	-()	-()
Other _____	()	()	()
Expert System 1 _____	()	()	()
Expert System 2 _____	()	()	()
Integrated Workstation Packages			
FrameWork	()	()	()
Works	()	()	()
Other _____	()	()	()
Scientific Graphics			
Adobe Illustrator	()	()	()
Cricket Draw	()	()	()
DI-3000	-()	-()	-()
DISSPLA	()	()	()
Fullpaint, MacPaint	()	()	()

	Current Skill		
	Basic	Good	Expert
MacDraft	-()	-()	-()
MacDraw	()	()	()
Other _____	()	()	()
Spreadsheets			
Excel	()	()	()
Lotus 1-2-3	-()	-()	-()
Multiplan	()	()	()
Other _____	()	()	()
Statistical Packages			
BMDP	()	()	()
MINITAB	()	()	()
SAS	-()	-()	-()
SPSS, SPSSX	()	()	()
Systat	()	()	()
StatWorks	-()	-()	-()
Other _____	()	()	()
Textual Tool _____	()	()	()
Application Libraries			
IMSL, MINNLIB	()	()	()

	Current Skill		
	Basic	Good	Expert
BESPACK	()	()	()
LINPACK, EISPACK	-()	-()	-()
Other Library 1 _____	()	()	()
Other Library 2 _____	()	()	()

After you have marked your current skills in this inventory, you might want to go through with a different color marker to indicate computing areas that you would like to study or investigate. Add any comments you might have below.

The Classifieds

For Sale

DecWriter III. \$300.00. Call Tim Engel at 481-9723.

Phones/Hours/Labs

ACSS PHONE NUMBERS

Administrative Office: 626-1600

HELP-Line 626-5592

Access:	
CYBER (CA)	626-1620
CYBER (NV)	626-1622
ENCORE (UX)	626-1681
VAX (VX)	626-1641
RJE (2400 baud)	626-1656
RJE (4800 baud)	626-1663
Accounts:	
CYBER, ENCORE, VAX	625-1511
Computer Hours (recorded message)	626-1819
Computing Information Center	625-7397
Contract Services	625-2303
East Bank I/O, 128B Lind Hall	625-5082
Engineering Services	627-4357
Equipment Maintenance/Repair	627-4357
Graphics Software	626-5592
Information, Lauderdale	626-1600
Lauderdale Computer Room	626-0550
Lauderdale Services	626-1838
Magnetic Tape Librarian	626-1838
Math and Statistics Packages	625-5830
Micro Information	626-4276
Newsletter Subscription	625-7397
Permanent File Restoration	626-0595
Project Assist	626-1090
Public Labs (Managed by ACSS)	
14 Folwell Hall	625-4896
306B Lind Hall	625-9032
130 Physics	625-6820
9 Walter Library	626-1899
Lab Manager (14 Folwell Hall)	625-7850
Publications Information	626-1093
Short Course Registration	625-7397
Shuttle Bus Service	625-9525
System Status (recorded message)	626-1819

PUBLIC LABS TWIN CITIES CAMPUS

Location	Batch	Interactive	Micro
<i>East Bank</i>			
ApH 204			X
Arch 160			X
CenH		X	
ComH		X	
DiehlH 207, 270		X	
EddyH Annex 54			X
EltH 121, 124	P	X	
FolH 14, 14a	P	X	X
FronH		X	
LindH 26		X	
LindH 128B	P	X	
LindH 306B			X
MechE 308		X	
MoosT 8-425			X
Nich 109			X
Phys 130		X	X
PioH		X	
SanH		X	
TerrH		X	
VinH 4		X	
VinH 203			X
WaLib 9		X	X
<i>West Bank</i>			
AndH 170	P	X	X
BlegH 90			X
BlegH 140	P	X	
MdbH		X	
OMWL B2	P	X	
<i>St. Paul</i>			
BaH		X	
CentLib B50			X
ClaOff 125E	P	X	
ClaOff B22			X
McNH 69			X

P means Printer only.
For more information see WRITEUP, LABS.

SYSTEM OPERATING HOURS

	CYBER (CA), ENCORE (UX), VAX (VX)	CA and VX Low Rate	CYBER (NV)
M-F	7 am - 4 am	8 pm - 4 am, 7 am - 8 am	7 am - 1 am
Sat	4 am - 9 pm	all operating hours	7 am - 10 pm
Sun	6 pm - 4 am	all operating hours	6 pm - 1 am

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The ACSS Newsletter September 1987 Volume 21, Number 9

Acting Director: *Michael M. Skow*
Editors: *Steven Brehe, Paula Goblirsch*

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The ACSS Newsletter

Academic
Computing
Services and
Systems

Technical Publications
100 Lauderdale CF
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Lauderdale, Minnesota 55113

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UNIVERSITY ARCHIVES
10 WaLib

Deliver to current occupant.

September 1987