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acs academic computing services Newsletter

Volume 25, Number 2

University of Minnesota, Twin Cities

February, 1991

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A Network File Server

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ACS now offers a new network file server that will enable our users to keep files on-line at a significantly lower cost. You'll also be able to access those files from a number of systems via the University's backbone network.

UX users can take advantage of this service immediately, as can Macintosh and PC users that are currently using UX for storing files through AppleShare. We plan to expand the service to our VMS systems VX and VZ and begin archiving old UX files to the file server in the months ahead.

Both individual users and University departments with NFS (Network File System) software can validate their systems to use the file server. You can use it to meet unexpected, short-term needs for additional local disk space or you can use it for long-term, off-site file backup. The monthly billing for this service will only be for actual file storage used.

Cost

There are no mounting or transfer charges and the cost is one-fifth of our normal disk storage rate—i.e., 2.75 cents a megabyte-day rather than 14 cents a megabyte-day. This means a 10 megabyte file stored for 30 days or a 300 megabyte file for a single day costs \$8.25 rather than \$42.

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The *ACS Newsletter* is published monthly by Academic Computing Services of the University of Minnesota, Twin Cities.

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For a free subscription call (612) 625-7397, or send your name and address to the Computing Information Center, 1 Nicholson Hall, University of Minnesota, 216 Pillsbury Drive SE, Minneapolis, MN 55455. MAD@UMNACVX/MAD@VX.ACS.UMN.EDU. On-campus address changes *must* include your department name and address.

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The *ACS Newsletter* is produced on an Apple Macintosh IIfx running Microsoft Word and Aldus PageMaker software. Camera-ready copy is produced on an Apple LaserWriter Plus and then printed at the University Printing and Graphics Dept.

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A Network File Server continued from page 25

Using the File Server: Three Ways

1. From UX: Once they are validated to use the file server, UX users can save files on the file server using standard UNIX commands.

As shown in the example below, we've added the file server "make directory" command, `fsmkdir(1)`, to UX to allow access to the service. `fsmkdir` creates a user directory on the file server and then replaces `/home` in the current UX directory path name with `/fs1` to create the file server path name. The command then displays this path name of the user directory to use in copying files.

Once you've created the directory, you can move files to the directory using the UNIX "copy file or directory" command `cp(1)`. You can also use `tar(1)`. An example:

```
ux% pwd {Prints working directory.}
/home/staff/djb
ux% fsmkdir {Makes directory on file
server.}
/fs1/staff/djb
ux% cp largefile /fs1/staff/djb
{Copies largefile to file server.}
```

`ln(1)` allows UX users to create a symbolic link to their file server directory:

```
ux% pwd {Prints working directory.}
/home/staff/djb
ux% ln -s /fs1/staff/djb
fileserver {Creates symbolic link.}
ux% cp largefile fileserver
{Copies largefile to file server.}
```

2. From PCs and Macs: Appleshare users with UX accounts can use the directory created by `fsmkdir` as an AppleShare volume by placing it in their `~/afpvols` (or `~/afpvols`) file. Using the above example, the `afpvols` file might look like:

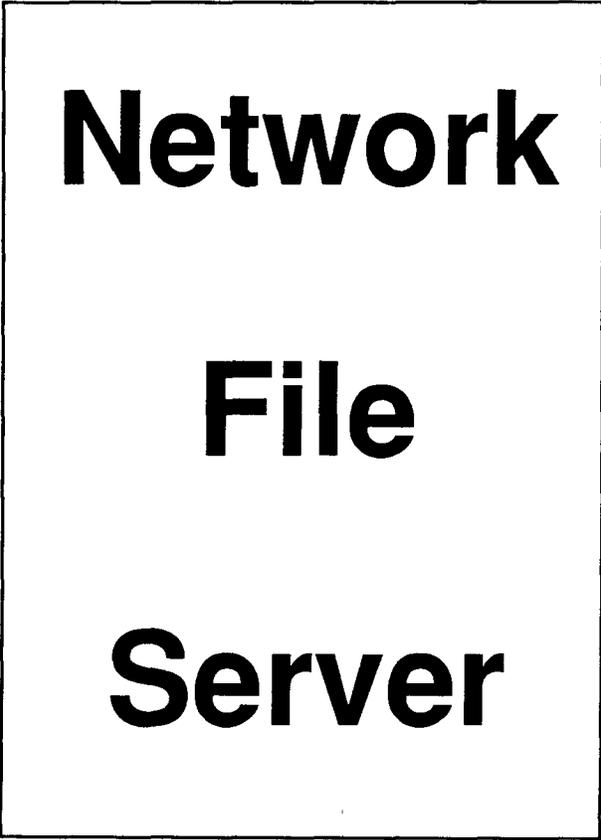
```
/fs1/staff/djb:Fileserver
```

Use **Chooser** on a Macintosh to display **Fileserver** as an available volume on the ACS-ENCORE AppleShare server.

3. From department systems: For more information about using the file server for low-cost storage from your workstation or other system, contact Dave Bianchi at 626-1827.

For More Information

We'll tell you more about the file server in future newsletter articles and on-line announcements. Meanwhile, if you want more information, please contact Dave Bianchi at 626-1827.



**Network
File
Server**

ACSS\$WRITEUP Files to be Deleted; Use ListDoc

Michael J. Frisch

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We have transferred all of our documentation on the ACSS\$WRITEUP directory to the ListDoc package directories. We have also changed documentation that mentions ACSS\$WRITEUP to instead reference ListDoc. Since there no longer is a need for the ACSS\$WRITEUP directory, it will be deleted on March 20.

Files that were there will usually be accessible by the command

```
$ LISTDOC filename
```

For more information about ListDoc, type:

```
$ HELP LISTDOC
```

or use ListDoc in its menu-driven mode by typing:

```
$ LISTDOC
```

and follow the directions on your screen to search, read, edit, copy, or print documents or obtain additional help.

More RATS on the VAX: Version 3.11 Now on VX and VZ

Bruce A. Center

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BAC@VX.ACS.UMN.EDU

The Regression Analysis of Time Series, an econometric research program, is better known by its elegant acronym. RATS Version 3.11 is now available on VX and VZ. We will keep the older version, RATS 2, if there is demand. To communicate this demand, please contact your friendly RATS specialist, me, at 625-2538 or by E-mail at the addresses above.

We have prepared a brief that describes the new version of RATS in some detail. This document, *RATS Version 3.11*:

- gives brief instructions on executing the package,
- describes improvements and new features in Version 3.11,
- points out incompatibilities with RATS 2.0,
- and provides an extensive example, including the data file, command file, and output.

You can obtain a copy of the RATS brief in our Computing Information Center (CIC), 1 Nicholson; call 625-7397 if you would like our staff to send you a copy. Also available in the CIC is a reference copy of the new RATS manual, *Regression Analysis of Time Series 3.1*.

The text of our RATS brief is also available on-line on VX and VZ within the ListDoc documentation utility, under the **Statistics** category.

SPSS 4.0 on VAX VX and VZ

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BAC@VX.ACS.UMN.EDU

And you thought only ACS liked to change its name. With Version 4.0 SPSSX has again been renamed—back to SPSS.

SPSS 4.0 is now available on VX and VZ. The new version contains a menu-driven front-end called the **SPSS Manager**, which helps you build commands and review output. The Manager includes a menu-based command generator, with context-sensitive help, an on-line glossary, extensive editing capabilities, and other features. Experienced SPSS users will not necessarily find this an improvement.

The new version also contains several new features, including **EXAMINE**, which performs Tukey's Exploratory Data Analysis.

We have prepared a brief that describes this new version in some detail. This document, *SPSS 4.0*:

- briefly describes the new procedures,
- describes differences between SPSSX 3.11 and SPSS 4.0, and points out incompatibilities between the old and new versions,
- gives brief instructions on executing SPSS 4.0,
- lists and briefly describes the new manuals from SPSS Inc. on the new version,
- and provides an extensive example of the new **EXAMINE** procedure, including the command file and annotated output.

You can obtain a copy of our new SPSS brief in our Computing Information Center (CIC), 1 Nicholson; call 625-7397 if you would like our staff to send you a copy. Also available in the CIC are reference copies of the several new manuals that document SPSS 4.0.

The text of our SPSS brief is also available on-line on VX and VZ within the ListDoc documentation utility, under the **Statistics** category.

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STATLIB Public Domain Statistical Software

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STATLIB is an electronic mail system to distribute public-domain statistical software and data. STATLIB is a minor modification of the NETLIB software (see the article about NETLIB elsewhere in this issue). All of the STATLIB routines come in source code form and require the appropriate compiler (usually Fortran). Keep in mind that though the routines are free of charge, they come with no guarantee. See Table 1 for a list of STATLIB libraries.

Some types of problems can occur when using the routines. We recommend that you carefully test and check each routine. In particular, look for machine constants in the

codes. Machine constants for a CRAY might produce incorrect results when used on an IBM-PC.

Accessing STATLIB

The index files and the software itself are available from STATIB by sending requests in the form of electronic mail addressed to IN%"STATLIB@LIB.STAT.CMU.EDU". The requests are one-line commands that can be the subject part of a mail message or can be the mail message itself. STATLIB interprets the command, executes it, and sends you a mail message response.

Table 1: List of STATLIB Libraries

apstat	Select algorithms transcribed from the journal Applied Statistics.
crab	Kodiak Island king crab survey data.
datasets	Various datasets.
directory	Lists of addresses and E-mail addresses of statisticians.
disease	National Notifiable Diseases Data.
general	Software of general statistical interest.
griffiths-hill	Applied Statistics algorithms contained in the book of that name by Griffiths and Hill.
multi	Multivariate Analysis and Clustering. An annotated directory and selected algorithms.
S	S functions, device drivers and related software.
s-news	Archives of the S-news mail, in digest format.
xlispstat	Luke Tierney's XlispStat system for Unix systems. (Luke Tierney is a professor in the University of Minnesota's Statistics department.)

Table 2 shows some typical commands to STATLIB.

\$ LISTDOC STATLIB

This news article is also kept on line on the VAX. To read it, type:

We plan to check the actual STATLIB index quarterly and update our on-line document to match their list.

Table 2: Some STATLIB Commands

<u>Command</u>	<u>Requests</u>
SEND INDEX	Index listing of all available software.
SEND INDEX FROM <i>collection</i>	Index of routines within a specific collection; e.g., SEND INDEX FROM S
SEND <i>routine</i> FROM <i>collection</i>	Routine contained in a particular collection; e.g., SEND SPLINES FROM S

(Note that the commands don't have to be in uppercase letters.)

STATLIB

More NETLIB Public Domain Mathematical Software

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We have discovered that there are two locations that run the NETLIB electronic mail system for the distribution of the source code for public domain mathematical software and they don't have exactly the same software (although the differences are small and we have read that the system managers try to make them match up periodically). As a result, we now report on the newly added items and indicate at which location to find them.

The following has recently been added at NETLIB@ORNL.GOV:

CRPC Software available from the NSF
 Science and Technology Center for
 Research in Parallel Computation.

The following have recently been added at NETLIB@RESEARCH.ATT.COM.

Amos Special functions by D. Amos (= TOMS/644).

BLAS3 Basic Linear Algebra Subroutines, level 3, for matrix*matrix operations.

C Another miscellaneous library for software written in C.

cascade Analysis and design of linear control systems.

Dierckx Spline fitting routines for various kinds of data and geometries.

f2c Fortran to C converter.

Vanhuffel Total least squares solution using partial singular value decomposition.

To find out more about accessing these files and other NETLIB libraries, use the following command on the VAX VX:

```
$ LISTDOC NETLIB
```

The documentation has been modified to note the two different locations.

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IMSL 10: Two Missing Routines Put Into Library on VX

Michael J. Frisch
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On December 18, we added the routines DCINH and DSVRBN that we inadvertently left out when we first installed the IMSL10 library on the VAX VX computer. Any users who had earlier tried to reference these routines would have gotten an "undefined symbol" message from the LINK command.

Humanities Computing Conference

The Association for Humanities Computing and the Association for Literary and Linguistic Computing are sponsoring an international conference in humanities computing in Tempe, Arizona, March 17-21.

For registration information, write:

Daniel Brink
Humanities Computing
Arizona State University
Tempe, AZ 85287-0302
(602) 965-7748
BITNET: ATDXB@ASUACAD

**Register for
a Free
Central Systems
Computing Course!**

(See page 35.)

Conventions

Throughout this and other ACS publications, we have adopted these conventions:

- Messages and prompts from the ACS computers appear in plain type, like this.
- Words that the computer systems replace with a specific name, value, or other information appear in *italic type*, like this.
- Commands you type at your terminal keyboard appear in **bold face type**, like this.
- Words that must be replaced by a specific name, value, or command that you type in appear in ***bold italic type***, like this.
- Comments to interactive sessions and program files are enclosed in { curly braces, like this }.

Here's an example:

SAVE, *filename*

is a command you type in. You type **SAVE** and replace *filename* with the name of your file. The system may respond with the message

filename ALREADY PERMANENT { An example of a system message. }

where *filename* will be replaced by the name of the file you attempted to save.

- The symbol <CR> refers to the carriage return (or RETURN) key on the terminal. The <CR> serves as a terminator for commands you type at your terminal. In most cases we do not show <CR>; we assume you know to type it after every command.

Free Central System Computing Courses Winter 1991

Offered by St. Paul Computing Services (SPCS), Academic Computing Services (ACS),
and Health Sciences Computing Services (HSCS)

Our courses teach you the operating systems and software on central system computers, large systems used by many people at the same time. These courses do not cover microcomputer software unless otherwise indicated in the following descriptions.

How to Register

To register call 626-0032, 8:00 am to noon and 1:00 to 4:30 pm, Monday through Friday.

Registration is located at the Computing Information Center, 1 Nicholson Hall. Mail registrations are accepted or you can also register by electronic mail—write to classes@umnacvx or classes@vx.acs.umn.edu. Include a day-time phone number. Please call to cancel if you later decide not to attend, so we know how many to expect. Deadline for registering is 4:30 pm on the last working day before the class begins.

Operating Systems

CMS Tapes (SPCS)

Wednesday, February 20, 9:30–11:30 am

Specifying, reading, and writing tapes. You must know the CMS operating system.

Introduction to NOS/VE Part 1 (HSCS)

Wednesday, February 20, 2:00–4:00 pm

Connecting to NOS/VE, entering commands, managing files, obtaining output, and on-line help.

Introduction to NOS/VE Part 2 (HSCS)

Wednesday, February 27, 2:00–4:00 pm

Batch jobs, printing options, job/command control, special files, and file transfers on the NOS/VE operating system.

NOS/VE Full Screen Editor (HSCS)

Tuesday, March 19, 2:00–4:00 pm

Creating and editing NOS/VE files, expanded on-line help for each function, and customized functions. You must know the NOS/VE operating system.

Communications

CMS Electronic Mail (SPCS)

Tuesday, March 5, 9:30–11:30 am

Corresponding with other computer users locally and worldwide, via BITNET.

Internet Overview (SPCS)

Thursday, February 21, 10:30–11:30 am

Using the CMS central system to log on to and transfer files to/from other computers on the Internet.

Short Courses

ProComm (SPCS)

Tuesday, February 19, 10:30–11:30 am

Demonstration of the ProComm terminal emulation package, as used with the CMS operating system.

TinCan (SPCS)

Tuesday, February 26, 10:30–11:30 am

Demonstration of the TinCan terminal emulation package, as used with the CMS operating system.

Statistics

SAS/Stat (SPCS and ACS)

Thursday, February 14, 9:30–11:30 am

The statistical analysis features of SAS, such as correlation, regression, and analysis of variance. You must know either the CMS or VMS operating system.

PC SAS Overview (SPCS)

Thursday, March 7, 9:30–11:30 am

Discussion of features specific to the IBM-PC version of SAS.

Databases

NOMAD2 (SPCS)

Friday, February 22, 9:30–11:30 am

Demonstration of NOMAD2, a database management system on the CMS operating system.

Graphics

SAS/GRAPH (SPCS)

Thursday, February 28, 9:30–11:30 am

Exploring SAS graphics for presentation of your data as plots, charts, maps, and contour plots. You must know the CMS operating system.

PicSure Interactive Graphics (HSCS)

Tuesday, March 26, 2:00–4:30 pm

Using PicSure to create bar charts, scattergrams, line charts, pie charts, and combinations. Demonstrated on the NOS/VE operating system.

MinnesotaMEDLINE

(Call the Bio-Medical Library at 626-5808 for information on class times and registration procedures.)

Basics of MinnesotaMEDLINE Searching (HSCS)

Three sections: Tuesday, February 19, 1:00–2:45 pm

Monday, March 4, 10–11:45 am

Tuesday, March 19, 9:00–10:45 am

Basic commands and the use of Medical Subject Headings (MeSH) in on-line medical literature searching.

Other

PROFS Calendars (SPCS)

Friday, February 15, 9:30–11:00 am

Viewing, maintaining, and changing your electronic calendar on the CMS operating system.

C Programming (ACS)

Monday, Wednesday, and Friday, February 25–March 1, 2:30–4:30 pm

Introduction to syntax, style, and structure of the C programming language. Requires some programming background. You must know the UNIX operating system.

**Free
Central System
Computing
Courses
Winter 1991**

Public Labs Connected to ACSnet Twin Cities Campus

Location	Central System Printing	Terminals	Micros	Phone Numbers	Hours: Weekday	Hours: Weekend
<i>East Bank</i>						
278 Diehl Hall	laser printer	X	X	624-3128	M-F 8am-1 am	Sat 8 am-8 pm Sun 11 am-1 am
4-204 EE/CSci	laser printer	X		625-9081	M-Th 8 am-midnight F 8 am-8 pm	Sat 8 am-midnight Sun 10 am-midnight
121 Elliott Hall	impact/laser printer	X	X	624-0866	M-Th 8 am-10 pm F 8 am-6 pm	Sat closed Sun closed
14 Folwell Hall	laser printer	X	X	625-4896	MWTh 8 am -10 pm T 8-10 am & noon-midnight F 8 am-6pm	Sat 10 am- 5 pm Sun 4 pm-10 pm
1 Lind Hall	laser printer	X		625-0801	M-Th 8 am-10 pm F 8 am-5 pm	Sat noon-6 pm Sun 6 pm-10 pm
308 Mechanical Eng	laser printer	X		625-7352	M-Th 8 am-midnight F 8 am-7 pm	Sat 9 am-7 pm Sun 6 pm-midnight
1 Nicholson Hall	laser printer	X		625-5082	M-F 8 am-10 pm	Sat 10 am-2 pm Sun 6-10 pm
130 Physics	laser printer	X	X	625-6820	M-Th 8 am-10 pm F 8 am-6 pm	Sat 10 am-6 pm Sun 4 pm-10 pm
9 Walter Library	laser printer	X	X	626-1899	M-T 8 am-midnight F 8 am-10 pm	Sat 10 am-6 pm Sun noon-midnight
<i>West Bank</i>						
170 Anderson Hall	laser printer		X	624-6526	M-Th 8 am-midnight F 8 am-10 pm	Sat 10 am-8 pm Sun noon-11:30 pm
140 Blegen Hall	impact printer	X		624-5278	M-Th 8 am-11:30 pm F 8 am-9:30 pm	Sat 10 am-7:30 pm Sun noon-11 pm
B2 Wilson Library	laser printer		X	626-2205	M-Th 8 am-midnight F 8 am-10 pm	Sat 10 am-8 pm Sun noon-11:30 pm
<i>St. Paul</i>						
B40 Central Library		X		624-3269	M-F 8 am-10 pm	Sat 10 am-2 pm Sun 6-10 pm
B50 Central Library	laser printer		X			

Micros in public microcomputer labs that are connected to AppleTalk can access ACSnet. The following residence halls also have public terminals: Bailey Hall, Centennial Hall, Comstock Hall, Frontier Hall, Middlebrook Hall, Pioneer Hall, Sanford Hall, Territorial Hall. Micro access cards, which you can purchase for \$30 at the Bursar's Office, permit you to use the microcomputers. You do not need a card to use terminals.

Help Page

ACS HELP-Lines

Central Systems (UX,VX,VZ,CA):

Software (including Graphics, Databases, and Statistics Packages), Hardware, Networking

626-5592 8 am to 5 pm, weekdays

Artificial Intelligence:

625-8332 3 to 4 pm, Monday, Wednesday, Friday

Humanities, Text Analysis:

625-8332 3 to 4 pm, Monday, Wednesday, Friday

Equipment Repair:

625-1595 8 am to 4:30 pm, weekdays

Lauderdale Tape Library:

626-1838 9 am to 3 pm, weekdays

Other HELP-Lines

Health Science Computing Services:

5-235 Moos Tower

625-2666 7:45 am to 4:30 pm, weekdays

LUMINA (communications questions):

626-2272 8 am to 5 pm, weekdays

Microcomputer and Workstation Networks Center:

125 Shepherd Lab

626-4276 9 am to 4 pm, weekdays

St. Paul Computing Services:

90 Coffey Hall

624-6235 9 am to 5 pm, Monday through Thursday; 9 am to 4 pm, Friday

Consulting

Walk-In Consulting

1 Nicholson Hall 10 am to 4 pm, Monday through Friday

Electronic Mail Consulting

Consulting is now available via the mail facility on all ACS systems (the UX, VX, VZ, and CA). 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 ACS systems (ENCORE/UNIX, VAX/VMS, CYBER/NOS), software, and for answers to any other inquiries on using computers for instructional computing.

Computing Information Center

1 Nicholson Hall, 625-7397

MAD@UMNACVX, MAD@VX.ACS.UMN.EDU

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

Short course enrollment. Short course schedules and class descriptions available. Call 626-0032.

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 ACS software.

Free ACS documentation. General information and central system information available.

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

ACS Directory

100 Laud CF (campus mail)	626-1600	LaudCF: Computer Consoles	626-0550
FAX	626-7440	File Restoration	626-0595
Director—Michael Skow	625-6349	Magnetic Media Lib/Operations (9 am-3 pm)	626-1838
Deputy Director—Lawrence Liddiard	625-4016	Operations Coordinator	626-1646
Adm. Assistant Dir—James Foster	625-1511	Services (tapes, laser disks, CD ROMs, Xerox, plotters) Supervisor	626-1661
Access: ACS systems (UX, VX, VZ, CA)		Users' room	626-0386
3/12/2400 bps + 7/Even/1	626-1630	Networking—Paul Tranby	626-0815
12/2400 bps + 8/None/1	626-1631	Newsletter and Publications:	
Accounts: (8 am-12 pm, 1-4:30 pm)		ACS newsletter subscriptions	625-7397
ENCORE, VAX, CYBER	625-1511	Technical Publications—Steven Brehe	626-1828
Assistance and Information:		NOS Systems—David Bianchi	626-1827
HELP-Line (including Graphics, Databases, Statistics Packages, and Text Processing)	626-5592	Operations, Asst Director—Richard Folden	626-0031
Equipment repair	625-1595	Programming Environments—Jim Miner	626-1091
Computing Information Center	625-7397	Shuttle Service	625-9525
Short Course Registration	626-0032	System Status (recording) status and hours	626-1819
Artificial Intelligence	625-8332	UNIX systems—David Bianchi	626-1827
BITNET/Electronic mail	625-1543	User Services—Richard Hotchkiss	625-0795
Faculty Instructional Computing	626-0200	VMS Systems—Marisa Riviere	626-0268
Humanities/Text Analysis	625-8332		
Math and Engineering Packages	625-5830		
Contract Services—Cheryl Vollhaber	625-2303		
DEC CSLG/ESL Software Distribution	626-0268		
Engineering Services, LaudCF	625-1595		
Asst Director—Donald Clark	625-1583		
Equipment Maintenance/Repair	625-1595		
Info/Public Information Service	626-1527		

Other University Computing Services

Health Sciences Computing Services	625-5444
Microcomputer and Workstation Networks Center	625-1300
St. Paul Computing Services	624-7788

Central Computing Systems

The UX research and instructional system, an ENCORE Multi-max multiprocessor running the UMAX 4.3 operating system (4.3 BSD UNIX).

The VX research and instructional cluster: a Digital Equipment Corporation VAX 6000-510, clustered with other VAX systems using the VMS 5.4 operating system.

The VZ system for non-University users: a Digital Equipment Corporation VAX 3100 using the VMS 5.4 operating system. The VZ is part of the VMS cluster system.

The CA research and instructional system: a Control Data Corporation CYBER 830, using the NOS 2 operating system. The CA provides interactive and batch computing for University researchers and students.

Accounts

To use our central computer systems, you need a user name. This user name (with a secret password) is your authorization to use the computer systems. You can get application forms and rate information from ACS Accounting, 100 LaudCF (625-1511).

Operating Hours

The ENCORE UX, VAX VX, VAX VZ, and CYBER CA systems run continuously from 6 pm Sunday until 6 am the following Sunday.

On the second and fourth Fridays of each month from 5 am to 7 am the CYBER CA system is unavailable. Low-rate hours are from 8 pm to 8 am Monday through Friday, and all operating hours on Saturday and Sunday.

ACS Newsletter Subscription Request

Send to ACS Computing Information Center, 1 Nicholson Hall, 216 Pillsbury Drive SE, Minneapolis, MN 55455

Add

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Campus Mail (You must provide your department's name and departmental address.)

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Room _____ Building _____

U. S. Mail

Address _____

City _____ State _____ Zip _____

Change/Old Address

Department _____

Room _____ Building _____

Address _____

University of Minnesota Affiliation

Department

Faculty

Staff

Student

Alumni

Other

acs

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100 Lauderdale CF
University of Minnesota
2520 Broadway Drive
Lauderdale, Minnesota 55113

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UNIVERSITY ARCHIVES
10 W&Lib