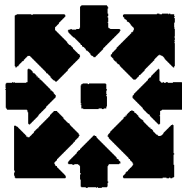


University Computer Center

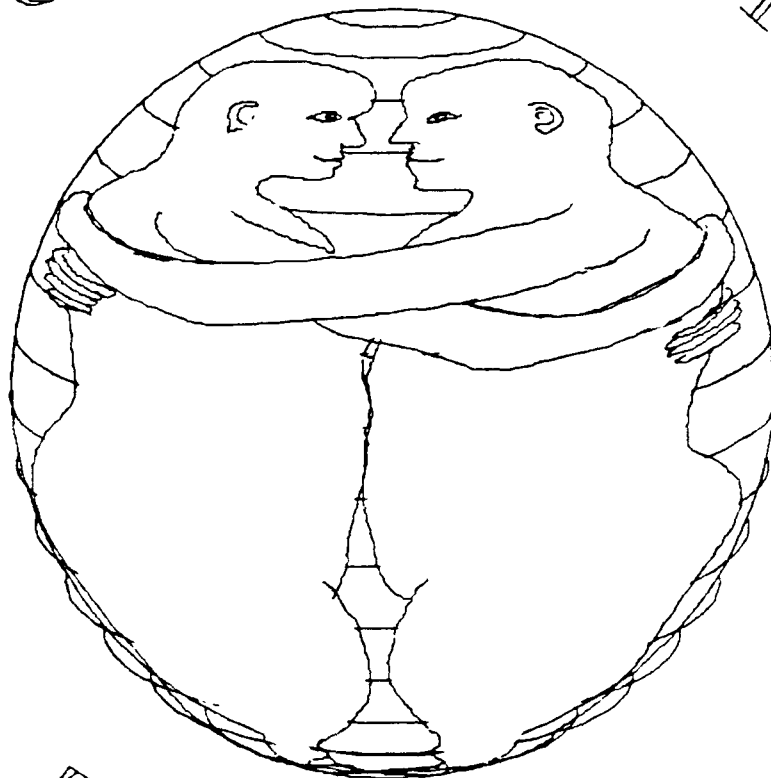
University of
Minnesota
Twin Cities
Minneapolis, Minnesota



January 1982
Volume 16
Number 1

MIW
0189

ONE EARTH



TOGETHER

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—CORRECTIONS—

Due to the *Newsletter* editor's lack of fluency in computer operating system language, commands listed in several of last month's articles were incorrect. For a complete list of the articles and the corrected commands, see CORRECTIONS in the *All Systems Bulletins* section of SYSTEM NEWS/NOTES. Sincere apologies to everyone inconvenienced by these errors.

The graphic on the cover of the December *Newsletter* was inadvertently placed sideways; what appears as the right side is in fact the bottom. Our apologies to the artist.

Director: Peter C. Patton
Editor: Christine Mack Gordon

Comments about the content of this newsletter, or suggestions for changes may be directed to the editor, 235a Experimental Engineering, or call 612/376-9832.

The University of Minnesota adheres to the principle that all persons shall have equal opportunity and access to facilities in any phase of University activity without regard to race, creed, color, sex, national origin or handicap.

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AN OPEN LETTER TO UCC USERS

In the November *Newsletter*, we at UCC asked you, our users, to communicate your concerns and interests to us via a questionnaire. We decided to use the occasion of a new year to summarize your responses, which gave us a more vivid picture of you and your computing needs.

Thus far we have received 109 responses to the UCC questionnaire; this is slightly over a two percent return rate. Of those returning questionnaires, 40% were faculty members, about 20% each were staff, graduate students, and outside users, and a sprinkling were undergraduates. Responses came from all over the University, with the biggest departmental return (4) from Agricultural and Applied Economics. Outside users included the USDA Forest Service; state, county, and municipal research analysts; commercial businesses; and public service organizations.

Nearly 80% of the respondents considered themselves daily or frequent users who knew at least one, and often two or more, languages or programs. With regard to content, the "System News/Notes" was the most popular section of the *Newsletter*, followed by feature articles and short course information. Trailing somewhat behind these areas were the phone list and operations information, the suggestion box, want ads, and statistics.

Many respondents had suggestions for articles; most in demand was information on microcomputers, text processing, graphics, state-of-the-art computing in the world at large as well as at the University, and user applications. We are giving serious consideration to all suggestions and will do what we can to respond to your requests.

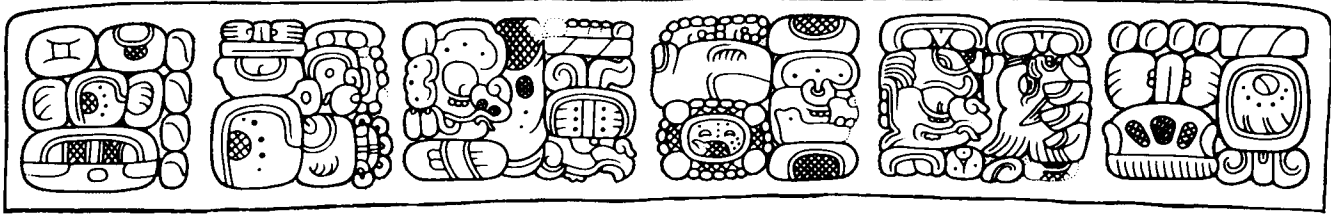
We would like to reiterate at this point that we welcome articles by users. Since many respondents

suggested such articles, we can only continue to encourage all of you to write short descriptions of the work you are doing and send them to us (please include your name, address, and a phone number where you can be reached during the day). The deadline for such articles is the 10th of each month for publication the following month. Users are also welcome to advertise computer-related materials and services in our want ads, and to continue to submit suggestions, complaints, and praise.

Most users who returned their questionnaires were pleased with the *Newsletter*; some suggested eliminating the statistics page and the monthly listing of phone numbers and operations, and these suggestions are being considered. Several off-campus users complained about delays in receiving their *Newsletter*; this, unfortunately, is something we can do little about, since the newsletters are sent at bulk mail rates from the University's addressing and mailing department, and delivery rests in the hands of the Postal Service. We strongly suggest that all dated announcements be placed early, so that an event scheduled to occur in any given month (February, for example) would be announced in the preceding month's (January's) *Newsletter*. This should solve the problem for most readers.

We would like to take this opportunity to thank all those users who took the time to complete and return the questionnaire, and to encourage all of you to continue to let us know your responses both to the *Newsletter* itself and to all of UCC. Help us to serve you better by staying in touch. We wish all of you the best possible new year.

—Christine Mack Gordon, Newsletter editor
for the UCC staff



An example of Mayan hieroglyphic from Yaxchilan. The original, carved in fine yellowish limestone, is in superb condition for study.

Non-Traditional Computing

TRANSLATING MAYAN HIEROGLYPHIC

By the year 1000 A.D., the Maya of Mexico and Central America had produced an advanced civilization complete with cities, roads, monumental architecture, artistic and intellectual achievements, and a fully developed writing system known as Mayan hieroglyphic. Due to the excesses of the sixteenth century Spanish colonial government, however, much knowledge about the writing system was lost.

Scholars have been attempting to decipher Mayan texts since the late nineteenth century. Despite the devotion of a great deal of time to this problem, however, we have achieved only limited success. We can now read some signs in the script and get a sense of what is written in certain texts, but it is still impossible to read with certainty any Mayan text from start to finish.

Before a scholar can make significant progress, a frequency and distribution analysis of the "signs" of a text is needed. Such an analysis would be both tedious and error-prone without the aid of a computer. In consultation with Tom Rindfleisch of Non-traditional Computing Support Services, I developed a computer-assisted research plan to increase our understanding of the Mayan hieroglyphs. My project deals with the texts from one Mayan site, Yaxchilan, and seeks to answer a number of specific questions about the texts: How many separate signs are there? What constitutes a separate sign? In what direction should the signs be read? Are the groupings of the signs significant, perhaps indicating words or phrases, or are they based only on aesthetic considerations? Earlier researchers suggested answers to these questions, but none can be considered definitive, since the texts remain unreadable. Ultimately I hope to propose readings for at least some of the signs.

I will base my analysis of the texts on a transcription that codes all the information inherent in their external structure. Obvious single signs are separately coded. In cases where I cannot determine whether I'm dealing with a single sign or a number of signs written one on top of another, each possible component will be assigned a separate code. If I later determine that a particular cluster of signs is really one sign, I can use XEDIT to change all occurrences of that cluster into one code. Groupings of signs and line structure, as well as the specific locations of signs, are indicated in the transcription. The texts will be reformatted in ways analogous to reading the signs horizontally, vertically, and horizontally by columns of two.

Frequency and distribution analysis of these texts can then begin to answer the questions posed above. In addition, a frequency analysis can address questions concerning the values of signs: a sign that stands for a word, for example, will probably not occur as often as a sign that stands for a vowel. Distribution analysis, in its turn, may be used to assign values to signs. A sign representing consonant-plus-vowel will probably have a more restricted distributional pattern than one that represents a vowel alone.

After suggesting some preliminary hypotheses concerning the values of the signs, I can begin to propose readings for sequences of signs. The computer's ability to locate all occurrences of a certain pattern and then to replace it with a new pattern will be essential for this, since it will allow me to thoroughly test the consequences of each reading I propose. This process may be just the advantage needed to make significant progress in deciphering these valuable texts.

—Mary Ellen Kelly, Department of Anthropology
University of Minnesota

SYSTEM NEWS/NOTES

Cray News

PERMANENT DATASET RECOMMENDATIONS

UCC is currently running NOS 1.3 (Network Operating System) on our Cyber systems. Because NOS has evolved from other CDC operating systems over more than a decade, it is a sophisticated interactive system allowing a very high degree of data security, integrity, and privacy for our Cyber users.

We are currently running COS 1.10 (Cray Operating System) on our Cray 1B system. Because the Cray represents state-of-the-art hardware technology and raw machine computational speed, we all must pay a small

and temporary price for this privilege. COS has not had the years of use and enhancements that NOS has had; specifically, permanent dataset security on the Cray is not as extensive as permanent file security under NOS on the Cybers. Cray Research and UCC are working on the enhancement of Cray dataset security and integrity as a high priority task.

During the next few months, we advise all users to adhere to the following UCC Cray permanent dataset recommendations.

RECOMMENDATIONS FOR CRAY PERMANENT DATASETS

- 1) Users should ACQUIRE NOS permanent files from the C730 or C74 families for use as Cray datasets during the job in which the files are needed.
- 2) Users should DISPOSE Cray datasets from the Cray to the C730 or C74 families and RETAIN them as permanent NOS files on the Cybers or ROUTE them during the job in which the datasets are used.
- 3) In all cases, the ID parameter should be used on the ACQUIRE and ACCESS Cray commands. (Note that, by coincidence, both NOS and COS have ACQUIRE commands.) Always set ID to your user number. Only in this way can you make your dataset unique to you as a Cray user. Always use the read, write, and maintenance passwords (parameters R, W, M), and use the UQ parameter on the ACQUIRE and ACCESS commands. Change your passwords often and protect them.
- 4) On the DISPOSE Cray command, use the WAIT parameter. DELETE a Cray dataset after a DISPOSE is successfully completed—the WAIT parameter will ensure successful completion before processing your DELETE command. Remember that a Cray ACQUIRE command will make a Cray dataset both local and permanent. For this reason we recommend a DELETE after every DISPOSE.

These are our best suggestions to you for the next few months. Use the Cyber utility ARCHIVE or DUMPPF to back up your Cyber permanent files to tape. By using these temporary recommendations you will maximize the security, integrity, and privacy of the data you use on the Cray.

Some of our users may have special needs difficult to meet in an economical way with this temporary advice. In general, we advise against point number five below. If you are a user with special needs and you believe the above advice is inappropriate for you, please consider point number five and call us to discuss your processing needs.

- 5) Users with special needs may leave permanent datasets on the Cray during a day on which they will run several jobs. Such users should always DISPOSE datasets to the C730 or C74 families and RETAIN them as permanent files at the end of the last Cray run of the day. Do not leave datasets overnight on the Cray. UCC cannot guarantee the presence or the inviolability of datasets left on the Cray between Cray jobs.

These recommendations will provide maximum security and integrity at this time. UCC will continue to develop easier and more secure procedures for Cray usage in the months ahead, and these will be published in this *Newsletter*. For additional up-to-date information on the Cray, see WRITEUP(SERVICE = CRAY) and WRITEUP(CRAY = *). Please call Tom Kovarik, 376-5608, if you have comments, questions, or suggestions.

VAX Service

UNIX OPERATING SYSTEM AVAILABLE IN FEBRUARY

The University Computer Center will offer the University community a UNIX operating system on the Lauderdale VAX beginning February 1. We will use the Berkeley UNIX system developed by Bell Labs and enhanced at the University of California at Berkeley.

The UNIX operating system was developed in the 1970s for use on the DEC PDP-11 computer and has continually evolved since that time. Many PDP-11s at the university currently use this system, and it is popular with computer science departments, government-sponsored research projects, and mini and micro computer users. The system contains many utility programs aimed at increasing programmer productivity. These utilities, as well as most of the operating system itself, are written in a structured assembly language called "C" that has made it easy to move the UNIX system to other computers, including the VAX. The system design and file structures are straightforward and fairly easy to follow. Critics of UNIX point out, however, that its user interface is often inconsistent and too terse.

The UNIX operating system can be run only on computers licensed by the Western Electric Corporation. Several classes of license are available; our license allows use only by University students, researchers, and employees for educational and research purposes. No commercial users are allowed under this license. The documentation for the UNIX system is available on-line to any authorized user of the system. UNIX users are free to list whatever is necessary to their work. When applying for a UNIX account number, you will be asked to read and sign a statement in which you agree to abide by these rules. This policy works well at other universities, and allows us to live up to our agreement with Western Electric.

To apply for a UNIX account, call Jack Schwab at 373-4548. The rates for the UNIX VAX are \$1.20 per cpu minute of VAX time + \$0.40 per thousand I/O blocks transferred. Files kept on UNIX VAX disks accumulate charges of \$0.64 per thousand blocks per day; one disk block = 1024 characters. This storage rate is approximately \$16.87 a month for a thousand blocks.

To log into the UNIX system, dial 376-5891. All the UNIX ports are autobaud ports—they will handle transmission speeds of 120, 30, 15, or 10 characters per second. Press the carriage return key when you log-in and supply your log-in name and password when the system asks for them. You can use the break key to change the terminal speeds if the system seems to be trying the wrong speed. Pressing the break key at log-in time forces UNIX to cycle through the terminal speeds in the following order: 30-120-15-10 characters per second. If you have never used a UNIX system, you can type

learn

A UNIX program called "learn" will teach you the basics of the file system and one of the text editors. You can also learn the C language and some text processing features from "learn." The entire UNIX manual is on-line and may be retrieved one section at a time with the "man" command. The *UNIX Programmer's Manual* is also on sale at the Computer Store. Volume I, containing the most necessary information, costs \$32.50. Volume IIA costs \$16.20, IIB costs \$12.00, and IIC costs \$16.25. In addition, the following four publications will be available in the Computer Store about February 1: *UNIX: Getting Started*; *UNIX: Commands*; *UNIX: Text Processing*; and *UNIX: Programming*. These are especially recommended for users unfamiliar with UNIX.

If you have more questions, a UNIX HELP-line will be staffed from 1-2 p.m. every Monday, Wednesday, and Friday. The number for this HELP-line will be announced in the February *Newsletter*. If you have questions at other times, you can use the UNIX mail utility. Mail a question to log-in name CONSULT, and the UNIX consultant will mail a reply to you.

The hours of operation for the UNIX system are:

8 a.m.-1 a.m.	Monday through Friday
8 a.m.-4 p.m.	Saturday
4 p.m.-midnight	Sunday

During these hours a computer operator is on duty; the operator will call for maintenance, for example, in case of a hardware failure. At other hours the system will be used for system development and maintenance. It may frequently be brought up in unattended mode during these periods. You may use the system at such times, but we cannot make promises about its stability.

The languages available on the UNIX system are C, Pascal, FORTRAN (the 1977 standard), APL, LISP, and RATFOR (a rational FORTRAN, according to its friends). A family of available text processors includes ROFF, NROFF, and TROFF. The INGRESS relational data base management system is available. UCC has a license for the PWB (Programmers Workbench) version from Western Electric and we hope to make many of the tools in PWB available soon.

There is no way for UNIX users to communicate with other UCC computers at the present time, but several communications projects are underway for the long and short term. For additional information about UNIX, contact K.C. Matthews, 376-9720.

Non-Traditional Computing

For those who have just joined us as users and for those who are old friends, I'd like to reiterate our policy of assistance for non-traditional computing. Our staff consults on project design and implementation. We will talk with you about exactly what you want to do and recommend the best way to achieve your ends. We will help estimate computing costs and assist with grant proposal writing. We will do whatever we can to get your project off the ground and onto the computer. Consultants are available from 1-2 p.m. Monday through Friday in 140 Experimental Engineering and from 2-3 p.m. Monday through Friday in 304a Folwell. Regular phone consult-

ing is available from 10:30-11:30 a.m. Monday, Wednesday, and Friday at 373-5780. So call or drop in and find out what computing can do for you! For additional information, contact Vicky A. Walsh, 373-5780.

Business Data Products

ATTENTION DATABASE USERS

As you have noticed by now, many changes have taken place at UCC in recent months. Some of you may be confused by what you have heard regarding business and database packages. A new department has been formed at UCC, the Information Management Systems group. This group will offer consulting, teaching, and documentation services related to business and database products. In order to keep you informed about new developments, we will write a monthly column for this *Newsletter* called "IMS Journal." New products, changes in existing products, and application notes will be among the topics included in this column. Any suggestions and comments should be mailed to:

UCC Information Management Systems
208 Experimental Engineering
208 Union Street SE
Minneapolis, MN 55455

FORTRAN Libraries

NEW MINPACK LIBRARY AVAILABLE

MINPACK, a library of nonlinear least-squares routines and nonlinear equation solvers developed at Argonne National Laboratory, has been tested and was installed on the Cybers on December 29, 1981. This library can be accessed by entering the control statement

FETCH,MINPACK/V = compiler name

where compiler name is FTN, FTN5, MNF, M77, or PASCAL.

The library consists of 22 routines:

CHKDER	DOGLEG	ENORM	FDJAC1	FDJAC2
HYBRD	HYBRD1	HYBRJ	HYBRJ1	LMDER
LMDER1	LMDIF	LMDIF1	LMPAR	LMSTR
LMSTR1	QFORM	QRFAC	QRSOLV	RWUPDT
RIMPYQ	R1UPDT			

HYBRD, HYBRJ, LMDER, LMSTR, and LMDIF are the core subroutines in the five general algorithmic paths in MINPACK.

HYBRD1, HYBRJ1, LMDER1, LMSTR1, and LMDIF1 are "easy-to-use" drivers with simplified calling sequences made possible by assuming default settings for certain parameters and by returning a limited amount of information. Many applications do not require full flexibility and in these cases "easy-to-use" drivers can be invoked. CHKDER is supplied to help users check the coding of Jacobian evaluation subroutines.

Writeups for HYBRD1/HYBRD, HYBRJ1/HYBRJ, LMDIF1/LMDIF, LMDER1/LMDER, LMSTR1/LMSTR, and CHKDER are available through the following control statements:

WRITEUP(MINPACK = INDEX) prints the index of the writeup

WRITEUP(MINPACK = routine-name) prints the writeup for the specified routine

WRITEUP(MINPACK = *) prints the entire writeup

If you have questions about or problems with MINPACK, please call James Wang, 376-5262.

MINNLB LIBRARY CHANGES

The following routines were changed in the MINNLB library for the Cybers on December 29, 1981:

CHSQI - an error message was corrected

GRIDIT - a situation where spikes were generated when a grid point matched a data point was corrected

QKDRAW (internal routine for PLOT3D) - an infinite value that was generated in a special case was corrected

SCLPLT - an exit from the routine was corrected to first save some internal values in the scratch array.

The ALMAP library was changed to use the SHIFT routine instead of LRSHFT. The M77IOL library was completely recompiled with M77 to repair defective code from an earlier version of M77. Some exponentiation routines were added to M77IOL from the FORTRAN library. The routines NEWNOT and SETDAT were deleted from the BSPLINE library. IMSL Version 8.1 was installed as described in the December, 1981 *Newsletter*. If you have any questions about these changes, contact Mike Frisch, 376-1636.

All Systems Bulletins

NO FRILLS RATE TO CONTINUE

A previous UCC *Newsletter*, announced that the NOFRILLS charging rate would disappear with the installation of the Cray. The rationale for this decision was that the Cray rate was a NOFRILLS rate, and our hope is that most NOFRILLS users will change over to the Cray since its rate can be less than the Cyber NOFRILLS rate for certain jobs. We now recognize, however, that many NOFRILLS users cannot take advantage of the Cray since some use languages not available on the Cray and certain FORTRAN applications do not run fast enough on the Cray to justify reprogramming. Hence, we wish to announce that NOFRILLS is not disappearing from the Cyber 730 or the Cyber 74. The NOFRILLS rate will continue until at least July 1, 1982.

INTERACTIVE SYSTEM PHONE CHANGE

In the October *Newsletter* we announced that interactive service was being removed from the Cyber 74. The ports formerly connected to the Cyber 74 are now connected to the Cyber 730. Before the change, interactive service was available through two telephone numbers, 376-5930 for the Cyber 730 and 376-5730 for the Cyber 74. The two phone numbers represented two separate phone rotaries; that for the Cyber 730 had 71 ports, while the Cyber 74's had 45 ports. When interactive service was moved, the two rotaries were combined

into one large rotary with 116 ports. The first number of the new rotary is 376-5730; the 46th number is 376-5930. All users who currently dial 376-5930 should dial 376-5730 instead. You will be less likely to get a busy signal when you log in because 376-5730 is the beginning of the rotary, while 376-5930 is in the middle. The service for these two numbers is otherwise identical. If you have any questions about this change, contact Tom Lanzatella, 376-5606.

UCC SHORT COURSES—EXTENSION DIVISION

The following courses are offered through University of Minnesota Continuing Education and Extension (CEE). You may obtain more information and registration materials by calling CEE (612) 373-3195 or stopping by 101 Westbrook Hall on the Minneapolis Campus.

Computing: What Is It?

Jan 5-21 (TTh), 6:15-8 p.m., NichH 45

Introduction to Computers

Jan 25-Feb 8 (M), 6:30-8:30 p.m., Ramsey HS 251, Roseville

Programming: It's All in How You Do It

Jan 26-Feb 18 (TTh), 6:15-8 p.m., Arch 45

Beginning FORTRAN

Jan 26-Feb 18 (TTh), 6:15-8 p.m., AkerH 211

Personal Computers: A Perspective on Microcomputing

Jan 25, 28 (MTh), 6:15-8 p.m., Arch 15

UCSD and CP/M Systems on Micros

Feb 8, 11 (MTh), 6:15-8 p.m., Arch 15

Programming Techniques on Micros: Writing Your Own Microcomputer Programs

Feb 22, 25 (MTh), 6:15-8 p.m., Arch 15

ST. PAUL COMPUTER CENTER SHORT COURSES

The St. Paul campus Computer Center (SPCC) will offer two short courses this quarter. One will cover the Statistical Analysis System, SAS, a comprehensive statistical package available on the IBM 4341 computer at SPCC. The other will focus on MUSIC, an interactive system that allows you to edit and save files, submit batch jobs, or run jobs interactively. For those users who would like to access SAS remotely via an interactive terminal, MUSIC allows you to submit jobs to SAS and get the output back on a disk file.

Course schedules:

Minneapolis campus

SAS	Jan 25-29 (MWF)	3:15-4:30 p.m.	Ford 55
MUSIC	Feb 1-5 (MWF)	3:15-4:30 p.m.	Ford 55

St. Paul campus

SAS	Feb 15-17 (MWF)	3:15-4:30 p.m.	COB 35
MUSIC	Feb 22-26 (MWF)	3:15-4:30 p.m.	COB 35

If you would like to be on the SPCC mailing list, please call our main office at 373-0987. SPCC's hours are 7 a.m.-11 p.m. Monday through Friday and 8 a.m.-4:30 p.m. Saturday. The user room is in 90 Coffey Hall and the HELP-line (376-4602) is open from 10 a.m.-4 p.m. Monday through Friday. If you have any additional questions, call Ron Schultz, 376-2828.

System News/Notes to page 8

PHONE NUMBERS

Budgets	373-2521	HOURS-line (recorded message)	373-4927
Computer-Aided Instruction	376-2975	Image Processing	376-2895
Computer Hours (recorded message)	373-4927	Information, Experimental Engineering	373-4360
Computer Store	373-4877	Information, Lauderdale	373-4912
Consulting		Information Systems	376-1764
HELP-line	376-5592	Instructional Labs	376-3963
9 a.m.-5 p.m., Monday-Friday		Job Status, ExpEng (recorded message)	373-4994
Business Data Products	376-1761	Lauderdale Computer Room	373-4940
1-3 p.m., Monday-Friday		Lauderdale Operations Manager	373-4920
Statistics Packages	376-5062	Lauderdale Services	373-4995
1-2 p.m., Monday-Friday		Lauderdale Services Manager	373-7538
Data Bases	376-1761	Lauderdale Users' Room	373-4921
1-3 p.m., Monday-Friday		MECC Liaison	373-4573
Microcomputers	376-4276	Newsletter Subscription	376-4668
10-12 a.m. and 2-4 p.m., Monday-Friday		Permanent File Restoration	376-5605
Humanities	373-5780	Professional Services Division (PSD)	376-1764
10:30-11:30 a.m., Monday, Wednesday, Friday		Project Assistance	376-1764
Contract Programming	376-1764	Program Librarian	376-1636
Data Base Applications	376-1764	Programming Languages	376-7290
Educational Services	376-3963	Reference Room	373-7744
EDUNET Liaison	373-7745	Remote Batch (RJE) Services	376-3963
Equipment Purchase	376-8153	Short Courses	373-4360
Experimental Engineering I/O	373-4596	Shuttle Bus Service	376-3068
Field Engineering	376-7584	System Status (recorded message)	373-4927
Field Engineering—Service Contracts	376-1313	Tape Librarian: see Lauderdale Services	
Graphics Software	376-1849	Text Processing Services	376-2943
HELP-line	376-5592	User Accounts	373-4548
9 a.m.-5 p.m., Monday-Friday		User Services	376-3963

OPERATING HOURS

	Cyber 74/730	Cray	MERITSS (Cyber 172)	VAX
M-F	8 a.m. - 4 a.m.	8 a.m. - midnight	7:45 a.m. - 1:30 a.m.	8 a.m. - 6 a.m.
Sat	4 a.m. - 5:15 p.m.	8 a.m. - 5 p.m.	7:45 a.m. - 1:30 a.m.	24 hours
Sun	4 p.m. - 1 a.m.	4 p.m. - midnight	4 p.m. - midnight	24 hours

PUBLIC LABS—TWIN CITIES CAMPUS

Location	Batch	Interactive	Micro	Location	Batch	Interactive	Micro
<i>East Bank</i>				<i>West Bank</i>			
Arch 160		X	X	BlegH 140		X	
CentH		X		MdbH		X	
ComH		X		OMWL 2	X	X	
DiehH 270		X		SocSci 167, 1009	X	X	
ElecE 38	X			<i>St. Paul</i>			
EltH 121, 125		X		BaH		X	
EltH N640	X			BioSci 257	X		
ExpE 130	X			ClaOff 125	X	X	
FolH 304a		X	X	McN	X		
FrontH	X	X		NorH 24	X		
KoltH S191	X			<i>Lauderdale</i>			
LindH		X		Users Room	X		
MasCan 39	X						
Mayo D388	X						
MechE 308		X					
MinMet 321	X						
Physics 69	X						
SanfH		X					
TerrH	X	X					
VincH 4		X					
WaLib 204		X					
Zoology	X						

CORRECTIONS

The following are the correct commands for various procedures suggested in last month's *Newsletter* articles.

Business Data Products/Record Manager changes

```
FILE(OLDIS,FO=IS,ORG=OLD)
FILE(NEWIS,FO=IS,ORG=NEW,KL=6,MRL=30,
EMK=YES,RKP=0,RKW=0,MBL=630)
FORM(INP=OLDIS,OUT=NEWIS)
```

Graphics/Phasing Out PLOTPAC and PASPLOT

The commands as printed last month were correct; the following are alternate forms of the commands that will also work.

```
FUTURE,PLOTPAC.
FUTURE,PASPLOT.
```

Graphics/GRIDIT Repair

```
A(GRIDIT=GDXXXXB/UN=YZE6097,PN=SPL)
MNF(B=LGO) or FTN.
COPYBR(GRIDIT,LGO)
LGO.
```

Cray News/Permanent Datasets

```
ACQUIRE(DN=SAM,ID=MYOWNID,TEXT='...')
ACQUIRE(DN=SAM,ID=MYOWNID,
UQ,TEXT='...')
DELETE(DN=SAM)
```

All Systems Bulletins/Family Problems

```
SUBMIT(SAM,MI=74)
JOB(T20,MI74)
RELOAD(MI=74, . . . other parameters)
```

1981 NEWSLETTER INDEX

The index for volume 15 of the UCC Newsletter (1981) will appear in the February issue of the *Newsletter*.

University Computer Center Newsletter

User Services
227 Experimental Engineering
University of Minnesota
208 Union Street SE
Minneapolis, Minnesota 55455

UNIVERSITY ARCHIVES
11 WALTER LIBRARY
UNIVERSITY OF MINNESOTA
EAST BANK
117 PLEASANT STREET SE
MINNEAPOLIS MN

55455