University Computer Center Newsletter

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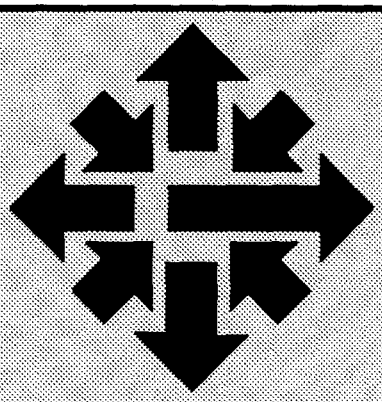

WELCOME

1985-86 BRINGS CHANGES TO UCC

As the new academic year begins, the University Computer Center (UCC) begins a year of important changes, including new operating systems, new supercomputers, and new locations for some of our offices and services. This article describes some of those changes and outlines our systems and services; more changes are described in other articles in this issue.

NOS 2 on MERITSS

Both MERITSS computers, the CYBER ME and MD, were converted to the **NOS 2** operating system this summer. Experienced student users of the MERITSS systems will notice very few differences between NOS 2 and the old operating system (NOS 1.4), but the new operating system will provide many advantages for users in general. NOS 2 will allow UCC to run new and sophisticated CDC software, permit the systems to handle more jobs and more files at one time, and make the transition to the new telecommunications service smoother.

We will upgrade the CYBER CA to NOS 2 on December 15. Watch future issues of this *Newsletter* for more information on the CA upgrade.

Some of the most important differences between NOS 2 and the previous system are described in the on-line documents WRITEUP(NOS2) and WRITEUP(NOS2DOC) on the ME and MD. For additional information, see the section in this article on documentation.

UCC Leaves Experimental

The venerable **Experimental Engineering** building, long one of UCC's homes, is scheduled for demolition in October to make way for the new Electrical Engineering and Computer Science Building, so all of the UCC offices and services once located there have moved elsewhere.

Our administrative offices have moved to 5 Wulling Hall (86 Pleasant Street SE, East Bank). Among our other offices and services now located in Wulling are our accounting offices (Room 7), our Professional Services Division (Room 30), the Scientific Programs Librarian (Room 40B), and the Statistics Software Manager (Room 30).

The I/O Station, formerly in 131 Experimental, has moved to 128B Lind Hall. The UCC Reference Room is now right next door in 128A Lind Hall. In-person consulting has also moved to 128 Lind Hall.

The UCC **phone numbers** most frequently called have remained the same. Consult the numbers listed in the back of this issue for any changes that might affect you. UCC's new campus mailing address is 5 Wulling Hall, 86 Pleasant Street SE.

Hardware

UCC's **central configuration** includes three Control Data CYBER computers. The CYBER CA, now running the NOS 1.4 operating system, is our principal batch and interactive processor for research and public service use and also serves as a front-end processor for our supercomputers. The other CYBERs, the ME and MD, both now running NOS 2, provide instructional computing through the Minnesota Educational Regional Timesharing System (MERITSS).

UCC also operates a Digital Equipment Corporation VAX-11/780, running the VMS 3.6 operating system. The VAX is a principal processor for graphics and text processing and is also a front-end processor for the supercomputers.

UCC now operates two **supercomputers**: a CRAY-1 and a CYBER 205, making Minnesota the only university in the world to provide services on two supercomputers. During 1985-86, the CRAY-1 will be replaced by two CRAY-2 machines, each more powerful than the CRAY-1.

Services

UCC provides a number of **consulting** services. For immediate answers to your computing questions, we provide a telephone service, our HELP-line, from 7 a.m. to 7 p.m., Monday through Friday—call 376-5592. HELP-line consultants answer your questions and, when necessary, direct you to our other consulting services. UCC provides telephone consulting in statistics, data base management, graphics, text processing, and other areas. Consult the phone list at the back of this issue for the numbers and hours of all our phone consultants.

In-person consulting is available daily at 128 Lind Hall. When you stop in to talk to these consultants, please be sure to have all of the relevant information.

UCC **short courses**, another good source of information, are taught by UCC staff on subjects ranging from computer terminology to programming languages. Classes meet for an average of two weeks and the fees are reasonable. More information on fall quarter short courses is available elsewhere in this issue.

UCC's **Reference Room**, 128A Lind Hall, contains a large non-circulating collection of manuals to help you use our operating systems and applications and many books and periodicals related to computing, including UCC publications.

You can buy microcomputers, micro software, documentation and computing supplies from the **University bookstores**. Visit the Electronics Desk in the Minnesota Book Center (Williamson Hall) and the H. D. Smith Bookstore on the West Bank.

Microcomputers

UCC offers a complete range of microcomputing services. Our Microcomputer Systems Group provides telephone **consulting** at 376-4276 (dial DR MICRO); the service is offered from 9:30 a.m. to 12:00 noon and from 1:30 to 4:00 p.m., Monday through Friday.

If you are considering purchasing a microcomputer or micro software, you might try out some of the machines at the microcomputer lab at 125 Shepherd Labs. This lab contains a number of Macintoshes, IBM-PCs, Zeniths, and other micros and a wide range of software for these machines. The Microcomputer Systems staff continuously evaluates new micros and software as it becomes available and can advise you on the system that best meets your needs.

Through the University's on-going **discount program**, you can purchase some brands of microcomputers and micro software (including Macintoshes, IBM-PCs, and Zeniths) from the University bookstores at a considerable saving. Current product and price lists are available at the Electronics Desk in the Minnesota Book Center (Williamson Hall), in the H. D. Smith Bookstore, and at the microcomputer lab in 125 Shepherd Labs.

The Microcomputer Systems Group also publishes its own **newsletter**, and, if you are interested in microcomputers, you should be receiving it. Write:

Microcomputer *Newsletter*
UCC Microcomputer Systems Group
5 Wulling Hall
86 Pleasant Street SE
University of Minnesota
Minneapolis, MN 55455

Documentation

MERITSS users may want to purchase our new *Introduction to MERITSS Computing*, a document that introduces new users to the MERITSS system and also explains some of the differences between the current MERITSS operating system, NOS 2, and the previous system, NOS 1.4.

Users of all our NOS 2 machines may want to consult the Control Data publications that describe the operating system in detail—see the four-volume *NOS Version 2 Reference Set*. New users may find Volume 1 of this set particularly helpful. Experienced users will find Volumes 2 and 3 useful.

If you do not have much experience in computing, the UCC publication *An Introduction to Computing* explains basic concepts and terms.

MERITSS users should also know about the new **EXPLAIN** documentation system. The best way to begin learning about EXPLAIN is to type the command

```
EXPLAIN
```

during an interactive session. Your terminal will immediately display an on-line document that tells you how to use the EXPLAIN utility.

The most important on-line manual on our NOS 2 systems is the EXPLAIN manual COMMAND, which documents all NOS 2 commands, including UCC's additions to the NOS 2 system. (COMMAND replaces the NOS 1 document WRITEUP,CONTROL.) To read COMMAND, type

```
EXPLAIN,M=COMMAND
```

and your terminal will display the first screen of the COMMAND manual, with instructions on how to read further. You can also learn EXPLAIN by reading the one-page UCC Brief *EXPLAIN Information* available at the UCC Reference Room.

CYBER CA users should use the *Guide to CYBER Computing* and its *Supplement*, available separately, which describe how to use CYBER systems running the NOS 1.4 operating system. The *CYBER Guide* will be the best document for the CA until the machine is converted to the NOS 2 operating system in December, at which time the *CYBER Guide* will be replaced by another document now in preparation.

All of UCC's publications and the Control Data publications described here are available for viewing in our Reference Room. You may also purchase your own copies of these and other publications at the Electronics Desk in the Minnesota Book Center (Williamson Hall) and the H. D. Smith Bookstore.

All CYBER users should also know about our **on-line documentation** systems. On the CA, ME, and MD, UCC's extensive library of **WRITEUP** documents is available. Type the command

```
WRITEUP(INDEX)
```

to obtain a list of all WRITEUP documents available from the system. The simple command

```
WRITEUP
```

produces an explanation of how to use the WRITEUP utility. You can also pick up a copy of the one-page UCC Brief *WRITEUP Information* at the UCC Reference Room.

More to Come . . .

Watch future issues of this *Newsletter* for information about upcoming changes in UCC's facilities and services, including the CYBER CA upgrade to NOS 2, new software on our systems, the inauguration of CRAY-2 service, the implications of the new telecommunications systems, and more. It's going to be an exciting year at the University, and through it all UCC will be ready to assist you with your computing needs with a wide range of hardware, software, and services.

Terminal Notes

CHANGES AND PLANS FOR UCC LABS and RJES

Over the summer, we made numerous changes to labs and an I/O station, and we plan more changes in the coming year. This article describes those changes and summarizes some of our plans for them.

I/O Station and Research Cluster

On September 10, 1985, we moved our I/O station and Research Cluster (formerly in Experimental Engineering) to 128B Lind Hall. The services we have provided in the past (e.g., secure bins, the shuttle to Lauderdale, printing, and consulting) will continue to be provided at the Lind Hall location.

We are planning to replace the impact printers in our Lind Hall I/O station with a medium-speed laser printer . We also plan to route some of the MERITSS output to this (and other) medium- and high-speed printers.

MERITSS Labs

We are giving several of the major labs facelifts (carpeting, painting, workstations, new chairs, etc.). Also, in June, we replaced approximately 35 old CRT and printing terminals with Zenith Z-29 CRTs.

During the 1985-86 school year, as the University installs its new phone system, we will upgrade communications in a number of ways that should improve baud rates (i.e., character transmission rates) for most of the lab terminals.

New Micro Lab

In addition to the MERITSS facilities in 9 Walter Library, a new supervised micro lab (featuring Macintoshes and Zeniths) is being planned for that site. Access and use policies in this lab will be similar to those at UCC's other micro lab in Folwell Hall.

(J. Larson)

Consulting

IN-PERSON CONSULTING

UCC's general consulting service provides in-person assistance on all our systems in 128 Lind Hall from 10 a.m. to 4 p.m. weekdays and from 7 p.m. to 9 p.m. on Tuesdays during the fall quarter.

The general consultants can deal with most of the problems you encounter. If your problem is fairly complex, check the expertise code under each consultant's name–listed in WRITEUP(CONSKED)–for specialized service. We ask you to bring your program listing, output, and computer job dayfile when you seek help. This makes the problem-solving process easier for everyone involved.

(P. Oberg)

Math and Statistics Packages

SPICE2 AND MINOS 5 UPGRADED

On July 31, UCC modified SPICE2 so that it now requests additional memory as needed.

On August 14, UCC replaced MIN5LIB (MINOS 5 Library) with a corrected version that fixes all known problems.

(M. Frisch)

CRAY News

CRAY STATION UPGRADE

The CRAY Station on the CYBER 845 (CA) will be upgraded to V1.13 on October 6, 1985. The upgrade will permit a faster file transfer rate between the CRAY and the CYBER. These changes, which may affect how some users use the station, are described below.

The dayfile message that indicates the successful transfer of a file between the CRAY and the CYBER will include the name of the module that issues the message.

The current dayfile message is of the form

```
DATASET - nnnnnn, 0000000000 WORDS, eeeeee.eee SECS.
```

and it becomes

```
xxx: DATASET nnnnnn, 0000000000B WORDS, eeeeee.eee SECS.
```

where

x = module name, SCO, SCI, CDI or CDO
n = dataset name
0 = number of words transferred (in Octal)
e = data transfer rate.

The CRAY commands CJOB and CSTATUS are modified to include more parameters. The new formats are:

```
CSTATUS [,q[,q...]][,ST=start][,L=lfn][,RT=time]
```

and

```
CJOB,jobnm,jsq[,L=lfn][,RT=time]
```

where

q	=	Queue Specifier (A,I,O,E,R,S,W)
start	=	Queue entry number to start display
lfn	=	Name of local file to which status output is written. Default LFN is *OUTPUT*
time	=	Repeat time in seconds. If specified, the status will repeat every *TIME* seconds. Default is no repeat, i.e., only one status is done.
jobnm	=	CRAY job name
jsq	=	CRAY job sequence number

For example, to print out the status of a dataset AYSYXXX every 10 seconds and put the output into a file CRAYOUT, you can use

```
CSTATUS,AYSYXXX,L=CRAYOUT,RT=10.
```

To stop the process, the *STOP* command should be used.

The error messages are changed accordingly. For CSTATUS, the message is

```
UNRECOGNIZED CSTATUS PARAMETER, MUST BE A,E,I,O,R,S,W,ST=,L=,OR RT=
```

For CJOB, the message is

```
UNRECOGNIZED CJOB CALL. FORMAT OF CALL IS CJOB,jobnm,jsq[,L=lfn]
[,RT=secs].
```

(E. Cheng)

CLEAN77 INSTALLED ON THE CRAY

CLEAN77, a program from Purdue University to reformat and clean up FORTRAN source code, has already been installed on the CYBER systems at UCC. Now it is also available on the CRAY. CLEAN77 can process both FORTRAN-77 and FORTRAN-66 programs. It can accept commands from a separate COMMAND file, indent IF - THEN - ELSE blocks, add blank comment cards before and after comment statements, and control the number of characters per line.

Information on using CLEAN77 is available in a 10-page document you can obtain with the command:

```
WRITEUP(CLEAN77)
```

This sample SUBMIT job shows how CLEAN77 transforms a program into a more readable form.

```
/JOB
DUKE,T50,STMCR.
USER,0,0.
JOB,T=50.0.
/ACCOUNT
*     THIS JOB TESTS CLEAN77 ON CRAY.
FETCH,DN=PROOLD,UQ,ED=10,TEXT='ACQUIRE,PROOLD.CTASK.'.
CLEAN77,N=PRONEW,P=PROOLD.
DISPOSE,DN=PRONEW,DC=ST,TEXT='CTASK.RETAIN,PRONEW.',WAIT.
EXIT.
DISPOSE,DN=PRONEW,DC=ST,TEXT='CTASK.RETAIN,PRONEW.',WAIT.
/EOR
```

The program in PROOLD is

```
      PROGRAM TRIAL
C     HOW NICE CLEAN77 IS ???
      READ(5,91)A,B
   91 FORMAT(2F8.2)
      CALL SETC(A,B,C)
      WRITE(7,91)C
      STOP
      END
      SUBROUTINE SETC(A,B,C)
      IF(A.GT.0.0)THEN
      IF(A.GT.B)THEN
      C=A
      ELSE
      C=B/A
      ENDIF
      ELSE
      C=-A/B
      ENDIF
      RETURN
      END
```

The program in PRONEW is

```
      PROGRAM TRIAL
C
C     HOW NICE CLEAN77 IS ???
C
      READ (5,10) A,B
   10 FORMAT (2F8.2)
      CALL SETC (A,B,C)
      WRITE (7,10) C
      STOP
      END
      SUBROUTINE SETC (A,B,C)
      IF (A.GT.0.0) THEN
          IF (A.GT.B) THEN
              C = A
          ELSE
              C = B/A
      ELSE
          C = -A/B
      ENDIF
      RETURN
      END
```

(S. Gavali)

Fall Quarter
SHORT COURSE SCHEDULE

INTRODUCTORY COURSES

PRICES: U. Student = $15, U. Staff = $25, Non-University = $35

Introduction to Computers	Oct 7-18	(MWF)	2:15-4 pm
Beginning NOS 2 (CYBER OS)	Oct 21-Nov 1	(MWF)	2:15-4 pm
XEDIT (CYBER Text Editor)	Oct 22-Nov 7	(TTh)	3:15-5 pm
Introduction to CRAY-1 & COS	Oct 22-31	(TTh)	2:15-4 pm

ELECTIVE COURSES

PRICES: U. Student $25-35, U. Staff = $30-50, Non-University = $50-100

DI3000 Graphics Routines	Nov 4-15	(MWF)	2:15-4 pm	$35,$45,$80
Magnetic Tapes in NOS 2	Nov 12-21	(TTh)	2:15-4 pm	$25,$35,$60
SPSS (Statistics Pkg)	Nov 11-15	(MWThF)	2:15-4 pm	$25,$35,$60
"C" Programming Language	Nov 18-Dec 4	(MW)	2:15-4 pm	$35,$45,$70

MICROCOMPUTER APPLICATIONS

(Limited to 10 per class)

Introduction to Micros: MS-DOS	Oct 15-17	(TTh)	1:15-4pm	
(This course or "equivalent knowledge" is prerequisite for all of the following microcomputer classes.)				
Introduction to Word Perfect, Sec. 1	Oct 29	(Tu)	9:30-Noon	
Introduction to dBase II & III	Nov 5-7	(TTh)	9:30-Noon	(Fees undetermined
Introduction to Lotus 1-2-3	Nov 11	(M)	9:30-Noon	at this time.)
Introduction to Word Perfect, Sec. 2	Nov 13	(W)	1:30-4 pm	
Advanced Lotus 1-2-3	Nov 19	(Tu)	9:30-Noon	

REGISTRATION: Registration is located at the UCC Reference Room, 128A Lind Hall (Hours: 8:00 am to 4:30 pm, Monday - Friday). Mail registrations will be accepted. Deadline for registering is Reference Room closing on the last working day BEFORE class begins. A self-service terminal for registration is located inside the Reference Room. Course fees may be paid by cash, check, or a signed University Journal Voucher. We can no longer charge short courses to UCC user accounts.
REFUND POLICY: NO refunds will be made after the class has begun. Refunds will be made in the same form as the fee was paid, i.e., check, journal voucher. For questions on short courses or registration, call Jerry Stearns, 376-8806. NOTE: November 28 and 29, Thursday and Friday, are University holidays. No classes will be held.

Administrative Information Services Workshop

Administrative Information Services is offering a full-day workshop: "Administrative Office Automation Needs Assessment." This workshop is designed to help administrative decision makers in needs assessment and planning for office automation. Topics covered are: reasons for automating, applications determination, software, hardware, ergonomics, training issues, people issues, and purchasing considerations. This workshop will be given once a month free of charge. The workshop will be given on the following dates: October 2, 8:30 a.m. to 4:00 p.m.; November 6, 8:30 a.m. to 4:00 p.m.; December 4, 8:30 a.m. to 4:00 p.m.

All sessions will be located in 227 Administrative Services Center, 1919 University Avenue. Enrollment at each workshop is limited to 20 people. Contact Denise Wilson at 376-1075 to make a reservation.

For Sale

All of the following equipment is in excellent condition, has been well maintained and is for sale.

Hewlett Packard 268A Laserjet
Laser printer with a Canon print engine. Prints 8 pages per minute on several paper sizes and types, including colored paper, labels, and overhead transparency film. Uses an EP cartridge that contains the toner and all replaceable parts.

ADM 24E Intelligent Terminal
Ergonomically-designed terminal. Twelve-inch green screen. 96-line display memory with one or two user-defined pages. Detached keyboard with separate numeric keypad and eight programmable function keys.

NEC Spinwriter 7725
300/1200 baud printer/terminal with complete keyboard. Bi-directional tractor feed. Several print balls including the math-tech print ball.

For additional information about the above items and their prices, please contact the Department of Math Science on the Duluth Campus. Steve Miller, UMD Math Science, 330 Math-Geology, Duluth MN 55812, 218/726-7664 or 218/726-8254 and leave a message.

TRS model 100 24K Portable Computer
Text editor, BASIC, communications pack, telecommunications, calendar. Cassette data recorder, power pack. Purchased May, 1985; used during the summer only. $450. Call Lois at 376-2838 or 332-1016.

PHONE NUMBERS

Access:
- CYBER(CA)—10, 30 cps.....376-5730
- —120 cps.....376-5706
- MERITSS(ME)—10, 30 cps.....376-7730
- —120 cps.....376-7120
- VAX/VMS(VA)—(autobaud).....376-8070

Accounts:
- MERITSS.....373-7745
- User Numbers.....373-4548

Computer-Aided Instruction.....376-2975
Computer Hours (recorded message).....373-4927
Consulting:
- HELP-line.....376-5592
  7 a.m.–7 p.m., Monday-Friday
- Statistics Packages.....376-1761
  1–2 p.m., Monday-Friday
- Data Bases.....376-1761
  10–11 a.m., Monday-Friday
- Microcomputers.....376-4276
  9:30 a.m.–noon and 1:30–4 p.m., Monday-Friday
- Scribe, Text Analysis & Humanities Computing.....376-2944
  1–3 p.m., Monday, Thursday, Friday

Contract Programming.....376-1764
Data Base Applications.....376-1764
EDUNET Liaison.....373-7745
Engineering Services.....376-1023, 376-8153
Equipment Purchase/Information.....376-8153
Experimental Engineering I/O.....373-4596
Graphics Software.....638-0541
HELP-line.....376-5592
7 a.m.–7 p.m., Monday-Friday
HOURS-line (recorded message).....373-4927
Information, Wulling Hall.....373-8432
Information, Lauderdale.....373-4912
Instructional Labs.....376-2703
Instructional Services.....373-7745
Lauderdale Computer Room.....373-4940
Lauderdale Services.....638-0523
Lauderdale Services Manager.....373-7538
Lauderdale Users' Room.....373-4921
Newsletter Subscription.....376-1491
Permanent File Restoration.....376-5605
Professional Services Division.....376-1764
Project Assistance.....376-1764
Reference Room.....373-7744
Remote Batch (RJE) Services.....376-2703
Short Courses.....376-8806
Shuttle Bus Service.....376-3068
System Status (recorded message).....373-4927
Tape Librarian: see Lauderdale Services

OPERATING HOURS

	CYBER (CA)	Low rate	CRAY (CR)	MERITSS (ME)	VAX (VA)
M-F	7 a.m.-4 a.m.	8 p.m.- 4 a.m.	7 a.m.- midnight	7:45 a.m.- 3:30 a.m.	8 a.m.- 6 a.m.
Sat	4 a.m.- 5:15 p.m.	4 a.m.- 5:15 p.m.	7 a.m.- 5 p.m.	7:45 a.m.- 3:30 a.m.	24 hours
Sun	4 p.m.- 1 a.m.	4 p.m.- 1 a.m.	4 p.m.- midnight	4 p.m.-3:30 a.m.	24 hours

PUBLIC LABS–TWIN CITIES CAMPUS

Location	Batch	Interactive	Micro
East Bank			
Arch 148		X	X
CentH		X	
ComH		X	
DiehlH 270, 207		X	
EltH 121, 125		X	
EltH N640	X		
FolH 14, 14a	X	X*	X
LindH 26		X	
LindH 128B		*	
MechE 308		X	
Physics 69		*	
SafH		X	
TerrH		X	
VincH 4		X	
Walib B9		X	
West Bank			
BlegH 25		*	
BlegH 90	X		
BlegH 140		X	
MdbH		X	
OMWL 2		X	
SocSci 167			X
St. Paul			
BaH		X	
ClaOff 125	X	X	

* Research cluster; access to CYBER CA and VAX/VMS
X in interactive column indicates access to MERITSS

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Michael M. Skow, Acting Director

The *UCC Newsletter* is published monthly by the University Computer Center. Deadline for articles is the 10th of the month preceding publication; deadline for short announcements is the 15th. The *Newsletter* is is produced with an Apple Macintosh running Microsoft Word, MacPaint, and MacDraw software and printed on the Apple LaserWriter.

Comments, suggestions, articles, and announcements should be directed to the editor, 121 Lauderdale Computing Facility, (612) 376-1491.

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University Computer Center Newsletter

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