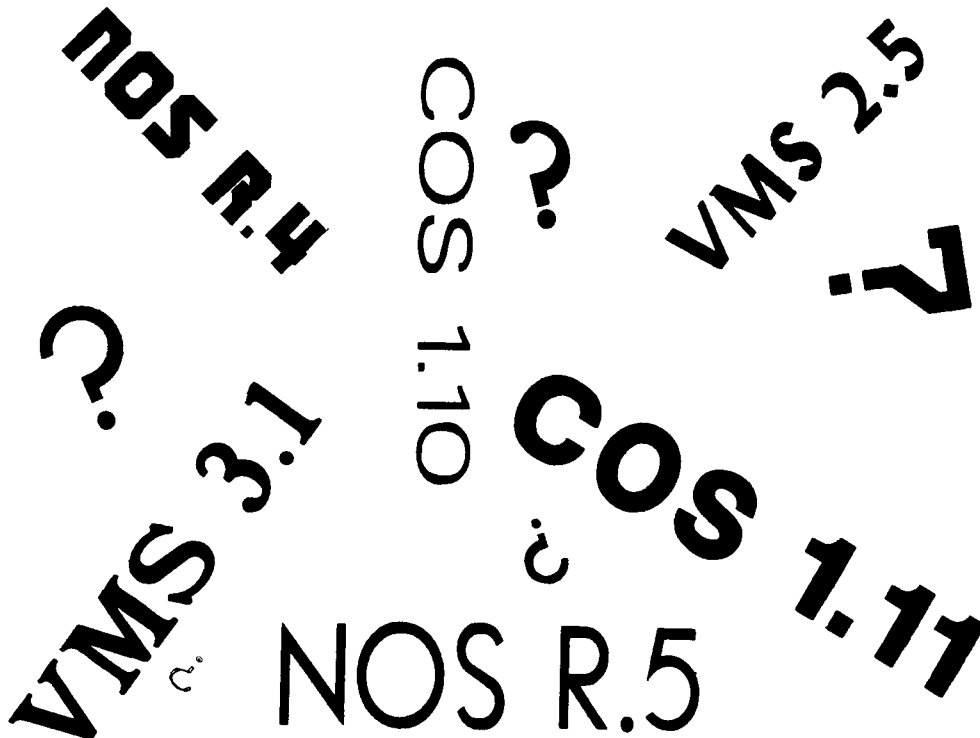
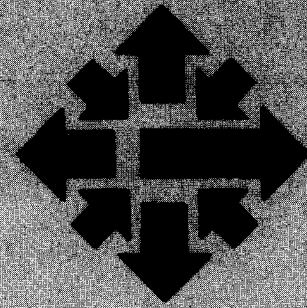


University Computer Center Newsletter

University of Minnesota
Twin Cities

April 1983
Volume 17, Number 4



—Graphic by Harry Hovland

We Did It: System Upgrades Completed

On March 13 and March 20, we successfully completed the upgrades of our VAX/VMS, CYBER, and CRAY systems. Although a few bugs may still exist (check SYSNOTES for information on these), all three are running well. The changes involved in these upgrades were extensively detailed in the March UCC Newsletter. If you do not have a copy, you can pick one up in 140 Experimental Engineering, or you can access the Newsletter in WRITEUP form with the control statement WRITEUP(NLETTER=MAR).

Here's a quick look at the major differences between the old

and new versions on the three systems.

CYBERS: FROM NOS R4 TO NOS R5

- ACQUIRE macro: The macro parameters for ACQUIRE are now identical to those of the ATTACH macro. The MODE parameter is not functional.
- CATLIST statement: NOS R5 prints separate lists (alphabetically by columns) for direct and indirect access files.
- CRAY job submittal structure: The format for jobs submitted from the CYBERS to the CRAY has changed. All jobs

submitted in this way have the same format. Exhibit 1 shows a sample job. This job may be submitted "as is" from a card reader or from an interactive terminal with either a SUBMIT or a ROUTE statement.

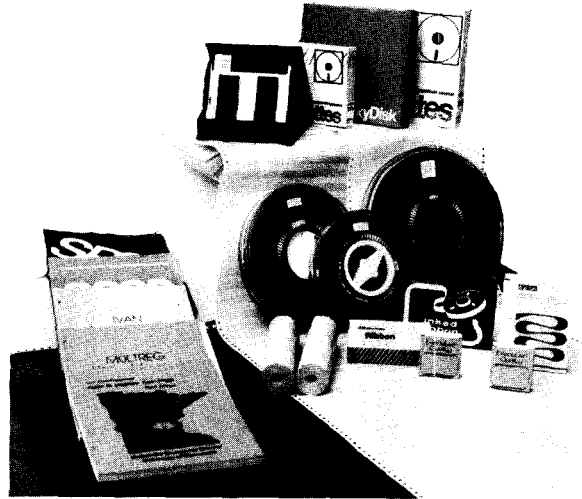
- User ECS (extended core storage) availability: No user ECS is available on CA; 230,000 (octal) words of user ECS are available on CB. In summer 1983, we will eliminate ECS from our CYBER systems. It is too expensive to maintain on our older CYBERS, and it will not work with new

Upgrades to 35

COMPUTER STORE

for all your computing needs

- floppy disks, cards, paper
- short course registration
- microcomputer access cards
- software
- documentation

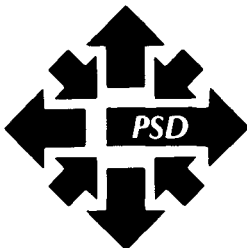


**211 Experimental Engineering
East Bank, University of Minnesota
373-4877**

DATA CARTRIDGES SPECIAL
9½ × 11 FANFOLD PAPER
20# DISSAPERF EDGES
New lower case price

PROFESSIONAL SERVICES DIVISION

graphics development:	computer graphics for data presentation
statistical analysis:	full range of services available
system analysis and design:	analysis of existing systems; design of new systems
financial analysis:	forecasting, accounting
data base development:	design and implementation using state-of-the-art technology
tape conversion:	conversion of off-site tapes to UCC internal format
customized programming:	COBOL, FORTRAN, Pascal for virtually any application
research applications:	scientific or social research environments



If you qualify for a University Computer Center account, and are interested in our services, please contact us.

376-1764 • 227 Experimental Engineering • 208 Union St. S.E.

Upgrades from 33

CDC hardware. The new CYBER 170-800 series machines can simulate ECS, so programs that use it can be changed to use more central memory. If you use ECS, plan now for its eventual disappearance. If you are unsure about how to eliminate your need for ECS, contact K. C. Matthews, 376-9720.

- Family and machine names: You *must* use the new machine IDs and family names on the FAMILY, USER, and SUBMIT statements, at log-in time, and on all other statements with an ST or MI parameter (see Exhibit 2).
- ROUTE statement: We now conform to CYBER standards for ROUTE statement parameters. The ROUTE statement can be used to punch a card deck, print a listing, or submit a job to any of our four large-scale machines. The parameters that have changed and a few examples of ROUTE statements are listed in Exhibit 3. As a convenience to our users, the TID parameter is still honored.
- KCL (KRONOS Control Language): KCL is obsolete; Control Data now supports CCL (CYBER Control Language). We will continue to support both until we convert to the *next* release of NOS, but we urge you to convert all KCL procedures to CCL as soon as possible. For more information, see WRITEUP(UPGRADE=KCL).
- QUEUE utility: This utility has *not* been eliminated as planned earlier. Interactive inter-machine job status remains available.
- Several UCC-written control statements have been renamed because they now have CDC-standard NOS equivalents. They are listed in Exhibit 4.

CRAY: FROM COS 1.10 TO COS 1.11

In addition to the structure of CYBER-CRAY job submissions mentioned above, the new version of the CRAY operating

Exhibit 1. CYBER to CRAY Job Submittal Structure

```
JNAME(STMCR)
USER(usernumber,password,family)
BIN(ex,014)
JOB,JN = jobname,T = 1000,US = whatever.
ACCOUNT,AC = accnumber,PW = craypassword.
ACQUIRE,DN = fname,UQ,ID = id,TEXT = 'ATTACH,fname.CTASK.'.
DELETE,DN = fname,NA.
CFT.
LDR.
— EOR—
... program, data, etc. ...
```

Exhibit 2. Machine ID and Family Name Changes

	NOS R4	NOS R5
MACHINE ID	64	ME
	72	CA
	74	CB
	CR	CR
	(VAX— no ID)	VA
FAMILY NAME	C172	CA
	C74	CB

Exhibit 3. ROUTE Parameter Changes and a Few Examples

NOS R4	NOS R5	R5 USE
MI = xx	ST = Mxx	Machine name
UN	RUN*	Remote user number
PW	RPW*	Remote password
CN	RCN*	Remote charge number
PN	RPN*	Remote project number
(none)	RFM*	Remote family name
TID	UN	Output site

*Remote parameters are for use in ROUTE statements from MERITSS to the CYBERS *only*.

ROUTE(FILE,DC=PR,TID=EA)

may still be used in place of the more proper

ROUTE(FILE,DC=PR,UN=EA)

ROUTE(FILE,DC=PR,UN=CYBERUN,PW=CYBERPW,MI=74)

must be changed under NOS R5 to

ROUTE(FILE,DC=PR,RUN=CYBERUN,RPW=CYBERPW,ST=MCB)

ROUTE(FILE,DC=IN,MI=72)

must be changed under NOS R5 to

ROUTE(FILE,DC=IN,ST=MCA)

Exhibit 4. Renamed UCC Control Statements

OLD	NEW	Meaning
RWF.	REWIND(*)	Rewind all local files
RTF.	RETURN(*)	Return all local files
ULF.	UNLOAD(*)	Unload all NODROPEd files

system (COS 1.11) includes the following features:

- The user number, password, and family parameters are remembered by the COS system and are used on all COS ACQUIRE and DISPOSE statements in their TEXT parameter. This eliminates the appearance of CYBER passwords in the CRAY job logfile.
- A symbolic interactive debugger (SID) that can also be used for batch jobs. It is described in CRAY manual SG-0056, *Symbolic Interactive Debugger (SID) User's Guide*.
- An OPTION control statement.
- A new job name and user number (JNU) option on the CHARGES statement.
- LDR can handle relocatable overlays (partially relocated modules) and has a SID=string parameter for symbolic debugger loading.

- A SUBMIT control statement replaces DC=IN on DISPOSES.
- UPDATE has a new declared modifications option and inputs (DC).
- A CONTRPV macro continues normal job processing from within a relieve subroutine.

For additional information on this upgrade, see WRITEUP(CRAYINF).

VAX: FROM VMS 2.5 TO VMS 3.1

While our earlier announcements stated that we would be upgrading from VMS 2.5 to 3.0, we decided to take the extra step to 3.1 since it is primarily a bug-fix release. The most important changes include the following:

- EDT is the default editor.
- Both phone numbers (376-9770 and 376-8070) work at both 300 and 1200 baud. They automatically determine your terminal speed up to 1200 baud.

- HELP lets you move interactively through the tree of documentation.
- The SEARCH, PHONE, SHOW USERS, and SET PROCESS/NAME commands replace the SEARCH, MCR TALK, MCR USERS, and SETNAME programs respectively. (The SEARCH command is more powerful than the SEARCH program.)
- The appearance of SHOW TERMINAL, DIRECTORY, DIFFERENCES, and DUMP output has changed.
- MOUNT has a /COMMENT="message" qualifier.
- SUBMIT has /NODELETE and /NOPRINT qualifiers.
- The SPAWN command lets you run a command while you do something else and allows you to interrupt a running program without interfering with it.
- New versions of FORTRAN, COBOL, and Pascal.

For more information about these changes, watch VMS sysnotes or call Stuart Levy, 376-5606.

BUYING AND MAINTAINING COMPUTER EQUIPMENT

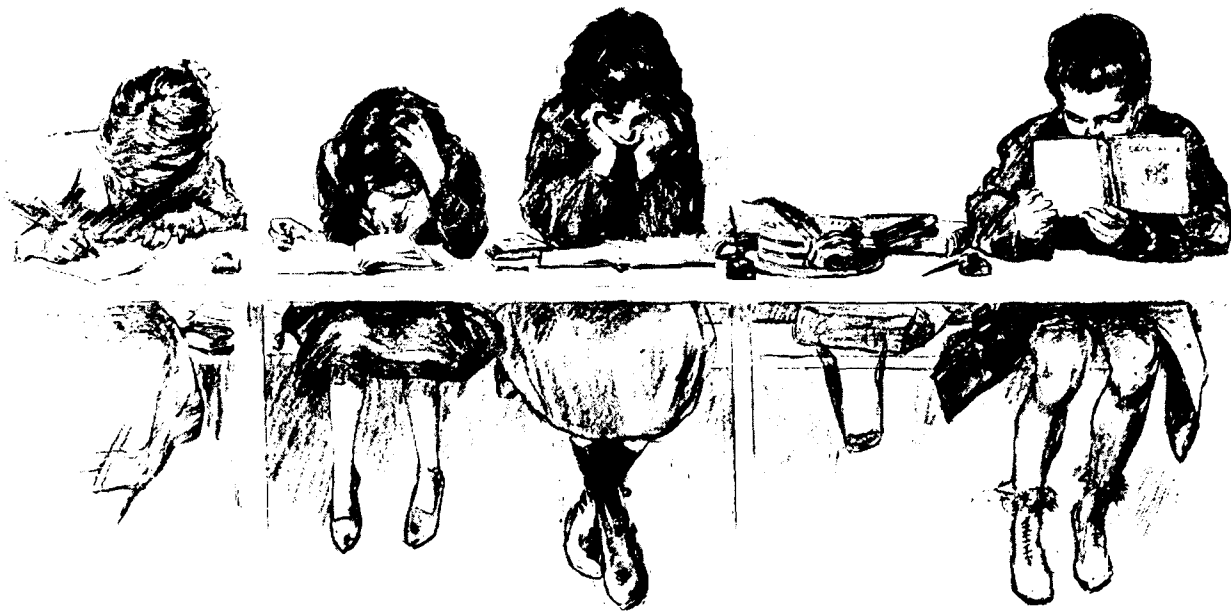
The University Computer Center's Engineering Services division services and provides a means of buying a variety of computing equipment. We have purchasing agreements with vendors for the purchase of microcomputers, hard copy and interactive terminals, acoustic couplers, printers, and modems. The majority of these agreements are available to University departments ordering with a valid University budget number. The vendors for the IBM Personal Computer and the Xerox 820-II, however, have extended their terms to University faculty and staff with certain provisos. For more information about the equipment available and sample requisition forms, call Dan Whealdon, UCC Engineering Services, 376-8153.

If you already own or are thinking about purchasing computing equipment, you might also consider investing in a service contract. Service agreements guarantee that your equipment, once you purchase it, is maintained in good operating condition. An extensive description of our maintenance and service policies is available from Dan Whealdon.

A service contract with UCC means that Engineering Services will install your equipment, deal with vendors during the warranty period, and provide preventive and remedial maintenance. Our rates usually represent a considerable savings when compared with those of other vendors, since they cover the cost of service but don't

represent any profit for us. The rates detailed in the Engineering Services policy statement are applicable to equipment owned by University departments and by State or non-profit agencies that use the equipment in conjunction with UCC's systems. Rates for the maintenance of equipment operated by other governmental or non-profit agencies not meeting this criterion are negotiated when appropriate.

All service agreements are written on an annual basis and charges must be prepaid in full at the beginning of the agreement period, although exceptions can be made to coincide with the period of a grant. Service rates are subject to change each fiscal year. For more information, call Dan Whealdon, 376-8153.



Computing by the Book

Computing is here to stay. If you doubt it, just pay a visit to your friendly neighborhood bookstore: the publishing world has discovered computing and is rushing to fill the void with everything you wanted to know and then some.

The books are aimed at everyone from amateurs to professionals, computerphobes to computerphiles, children to teens to adults. All you must do is figure out where you fit in the picture, pay a visit to the bookstore or library, and go to it. Here are a few books you might find interesting, provocative, or helpful. For the sake of your pocketbook, we've listed only paperback editions unless otherwise noted. The books are listed alphabetically by author within specific categories.

General

Computer Choices: Beware of Conspicuous Computing, H. Dominic Covvey and Neil Harding McAlister (Addison-Wesley, \$8.95). Discusses the pros and cons of computing in the eighties.

Discovering Computers, Mark Frank (Stonehenge Press, \$9.95 cloth). Recounts the evolution of computers from large scientific

experiment to small unit used every day. Prepared in association with the American Museum of Natural History. *Bits, Bytes and Buzzwords*, Mark Garetz (dilithium Press, \$7.95). Attempts to demystify computers and define the jargon of the field.

The Soul of a New Machine, Tracy Kidder (Avon, \$3.95). How a new computer was created; 1982 Pulitzer Prize winner. *Understanding Computer Systems*, Harold Lawson (Computer Science Press, \$11.95). Ties computers to everyday events to help you understand how they work.

Electronic Nightmare: The Home Communications Set and Your Freedom, John Wicklein (Beacon Press, \$8.95). Discusses the dangers new communications techniques pose to our traditional freedoms.

Microcomputers/Word Processors

The Penguin Book of Microprocessors, Anthony Chandor (Penguin, \$5.95). Explains new words and phrases microcomputers have added to the language.

Choosing a Word Processor, Philip Good (Reston/Prentice-Hall, \$12.95). Designed to help you

decide what machine is best for your use, whether at home or in an office. Compares 157 features available from 21 different computer systems.

A 60-minute Guide to Microcomputers, Lew Hollerbach (Prentice-Hall, \$6.95).

Understanding both the professional and personal uses of micros.

An Introduction to Microcomputers, Volume O: The Beginner's Book, Adam Osborne and David Bunnell (Osborne/McGraw-Hill, \$12.50).

Describes microcomputers, how they work, and the technical principles behind their operation. Also provides an introduction to programming languages.

Low Cost Word Processing, Laurence Press (Addison-Wesley, \$10.95). Discusses word processing options available on microcomputers.

Your First Computer, Rodney Zaks (Sybex, \$8.95). How to understand, buy, and use small computers for personal and business applications.

Business/Graphics

The Data Base Guide, Charles Benton (Brady/Prentice-Hall, \$19.95). How to select, organize, and implement data base systems

for microcomputers.

Computer Animation Primer, David Fox and Mitchell Waite (McGraw-Hill/BYTE, \$18.95).

Tools and techniques for programs that create movement on computer screens.

The Computer Image:

Applications of Computer Graphics, Donald Greenberg, Aaron Marcus, Allan H. Schmidt, and Vernon Gorter (Addison-Wesley, \$27.95 cloth).

Introduction to computer graphics.

Management Information Systems, Donald W. Kroeber (Free Press/Macmillan, \$17.95 cloth).

How to use and manage computer information systems for productivity.

Programming Languages

From BASIC to PASCAL, Ronald W. Anderson (Tab, \$10.95). How to translate BASIC programs to PASCAL.

LOGO: An Introduction, Dr. J. Dale Bennett (Creative Computing Press [Ziff-Davis], \$7.95). A step-by-step introduction to LOGO.

Simple Pascal, James J. McGregor and Alan Watt (Computer Science Press, \$12.95). Teaches Pascal to beginning students, programmers, and hobbyists through examples.

The PASCAL Handbook, Jacques Tiberghien (Sybex, \$19.95). A reference volume designed to help you understand the language.

Introduction to PASCAL (Including UCSD PASCAL), Rodney Zaks (Sybex, \$15.95). A guide to the language.

In addition to these, Addison-Wesley publishes a series of spiral bound *Pocket Guides* that sell for \$6.95 each. They include:

Pocket Guide to WORDSTAR, Anthony Bove and Cheryl Rhodes
Pocket Guide to FORTH, Mitch Derick and Linda Baker

Pocket Guide to BASIC, Roger Hunt

Pocket Guide to FORTRAN, Philip Ridler

Pocket Guide to Pascal, David Watt

Pocket Guide to COBOL, Ray Welland

Games/Kids

Kids and Computers: The Parent's Microcomputer Handbook, Dr. Eugene Galanter (Putnam, \$7.95).

How to understand micros in order to enhance children's learning experience.

What Makes a Computer Work?

Dan Halacy, illustrations by Nathan Goldstein (Little, Brown, \$5.95 cloth). Explains the

workings of computers for children.

All About Chess and Computers, David Levy and Monroe Newborn (Computer Science Press, \$19.95 cloth). Contains all other books on this subject from the publisher plus 24 new games.

Mindstorms: Children, Computers, and Powerful Ideas, Seymour Papert (Basic Books, Inc./Harper Colophon Books, \$6.95). All about LOGO— how it was invented and how it works.

(Contributors to this article were Michael Collins, Brian Cook, Bob Gordon, Chris Gordon, Sara Graffunder, Andy Mickel, Cheryl Vollhaber, and Vicky Walsh)



SYSTEM NEWS/NOTES

Microcosm

MICRO USERS GROUP FORMS

A University Microcomputer Users Group is being formed to act as a forum for users to discuss and solve common problems. Among the concerns such a group might address are:

- The resale of hardware and software.
- Distribution of user contributed software.
- University purchase agreements with hardware and software vendors.

- The type and content of courses and training available at the University.
- UCC's support of micro hardware and software.

If you use a micro now or expect to do so in the future, please attend an organizational meeting for this group on Thursday, April 7, at 3:30 p.m., in 211 Nicholson Hall on the Minneapolis east bank campus. Refreshments will be served.

(Michael Collins)

FLASH: NEW UNIVERSITY Z-100 PURCHASING AGREEMENT

The University of Minnesota now has an arrangement to purchase Zenith Data Systems Z-100 microcomputer systems. A Z-100 with 128K of memory, two disks (5¼" 320K), two serial ports, parallel port and high resolution graphics, with basic software costs less than \$3000.

Call the Microsystems Group (376-4276 10-12, 2-4 Monday through Friday) or Engineering Services (376-8153) for details.

CYBER Notes

CORRECTION: NOS R5 AND KCL

In the NOS R5 conversion article (March Newsletter), an error occurred in the discussion of KCL. We will continue to support the KCL statements IF, GOTO, GOFO, and CALL until we convert to the next release of NOS (September 1984 at the earliest). When we decide to go to that release, we will determine whether it is practical or necessary for us to reinstall any KCL statements that CDC is removing. *(Donald W. Mears, Jr.)*

R5 UPDATE FOR CYBER GUIDES

With the March 20 change to NOS 1.4-552 (R5) on our CYBER systems, some information in the CYBER Batch and Interactive Guides related to ROUTE, FAMILY, MI (machine ID), ECS, and CRAY job submittal has changed. We have prepared an update sheet for the Guides that briefly explains these changes and refers you to more complete information.

If you already have a Batch or Interactive Guide, pick up a free update sheet in 140 Experimental Engineering. If you purchase a Guide, an update sheet is included. *(Mary C. Boyd)*

COBOL 4 TO BE REMOVED IN FALL

We will remove the COBOL 4 compiler from the system at the beginning of fall quarter 1983. You must convert your COBOL 4 programs to COBOL 5 by then. If you have questions about this change or need assistance, call our Information Management Systems Group at 376-1761. COBOL 5 documentation is available at the Computer Store. We will also remove CYBER Record Manager Advanced Access Methods Version 1 in the fall. *(Steve Reisman)*

CDC SUPPORT FOR FTN ENDS IN JUNE

Control Data Corporation (CDC) is removing support for FTN, FORTRAN Extended Version 4, on June 30, 1983. This means that no corrections will be made to

the FTN compiler after that date. While FTN will still be available at UCC for many years, we cannot guarantee that FTN programs will work on future releases of NOS (the Control Data CYBER Network Operating System).

We strongly recommend that you develop new programs in FTN5 or M77 and convert MNF and FTN programs as time permits. Conversion may be as simple as compiling your program using one of the compilers that conforms to the new standard and checking for correct results. If, however, you must make some changes to the program, F45, a conversion aid, may prove helpful (especially with long programs). The *F45 Reference Manual* is available for use in our Reference Room, 140 Experimental Engineering (it cannot be checked out, however). Differences between MNF and M77 are documented in WRITEUP(M77).

While you are converting your programs, you may want to make them conform to ANSI standards. This makes them more portable

and makes any future conversions easier. Non-standard statements can be detected by using the EL=0 parameter on the M77 control statement or the ANSI parameter on the FTN5 control statement. For more information or assistance, call Janet Eberhart, 373-5907. (Janet Eberhart)

VAX Service

VMS/XEROX 9700 BUGS

We are going to fix some bugs in the way plain text files ENQUEUE to the Xerox 9700 laser printer. Currently, if you print text files on the Xerox from VMS, you may have encountered the unusual behavior of underscore characters: wherever they appear, text is italicized instead of underlined. On April 4, this will change so that underlines are printed as underlines by default. To restore their italicizing function, use the /ITALICIZE qualifier on the ENQUEUE X9700 command.

You may also have noticed that some special characters do not print properly at the present time (they appear as blanks). They will print correctly after the bugfix. For more information on both changes, enter the command:

morehelp X-9700 special_effects

These changes affect only text files enqueued from VMS, not Scribe files or text files from the CYBERS. (Stuart Levy)

Grants for Research

PRIMER AVAILABLE LATE APRIL

To assist our users and prospective users in getting funds for computing, we have prepared a compendium of information that deals with grant proposal preparation. Sections on UCC grants and services, hardware and software, guidelines for proposal writing, and a bibliography of selected readings are included. For your copy, call Vicky A. Walsh, 373-5780. (Vicky Walsh)

Non-Traditional Computing

LECTURE SERIES: COMPUTING AND ART HISTORY

Professor Sheila McNally, Department of Art History, will lecture on "The Development of a City: Akhmim, Egypt" on Wednesday, April 6, at 3:15 p.m. in 204 Folwell Hall. Anyone interested in the uses of computing in non-traditional fields is welcome to attend.

MICROS AND HUMANITIES

The UCC Non-Traditional Computing staff plans to examine the use of microcomputers for humanities and related applications to better assist the variety of users in our area. We will look at various microsystems and software packages during the coming year and would like your assistance. If you use a micro to teach or do research in a non-traditional field and would like to

participate in our research, please call Vicky A. Walsh, 373-5780. (Vicky Walsh)

PROGRAM NOTES

We have received a bibliographic data base management program from the University of Nottingham (England) that is designed for use with personal data bases. After we have modified it to run on the CA machine, we'll give you more information on what it does and how to use it. The program will be available late in spring quarter.

From time to time, we'll pass on brief announcements of innovative programs developed at the University. Two recent examples are a content analysis program developed by Professor Donald G. McTavish in the Department of Sociology and a program to evaluate formal grammars designed by Professor Michael B. Kac in the Department of Linguistics. For additional information about either of these programs, call Tom Rindfleisch, 376-2944.

CONFERENCE ON SIMULATION AND GAMING

The Center for Ancient Studies at the University of Minnesota is sponsoring a Conference on Simulation and Gaming in Ancient Studies May 6 and 7 at the Nolte Center. It will include sessions on simulations in ancient history and archaeology. Contact Guy Gibbon, Center for Ancient Studies, 205-1/2 Folwell Hall, for more information.

CEE SHORT COURSES

The following Professional Improvement Courses are offered through the University's Continuing Education and Extension Division. For information on how to register for these classes, call 373-3195.

PIC 0504	Computing: What Is It? (Sara Graffunder) March 29-April 12 (TTh)	6:15-8 p.m.	\$40
PIC 0505	Pascal for Programmers (Rick Marcus) April 19-May 12 (TTh)	6:15-8 p.m.	\$60
PIC 0506	Personal Computers: A Perspective on Microcomputing (Mark McCahill) April 4-May 2 (M)	6:15-8 p.m.	\$40

SPRING QUARTER SHORT COURSES

INTRODUCTORY COURSES

Prices: U. student \$10, U. staff \$20, Non-University \$30

- 101 Introduction to Computer Terms (Jerry Larson)
April 4-8 (MWF) 3:15-5 p.m.
- 020 A Taste of Computing (Staff)
April 11-15 (M-F) 3:15-5 p.m.
- 050 NOS (CYBER operating system) (Rich Franta)
April 18-May 4 (MWF) 3:15-5 p.m.
- 080 Introduction to Microcomputers (Mark McCahill)
April 19-May 3 (TTh) 3:15-5 p.m.
- 040 Introduction to VAX/VMS (Linda Merims)
April 19-May 5 (TTh) 2:15-4 p.m.
- 055 Interactive System Commands (Rich Franta)
May 3-12 (TTh) 3:15-5 p.m.
- 100 Text Editing at UCC (Simin Hickman)
May 9-23 (M) 3:15-5 p.m.
- 150 Introduction to Programming (Rich Franta)
May 16-27 (MWF) 3:15-5 p.m.
- 110 Text Formatting at UCC (Elaine Collins)
May 17-26 (TTh) 3:15-5 p.m.
- 130 XEDIT (Mary Boyd)
May 17-26 (TTh) 2:15-4 p.m.

ADVANCED COURSES

Prices: U. student \$20-30, U. staff \$30-50, Non-University \$50-100

- ^620 LISP (Armand Prieditis)
April 4-6 (MTW) 3:15-5 p.m. \$20-\$30-\$50
- 510 Introduction to System 2000 (Cheryl Vollhaber)
May 9-25 (MWF) 3:15-5 p.m. \$30-\$40-\$50
- 530 SPSS (statistics package) (Pat Bland)
May 9-12 (MWTh) 2:15-3:30 p.m. \$20-\$30-\$50
- 600 Beginning FORTRAN (Janet Eberhart)
May 9-20 (MWF) 3:15-5 p.m. \$25-\$35-\$60
- 640 Introduction to Pascal (Michael Collins)
May 10-26 (TTh) 3:15-5 p.m. \$20-\$30-\$50
- 520 SIR (data base management) (Brian Cook)
May 16-27 (MWF) 3:15-5 p.m. \$30-\$40-\$60
- 580 Graphics (John Cornelison)
May 17-26 (TTh) 3:15-5 p.m. \$20-\$30-\$60

NOTE: Caret (^) indicates a new course.

HOLIDAY: Monday, May 30 is a University holiday. No classes will be held.

REGISTRATION: Register at the UCC Computer Store, 211 Experimental Engineering; a self-service terminal is located outside the Store. We accept mail registrations for an additional \$1 fee per class. You may pay course fees with cash, check, University journal voucher, or charge them to your non-instructional UCC user account.

REFUND POLICY: No refunds will be made after a class has begun. Refunds are made in the same form as the fee was paid, i.e., check, journal voucher, UCC account credit.

If you have questions about short courses or about registration, call Jerry Stearns, 376-8806, or see WRITEUP(CLASSES) on the MERITSS or CYBER systems.

ADVANCED TELL-A-GRAF SEMINAR

If you're familiar with TELL-A-GRAF basics and would like a guided tour through its options to find out what they can do for you, come to our special Advanced TELL-A-GRAF Seminar. It will meet from 3:15-5 p.m. on Friday May 20, Monday May 23, and Wednesday May 25.

We'll assume you know how to generate a basic graph and go on to explore the possibilities for graph annotation, page layout, and file handling. Advance registration is required. The fee is \$20 for University students, \$30 for University staff and faculty, and \$50 for non-University participants. Mail your registration to:

TELL-A-GRAF Seminar
227 Experimental Engineering
208 Union Street SE
Minneapolis, Minnesota 55455

For more information, call the TELL-A-GRAF/DISSPLA help-line, 376-2663, from 1-3 p.m. Tuesdays and Thursdays.

All Systems Bulletins

WEST BANK RESEARCH CLUSTER MOVED

To make the West Bank Research Cluster more convenient, we have moved it from Social Sciences 167B to Blegen Hall 25, the Social Sciences Research Center (SSRC).

The cluster is composed of three VT100 graphics terminals that can be connected to either the CYBER research network or the VMS VAX. We will install an Epson MX-100 printer when interfacing problems have been worked out. Connect time from these terminals includes a \$1.55

surcharge. The terminals are limited to use by graduate students, faculty, and staff accounts; undergraduate student accounts are not approved to use them.

The SSRC is always open from 8 a.m.-4:30 p.m. Monday through Friday: You no longer have to check out a key to use the terminals. Other hours depend on staffing, although we expect the cluster to be open until 10 p.m. most evenings. Call 373-5599 outside regular business hours to check if the cluster is open. (*Joe Cornell*)

DEMISE OF THE 1004 RJE STATIONS: A REMINDER

We will remove all remaining Univac 1004 RJE's from service on July 1, 1983. SUPIO, the UCC software required to drive the 1004s, is non-standard and difficult to maintain through system and hardware upgrades. Our records also show that RJE use continues to decrease as interactive use grows. So don't be surprised when the venerable 1004 workhorses are retired in July. (*Richard L. Hotchkiss*)

CRAY News

CFT COMPILER UPGRADE

On Sunday, April 24, the CRAY CFT 1.10 "77 standard" compiler now available as FUTURE,CFT will become the default CFT compiler called by the CFT control statement. The current CFT 1.09 compiler will be available as PAST,CFT.

Virtually all programs that compiled under CFT 1.09 should compile under CFT 1.10. For the few esoteric incompatibilities, see WRITEUP(CRAYUSE=CFTDIFF). If you have any questions or problems, call Susan Steffen, 376-5602.

HELP WANTED: VAX/VMS PROGRAMMER/ANALYST

A Minneapolis-based management consulting firm seeks a programmer/analyst with experience on a DEC VAX with VMS. Experience with fourth generation languages a definite plus. Position requires travel during system installation and training phases of client projects. Please send resume to:

Keith-Stevens Inc.
9531 West 78th Street
Eden Prairie, Minnesota 55344
Attention: Keith Capehart

FOR SALE

Olivetti TES 501 word processor: 21-character display; dual diskette drives; 55 cps daisywheel printer, 10 and 12-pitch. Call Barbara Edstrom, (612) 373-0852.

Decwriter II and Teletype Model 43 30 cps terminals with modems. Low mileage, excellent condition. For sale or trade. Call Alan R. Ek, College of Forestry, (612) 373-0825.

Asynchronous serial interface card for IBM Personal Computer. Call 373-0937.

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	376-2703
9 a.m.-5 p.m., Monday-Friday		Lauderdale Computer Room	373-4940
Business Data Products	376-1761	Lauderdale Services	373-4995
1-3 p.m., Monday-Friday		Lauderdale Services Manager	373-7538
Statistics Packages	376-5062	Lauderdale Users' Room	373-4921
1-2 p.m., Monday-Friday		MECC Liaison	373-7745
Data Bases	376-1761	Newsletter Subscription	373-4912
1-3 p.m., Monday-Friday		Permanent File Restoration	376-5605
Microcomputers	376-4276	Professional Services Division (PSD)	376-1764
10-12 a.m. and 2-4 p.m., Monday-Friday		Project Assistance	376-1764
Non-Traditional Computing	373-5780	Program Librarian	376-1636
10:30-11:30 a.m., Monday, Wednesday, Friday		Programming Languages	376-7290
TELL-A-GRAF/DISSPLA	376-2663	Reference Room	373-7744
1-3 p.m. Tuesday, Thursday		Remote Batch (RJE) Services	376-2703
Text Processing	376-2943	Short Courses	376-8806
9 a.m.-noon Tuesday-Thursday		Shuttle Bus Service	376-3068
Contract Programming	376-1764	System Status (recorded message)	373-4927
Data Base Applications	376-1764	Tape Librarian: see Lauderdale Services	
Educational Services	376-3963	Text Processing Services	376-2943
EDUNET Liaison	373-7745	User Accounts	373-4548
Engineering Services	376-1023, 376-8153	User Services	376-3963
Equipment Purchase/Information	376-8153		
Experimental Engineering I/O	373-4596		
Field Engineering	376-7584		
Graphics Software	376-5592		
HELP-line	376-5592		
9 a.m.-5 p.m., Monday-Friday			

OPERATING HOURS

	Cyber CA/CB	Low rate	Cray (CR)	MERITSS (ME)	VAX (VA)
M-F	8 a.m. - 4 a.m.	8 p.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.	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. - 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 25		X*	
CentH		X		BlegH 90	X		
ComH		X		BlegH 91T			X
DieH 270, 207		X		BlegH 140		X	
ElH 121, 125		X		MdbH		X	
ElH N640	X			OMWL 2		X	
ExpE 130	?						
FolH 14, 14a	X	X*	X	<i>St. Paul</i>			
LindH 25, 26	?	X		BaH		X	
MasCan 39	X			ClaOff 125	X	X	
MechE 308		X		NorH 24	X		
Physics 69		*?					
SanfH		X					
TerrH		X					
VinH 4		X					
WaLib 204		X					

* Research cluster; access to Cyber 730 and VAX/VMS

X in interactive column indicates access to MERITSS

? Unknown at the present time

Contents

We Did It: System Upgrades Completed..... 33
 Buying and Maintaining Computer Equipment ... 36
 Computing by the Book..... 37
 SYSTEM NEWS/NOTES
 Microcosm
 MICRO USERS GROUP FORMS 39
 FLASH: NEW UNIVERSTIY Z-100
 PURCHASING AGREEMENT 39
 CYBER Notes
 CORRECTION: NOS R5 AND KCL 39
 R5 UPDATE FOR CYBER GUIDES 39
 COBOL 4 TO BE REMOVED IN FALL 39
 CDC SUPPORT FOR FTN ENDS IN JUNE .. 39
 VAX Service
 VMS/XEROX 9700 BUGS..... 40
 Grants for Research
 PRIMER AVAILABLE LATE APRIL..... 40

Non-Traditional Computing
 LECTURE SERIES: COMPUTING AND ART
 HISTORY 40
 MICROS AND HUMANITIES 40
 PROGRAM NOTES 40
 CONFERENCE ON SIMULATION AND
 GAMING 40
 CEE SHORT COURSES..... 40
 SPRING QUARTER SHORT COURSE
 SCHEDULE 41
 All Systems Bulletins
 DEMISE OF THE 1004 RJE STATIONS:
 A REMINDER 42
 WEST BANK RESEARCH CLUSTER MOVED. 42
 CRAY News
 CFT COMPILER UPGRADE 42
 The Classifieds
 FOR SALE 42
 HELP WANTED: VAX/VMS
 PROGRAMMER/ANALYST 42

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.

Copyright 1983 University of Minnesota. Permission to copy is hereby granted, provided that proper acknowledgement is given.

University Computer Center Newsletter

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

Nonprofit Org.
 U.S. Postage
PAID
 Minneapolis, Mn.
 Permit No. 155

UNIVERSITY ARCHIVES
 10 WALTER LIBRARY
 UNIVERSITY OF MINNESOTA
 EAST BANK
 117 PLEASANT STREET SE
 MINNEAPOLIS MN 55455