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Director: Peter C. Patton
Editor : Naomi Miner

Comments about the content of this newsletter, or suggestions for changes may be directed to the editor, 235a Experimental Engineering, or call 612/376-4668.

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service, software, hardware review

As the University starts a new school year, it seems appropriate to review the hardware, software and service changes for the Cyber systems accomplished during the past year and planned for this year.

The Cyber 172 with 196 octal of Central Memory, 2 CPU's and 10 PPU's is the major hardware component of our interactive service to University researchers. During the summer, we added two fixed module disk controllers and drives to ensure adequate interactive response time and disk storage for the coming year. Good interactive service depends on having more than the peak number of ports on hand. We want to discourage users from hanging onto ports. By increasing our supply of ports, we should see a moderation in the tendency to hang onto a scarce resource. We have also initiated 1200-baud port Bell-type service on the Cyber 720, MERITSS, for those of you requiring faster communication. MERITSS uses a Cyber 720 with 98 octal words of Central Memory and 10 PPU's.

ports

The following table compares port availability for last October and for October of this year.

Rotary	Cyber	Oct 79	Oct 80
up to 300 baud	74	35	45
up to 300 baud	172	64	94
up to 300 baud	720	256	256
1200 baud VADIC	172 or 74	2	3
1200 baud BELL	172 or 74	12	32
1200 baud BELL	720	--	20
Outstate Campuses and Private		8	10

disks

The system must also keep ahead of the demand in disk storage. In anticipation of increased use and further reduction January 1 in the disk storage KSH cost, we will be adding two FMD disk storage units to the system this year. Each has a storage capacity of 1.385 billion characters. This additional disk storage is the only change we anticipate for our batch service (the Cyber 74 system with 131 octal words of Central Memory and 14 PPU's).

We completed the upgrade to double density disk drives for increased storage on the instructional timesharing service.

magnetic tapes

With the replacement this summer of a 7-track unit with a 9-track unit, we have completed our changeover to a primarily 9-track service. The following table shows the current configuration of magnetic tape drives.

System	7-track	9-track 800 and 1600	9-track 1600 and 6250
172 or 74	2	-	5
172	-	2	-
74	-	3	-
720	-	2	-

As you can see from the table above, those of you who have not converted from 7-track magnetic tape really ought to since only two 7-track drives will be available. During periods when one is being serviced there will be slow turnaround for jobs requiring 7-track tapes.

RJE sites

We received a number of survey responses concerning the problems in 1004 RJE service. We will be replacing three 1004 sites with new Terak-based RJE terminals with card readers and printers.

In our Performance Monitoring article in the June issue of this newsletter, we discussed the problem of poor response time. We reported that two areas in which we experienced saturation last year were the number of 300-baud ports on the Cyber 74 and the number of PPU's involved with Cyber 172 processing. We have increased the number of 300-baud ports on the Cyber 74. During the summer, Don Mears, a member of our systems staff, corrected the Cyber 172's poor system behavior when the PPU's are saturated. Measurements of response time during PPU saturation since the change show improvement: we see 1.2 seconds response time rather than 3.5 seconds.

To alleviate other problems we reported on, we would like to encourage you to limit your programs to 50K octal Central Memory, on the Cyber 74 (61K octal is allowed) to avoid lengthy response time. Except for some peak periods, usually November, February, May, and June, we are confident the Cybers will handle the University load. Some major system changes are definitely due for the summer of 1981.

software

We thank those of you who have used M77 and those who reported errors. The reporting of any system errors helps improve all our products and services. The preliminary M77 reference manual is rolling off the presses and will be available for the fall quarter. Coming later will be a new postmortem dump for M77, and an XOTHER type for MNF and M77. The XOTHER type allows you to use an experimental interval arithmetic package that checks for degradation in accuracy using processing time comparable to DOUBLE PRECISION arithmetic. We are working on a Pascal compiler to meet the new ISO and ANS standard. We have put an interactive COBOL5 subsystem on the Cyber 720 and on the Cyber 172. We have slated transaction-based interactive service for the 172 for early in fall quarter. We will install several new graphics packages, such as AD2000. ↴

The 3M Company has informed us that its Electron Beam Recorder (EBR) will no longer be maintained nor will they manufacture Dry Silver Film after March of 1982. Thus we have been investigating and will offer microfiche service to supplement our normal EBR microfilm roll service. There will be CRAY machine time available for University researchers who have large vector or total processing time problems that can not be done on the current Cyber systems. We plan to use a TIELINE package, purchased from CDC, to communicate with and allow batch job transfers to the IBM 4331 in the St. Paul Computer Center. We will initiate a fast page printer service, like the Xerox 9700, through an outside vendor. We recognize the advantages of such a service.

As this article just briefly surveys some planned changes, we ask you to read the Newsletter and system notes for further details.

L. A. Liddiard, 373-5239

delay and nofrill

We have three rate schedules for Cyber 172 and 74 users. They are: NORMAL, DELAY (PO on job card), and NOFRILL (PI on job card). We designed NOFRILL service to roll in jobs at approximately 7 PM each evening, avoiding DELAY service that started at 11 PM each evening. Another effect of DELAY queue service was to give lower rates for any interactive or batch job that commenced after 11 PM. A number of users have mentioned, and we agree, that a more rational service would be to have DELAY jobs start early in the evening and to have NOFRILL jobs start several hours later. Starting October 1, 1980, our rates will follow this suggestion, as presented in the table below:

	Monday-Friday	Saturday	Sunday
NORMAL	8AM-8PM		
DELAY	8PM-4AM	4AM-5:15PM	4PM-1AM
NOFRILL	12PM-4AM	4AM-8 PM	

Any batch job or interactive session starting during NORMAL hours will pay at NORMAL rate. Any batch job or interactive session starting during DELAY hours, or a batch job with PO on the job card, will run at DELAY rate during DELAY hours. This will lower costs for jobs run after 8 PM. Any batch job (including SUBMIT) with PI on the job card will run at NOFRILL rate starting at approximately 12 PM each evening.

L. A. Liddiard, 373-5239

\$2000

We are planning to have System 2000 Version 2.80 available as a FUTURE product on November 1. All internal tape requests made by Version 2.80 will be for 9-track 1600 bpi tapes. Version 2.60 will continue to request 7-track tapes.

S. A. Reisman, 376-1755

writeupdate

As the campus begins to shake off the lethargy of the torrid days of summer, and footballs and frisbees once again fill the azure skies, WRITEUPS have also begun to show signs of increased activity. Here is a list of those which have been added or modified since our perusal last month.

CATALOG (MERITSS only) - Describes how to get system information about binary records. (3 pp.)

CLASSES (All systems) - Gives the new fall short course schedule, as well as informative class descriptions. (15 pp.)

COSTEST (Cybers only) - Updated to include cost examples for tape jobs and various miscellaneous costs. (Variable length)

DOCLIST (Cybers only) - Gives a list of our documentation and vendor documentation. (Variable length)

EXAMINE (Cybers only) - Tape salvaging examples corrected. (14 pp.)

FICHE (Cybers only) - Updated information on generating microfiche output. (4 pp.)

PFGUIDE (All systems) - Gives changes in the charging algorithm for direct access files effective 5 September, and discusses changes in the permanent file system effective 1 September involving the conversion from 8 to 16-bit user control words. (20 pp.)

PFILES (MERITSS only) - Gives updated information on the permanent file processor. (11 pp.)

SUBMIT - Gives new details on SUBMITting deferred batch jobs. (18 pp.)

TAPEUSE (Cybers only) - Updated to correct errors and differences from the printed version, available as the UCC User Manual Supplement Guide to Magnetic Tape Usage. (Variable length)

TDUMP (MERITSS only) - Gives information on octal, alphanumeric, and hexadecimal file dumps. (1 p.)

J. Jaynes, 376-5262

remodeling

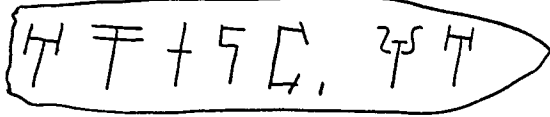
The Input/Output station (Room 131) at Experimental Engineering is being remodeled. The input area is being moved closer to the equipment room and the bins are being rearranged to improve the efficiency of the station's operations. Several secure output bins have been added. These bins may be rented by users who need more secure handling of their input/output materials than is provided by standard handling procedures. We thank you for your patience with the temporary inconveniences caused by this work.

J. Larson, 373-7538

staff profile

Vicky Walsh has joined the staff of UCC as the humanities computing supervisor. Among her new duties will be communicating with college and departmental committees that deal with computing in the humanities. If your committee or department is interested in conferring with her, please call 373-5780 or write:

Vicky Walsh,
University Computer Center
227 Experimental Engineering
208 Union Street, SE
Minneapolis, Minnesota 55455



Humanities News in Linear B, an ancient form of Greek. All of the existing writing is found on clay tablets, simulated above. (Graphic, V. Walsh)

humanities news

As a service to humanities users, we will provide special consulting for research projects involving the use of a computer. All faculty, graduate students, and undergraduates are eligible for this service. The humanities consultants will help users apply for user numbers and grants and will provide assistance in preparing proposals for University or external granting agencies. They will also consult with users regarding the computer aspects of their research design aid in selecting and implementing the proper computer application(s), and assist with problems that may arise due to the special nature of humanities projects. The consulting service will deal with microcomputers and large computers, and the pros and cons of each will be assessed for the individual project.

Each project is eligible for a limited amount of special consulting time. We expect that most users will gain enough expertise in using the computer to continue the project using our regular consulting channels. Users requiring additional help or special software may purchase services from the UCC Professional Services Division.

The humanities phone number is 373-5780 and will be regularly staffed MWF 10:30-11:30 AM and TTh 2:00-3:00 PM until further notice. At any other time, please call 373-5780 for an appointment.

publications

In addition to articles in this Newsletter, we publish other items for humanities users. Of interest is the Guide to Computing in the Humanities, available in the Computer Store (211 Exp. Eng.) and in Williamson Hall bookstore. Check this column for announcements of Technical Reports and preliminary publications of special interest to humanities users. Reports on teaching ancient Egyptian (Decker), an analysis of a set of Sumerian cuneiform tablets (Katz), and a prosopography (biographical sketch) of Caesar's army in Gaul, (Ricketts), are available through the Reference Room.

humanities organizations

- * HUG (Humanities Users Group)
c/o Paul Staneslow
South Asian Studies
186 Klaeber Court
University of Minnesota
- * Association for Computers and the Humanities
ACH Newsletter
Computers and the Humanities (Journal)
Queens College/CUNY
Flushing, NY 11367
- * Association for Literary and Linguistic Computing
ALLC Bulletin
ALLC Journal
Cambridge University
Cambridge CB3 9DA
England
- * ACM SIGLASH (Association for Computing Machinery - Special Interest Group for Language Analysis and Studies in Humanities)
SIGLASH Newsletter
1133 Avenue of the Americas
New York, NY 10036

reference service

The humanities consultants will develop and maintain directories of programs and packages for humanities applications, and an index to humanities data bases at the university. They will also provide information on major granting agencies, and appropriate journals and conferences for reporting research results.

V. A. Walsh, 373-5780

BASIC users

On September 22, BASIC 3.4 became the current version of BASIC. The old version, BASIC 3.3, is available as PAST(BASIC). The new version is current with the documentation we have from Control Data Corporation (the BASIC Version 3.0 Reference Manual, Publication Number 19983900, Revision F). BASIC 3.4 is an extension and correction to version 3.3. We do not expect any problems with running old programs with the new version. However, 3.4 requires on the average about 2000 octal greater field length to compile and execute. Please report any problems discovered with the new version of BASIC to the HELP-line, 376-5592.

W. Sackett, 376-5602

graphics conference

As you may know, we are experiencing the newest computer technology boom in the field of graphics. The microelectronics technology of the 1970's is being applied successfully to the graphics hardware flooding today's market. In the process expensive hardware has become affordable. After ten years of intensive research, graphics software has become relatively easy to use, yet sophisticated enough for the more complex applications. Many general purpose packages promise today's scientists, engineers, business people, educators, and computer neophytes versatile and refreshingly attractive methods for the analysis, display, and presentation of data.

I have just returned from SIGGRAPH, the Special Interest Group on Graphics of the Association for Computing Machinery. I would like to tell you about the conference, and about new hardware and software.

The increase in conference attendance, reflected a marked increase in interest by research, education, business and scientific professions, and attested to the rapid growth we are experiencing on all fronts of computer graphics.

Over the last few years, tutorial programs have been implemented as part of the annual conference. Several topics in computer graphics were reviewed during intensive 2-day sessions co-instructed by core groups of professionals from the business and education sectors, including many graphics pioneers. Sessions covered the following topics: raster graphics, computer-aided design, low cost applications, animation, and interfaces to graphics systems. As in previous years, the tutorial sessions included study manuals containing a selection of recent and "classic" papers, and lecture notes that provided background with more detailed explanations of the topics under review.

The annual Vendors' Exhibition provided over 100 booths displaying graphics products. Given the scale of this year's conference, there has been talk of making the Vendors' Exhibition a separate event. A Graphics Hardware Catalogue comprising a selection of the vendors' brochures will be available soon in our Reference Room. If there is enough interest, this catalogue can be updated and expanded to reflect the "state of the art" in graphics hardware. We are considering putting together a comparable catalogue for graphics software.

A prominent feature of this year's vendors' exhibition was the wide variety of color display terminals. They ranged from inexpensive to models with coarse resolution, 8-color models, to the high quality precision display models. Given this tremendous variety of equipment, one can see the difficulty writing packages and operating systems general enough to work on all the new hardware.

This situation will change once the hardware industry settles down with the most cost-effective and competitive technologies. At that time we anticipate hardware standards and more software packages for graphics.

The Three Rivers Computer Corporation has developed a product reflecting an innovative approach to versatile graphics display. Their PERQ computer system contains the processor, display, disk, and memory in one desk unit. The unit runs a Pascal-coded operating system. The PERQ has a powerful screen editor combining simplicity (you practically point to items to change them) along with global change capabilities. The display uses black symbols on a white field with very high resolution, making the screen easy to look at for long periods of time.

The third major aspect of this conference was the presentation of illuminating papers on the forefront of the computer graphics field. The video and slide presentations were, on the whole, excellent. As we become more involved with graphics, with user-oriented interactive graphics applications, and with an expansion in the graphics short courses, I anticipate welcomed growth in the number of graphics users. Check future issues of this Newsletter for announcements of new graphics equipment and services.

K. M. McMahon, 376-1849
or leave message, 373-4360

APPLICON

We have recently implemented the Applicon plotting software library on our system. This software is designed for an Applicon color plotter which utilizes three primary colors to build up the wide range of colors that the software supports. A local company, Color Graphics, Inc., provides an Applicon plotting service. Plots are drawn on paper with dimensions of 22 by 34 inches. The paper can be easily arranged into eight sheets of 8 1/2 by 11 inches. The software library is quite extensive and includes general, charting, and mapping utilities.

In order to get a plot, you will have to access the COLOR library, FETCH(COLOR), then run your program which will utilize the Applicon FORTRAN subroutines and generate a tape. You will need to contact Color Graphics to arrange for the actual plotting.

For more information regarding costs and delivery, call

Color Graphics, Inc.
4310 Reiland Lane
St. Paul, MN 55112
phone: 484-5679

If you would like information on using this plotting service through our computer systems, or if you would like to see the Applicon Software Instruction booklet, call

K. M. McMahon, 376-1849
or leave message, 373-4360

record manager

Beginning fall quarter, the FUTURE versions of MNF, M77, and at the begining of Winter quarter, the current versions, will be using the new record manager. The use of FETCH(CDCIO) will get the standard CDC record manager. This FETCH statement will have a side effect of prohibiting overindexing blank common. Those of you who overindex blank common to manage your program's memory should not use CDCIO. For alternative methods, call

M. Frisch, 376-1636
J. Mundstock, 373-5907

microcosm

The Microcomputer Support Group would like to hear from all Terak users who would be interested in using an ANSI77 FORTRAN that runs under UCSD Pascal.

New software for Apples and Teraks with Pascal:

Two-dimensional plotting library, with easy to use ACM-SIGGRAPH style routines for plotting on the screen, with Houston Instruments Hi-Plot and Tektronix devices.

Input/output library, routines to facilitate error proof data input and output formatting. The CAI group's new Terak-Pascal system called "A".

For more information on any of the above, call the Micro HELP-line. Just dial 37M-I-C-R-O.

M. Collins, 373-5754

UNIX users

If you are a UNIX user or license holder, you may be interested in the following letter received by President McGrath:

Your institution is licensed for at least two of our UNIX Systems and/or Phototypesetter Systems. Each of these systems includes a different C Compiler. Programs written for one C Compiler will not work with another C Compiler.

We are aware that it might be convenient for you to standardize on one C Compiler so that your programs can all be written the same way regardless of the system to be used. Accordingly, you may use any C Compiler with any system you are licensed for. If you are also licensed to furnish object code for such systems to your customers, you may include any C Compiler in the object code you furnish. Of course, it will be necessary for you to modify a C Compiler from one system for it to operate with another. We are unable to assist or give any advice with respect to any such modification.

Basically, Western Electric is granting those institutions holding licenses to UNIX systems the right to use any C Compiler with any UNIX system. Previously, users were contractually locked into using the version of C that came with their version of UNIX.

M. Skow, 373-7745

documentation

During the past academic year, we produced many pieces of documentation for our users. The documents range from basic, introductory booklets to more extensive, specialized reference manuals. Several of these items are available, without charge, in 140 Experimental Engineering. The rest are available, at a nominal cost, in our Computer Store, 211 Experimental Engineering, 373-4877. Our User's Manual and User's Manual Supplements are also available through the University bookstores.

The following lists itemize documents we have published since September, 1979. Please glance at the following titles; you may find several that will help you with your particular computing needs.

For a complete list of our publications, and vendor publications, see the machine-retrievable writeup DOCLIST. If you have questions or comments about our documentation, please call

M. C. Boyd, 373-2522

UCC EXTENSION CLASSES 1980-1981

These classes are offered through University of Minnesota Continuing Education and Extension (CEE). You may obtain more information and registration materials by calling (612) 373-3195 or by going to 101 Westbrook Hall, U of M Minneapolis campus.

quarter

<u>f w s</u>	<u>class; cost</u> <u>CEE course number</u>	<u>dates (days), times, location</u>
* *	Computing: What is it?; \$24.. PIC 0811	30 Sep - 9 Oct (tth), 7:15-9pm, Arch 15. 6 Jan - 15 Jan (tth), 7:15-9pm, Arch 15.
*	Intro. to Computers; \$12..... PIC 0812	26 Jan - 2 Feb (m), 6:30-8:30pm, Ramsey HS 253 Roseville
* * *	Introduction to UCC; \$6..... PIC 0821	8 Oct (w), 6:15-8pm, Arch 15. 14 Jan (w), 6:15-8pm, Arch 15. 8 Apr (w), 6:15-8pm, Arch 15.
* * *	Intro to Microcomputers; \$12. PIC 0818	20 Oct - 22 Oct (mw), 7:15-9pm, Arch 15. 26 Jan - 29 Jan (mth), 7:15-9pm, Arch 15. 11 May - 14 May (mth), 7:15-9pm, Arch 15.
* *	NOS (for beginners); \$24..... PIC 0822	13 Oct - 22 Oct (mw), 6:15-8pm, Aero 225. 14 Apr - 23 Apr (tth), 6:15-8pm, Aero 225.
* *	Interactive System Commnds; \$6 PIC 0824	30 Oct (th), 6:15-8pm, Aero 225. 21 Jan (w), 6:15-8pm, Aero 211.
* *	Batch Introduction; \$6..... PIC 0825	28 Oct (t), 6:15-8pm, Aero 225. 20 Jan (t), 6:15-8pm, Aero 225.
* *	Programming: It's all in how you do it; \$48..... PIC 0813	27 Oct - 19 Nov (mw), 7:15-9pm, Arch 15. 20 Jan - 12 Feb (tth), 7:15-9pm, Arch 20.
* *	COBOL; \$48..... PIC 0815	4 Nov - 2 Dec (tth), 7:15-9pm, Arch 20. 26 Jan - 23 Feb (mw), 7:15-9pm, Arch 20.
*	NOS (specialized topics); \$18 PIC 0823	12 Jan - 23 Jan (mth), 6:15-8pm, Aero 225.
* *	Using Micros (AppleII); \$24.. PIC 0820	2 Feb - 2 Mar (m), 7:15-9pm, Arch 15. 19 May - 9 Jun (t), 7:15-9pm, Arch 20.
* *	Using Micros (TERAK); \$24.... PIC 0819	5 Feb - 26 Feb (th), 7:15-9pm, Arch 30. 21 May - 11 Jun (th), 7:15-9pm, Arch 30.
*	Beginning FORTRAN; \$48..... PIC 0817	20 Jan - 12 Feb (tth), 6:15-8pm, Aero 211.
*	Pascal for Programmers; \$48.. PIC 0814	13 Apr - 6 May (mw), 7:15-9pm, Arch 20.
*	Advanced COBOL \$48..... PIC 0816	27 Apr - 20 May (mw), 7:15-9pm, Aero 211.

Note: No classes held on 27 and 28 November 1980 (thf) or 16 February 1981 (m) because of University holidays.

University Computer Center Short Courses

Fall 1980

Please Post

Fall 1980

Monday	Tuesday	Wednesday	Thursday	Friday
SEPTEMBER 29	30	OCTOBER 1	2	3
	<u>Computing: What is it? *</u>		<u>Computing: What is it? *</u>	
6	7	8	9	10
<u>Computing: What is it?</u>	<u>Computing: What is it?</u> <u>Computing: What is it? *</u>	<u>Computing: What is it?</u> <u>Introduction to UCC *</u>	<u>Computing: What is it?</u> <u>Computing: What is it? *</u>	<u>Introduction to UCC</u>
13	14	15	16	17
<u>NOS (system configuration)</u> <u>Microcomputing</u> <u>NOS (for beginners)*</u>	<u>NOS (files/jobs)</u>	<u>NOS (files/jobs)</u> <u>NOS (for beginners)*</u>	<u>NOS (permanent files)</u>	<u>NOS (program execution)</u>
20	21	22	23	24
<u>NOS (intro to tapes)</u> <u>Microcomputing</u> <u>Comparing DBMS</u> <u>NOS (for beginners)*</u> <u>Intro to Microcomputers*</u>	<u>Interactive System Cmmnds</u>	<u>NOS (misc statements)</u> <u>Intro to System 2000</u> <u>NOS (for beginners)*</u> <u>Intro to Microcomputers*</u>	<u>Interactive System Cmmnds</u> <u>Batch Introduction</u>	<u>NOS (control language)</u> <u>Intro to System 2000</u>
27	28	29	30	31
<u>SPSS (SPSS basics)</u> <u>Intro to System 2000</u> <u>Microcomputing</u> <u>XEDIT</u> <u>Intro to Programming*</u>	<u>SPSS (data manipulation)</u> <u>Intro to Programming</u> <u>Batch Introduction*</u>	<u>SPSS (SPSS files)</u> <u>Intro to System 2000</u> <u>XEDIT</u> <u>Intro to Programming*</u>	<u>Intro to Programming</u> <u>Interactive System Cmmnds*</u>	<u>SPSS (On-Line)</u> <u>Intro to System 2000</u> <u>XEDIT</u>
NOVEMBER 3	4	5	6	7

<u>Microcomputing</u> <u>COBOL</u>	<u>Intro to Programming</u>	COBOL	<u>Intro to Programming</u>	
Intro to Programming*	<u>COBOL*</u>	Intro to Programming*	COBOL*	
10	11	12	13	14
System 2000/RW Microcomputing Beginning FORTRAN COBOL	Intro to Programming	System 2000/RW Beginning FORTRAN COBOL	Intro to Programming	System 2000/RW Beginning FORTRAN
Intro to Programming*	<u>COBOL*</u>	Intro to Programming*	COBOL*	
17	18	19	20	21
<u>Graphics</u> <u>System 2000/PLI</u> Microcomputing COBOL Beginning FORTRAN Intro to Programming*	Graphics Intro to Programming	Graphics System 2000/PLI Beginning FORTRAN COBOL	Graphics workshop (n) Intro to Programming	Graphics System 2000/PLI Beginning FORTRAN
Intro to Programming*	<u>COBOL*</u>	Intro to Programming*	COBOL*	
24	25	26	27	28
<u>SIR</u> Microcomputing COBOL		SIR COBOL	-HOLIDAY-	-HOLIDAY-
	<u>COBOL*</u>			
DECEMBER	2	3	4	5
1		SIR		
SIR Microcomputing	<u>COBOL*</u>			
8	9	10	11	12
Microcomputing				

Underlining indicates first day of class.

See other side for details.

UCC SHORT COURSES FALL 1980

^Computing: What is it?.....: 3:15-5pm, 6-9 Oct (mtwth), Arch 30
 ^Introduction to UCC.....: 3:15-5pm, 10 Oct (f), Arch 55
 Microcomputing.....: 2:15-4pm, 13 Oct-8 Dec (m), Ex 193
 ^NOS (system configuration)....: 3:15-5pm, 13 Oct (m), Arch 55
 ^NOS (files/jobs).....: 3:15-5pm, 14-15 Oct (tw), Arch 55
 ^NOS (permanent files).....: 3:15-5pm, 16 Oct (th), Arch 55
 ^NOS (program execution).....: 3:15-5pm, 17 Oct (f), Arch 55
 NOS (intro to tapes).....: 3:15-5pm, 20 Oct (m), Arch 55
 NOS (misc statements).....: 3:15-5pm, 22 Oct (w), Arch 55
 NOS (control language).....: 3:15-5pm, 24 Oct (f), Arch 55
 Comparing DBMS.....: 3:15-5pm, 20 Oct (m), Arch 15
 ^Interactive Systems Commands...: 3:15-5pm, 21-23 Oct (tth), Arch 35
 Introduction to System 2000...: 3:15-5pm, 22 Oct-7 Nov (mwf), Arch 30
 ^Batch Introduction.....: 2:15-4pm, 23 Oct (th), MinMet 116
 ^XEDIT.....: 2:15-4pm, 27-31 Oct (mwf), LindH 229
 SPSS (SPSS basics).....: 3:15-5pm, 27 Oct (m), Arch 45
 SPSS (data manipulation).....: 3:15-5pm, 28 Oct (t), Arch 45
 SPSS (SPSS files).....: 3:15-5pm, 29 Oct (w), Arch 45
 SPSS (On-Line).....: 3:15-5pm, 31 Oct (f), Arch 45
 Introduction to Programming...: 3:15-5pm, 28 Oct-20 Nov (tth), Arch 10
 Beginning FORTRAN.....: 3:15-5pm, 3-21 Nov (mwf), Arch 5
 COBOL.....: 3:15-5pm, 3-26 Nov (mw), Arch 10
 System 2000/RW.....: 3:15-5pm, 10-14 Nov (mwf), Arch 60
 System 2000/PLI.....: 3:15-5pm, 17-21 Nov (mwf), Arch 55
 Graphics.....: 3:15-5pm, 17-21 Nov (mtwf), MinMet 116
 Graphics Workshop.....: 7:30-9:30pm, 20 Nov (th), Laud# (see note)
 SIR.....: 3:15-5pm, 24 Nov-3 Dec (mw), Arch 15

NOTE:

^: up-arrow (^) indicates this course is a basic prerequisite for other, unmarked courses.

#: Class held at Lauderdale conference room, Lauderdale computer site, 2520 Broadway Drive, Lauderdale, MN.

For further information, see WRITEUP(CLASSES)
or call Lincoln Fetcher at 612/373-7744

publications

Introductory Materials

Guide to Cyber Batch Computing	Jul 80	140 Ex
XEDIT 3.1 User's Guide	Sep 80	
UCC Brief: Key punch Information	Jun 80	140 Ex
UCC Brief: WRITEUP Information	Sep 80	140 Ex
Fact Sheet 1: Getting Started	Sep 80	140 Ex
Guide to User Libraries	Feb 80	
Guide for the New User*	Jul 80	

*available ONLY through "Introduction to UCC" short course

Specialized Reference Materials

Cyber Instant	Jul 80	140 Ex
XEDIT 3.1 Reference Summary	Sep 80	140 Ex
M77 Reference Manual, Prelim. Ed.	Sep 80	
APEX-I User's Guide	Dec 79	
System 2000 User Aids (9)	Oct 79	
BMDP Update	Mar 80	
PLOTPAC	Feb 80	
SPSS 6000 Ver. 8.0 Update	Apr 80	
SPSS/ONLINE Guide	Sep 80	
SPSS Supplements (10)	Apr 80	
MINITAB Reference Manual	Sep 80	
Guide to Computing in the Humanities	Sep 80	
Various FORTRAN library routines	1980	140 Ex
Various graphics routines	1980	140 Ex

In the Works!

Guide to Applications Packages: Mathematics, Statistics, Engineering	Jan 81	
Guide to Magnetic Tape Usage, 3rd Ed.	Dec 80	
Guide to Interactive Computing, Revised	Jan 81	140 Ex
UCC Brief: Humanities and Computing	Oct 80	140 Ex

statistics

***PRODUCTION USAGE SUMMARIES: Cyber 74/172

	August, 1980	August, 1979
System resource units (SRU)	1,402,306 (1,815,705)	1,195,579 (1,544,902)
Batch jobs and MIRJE sessions	100,846 (111,766)	95,874 (108,813)
Total central processor (CP hours)	146/250 (184/350)	172/143 (187/257)
DELAY queue CP hours	30/34 (33/40)	58/15 (59/30)
NO FRILLS queue CP hours	16/36 (31/37)	--/-- (--/--)
Mass storage transfers (KPR)	466,056 (580,452)	380,453 (483,750)
Magnetic tape transfers (KPR)	12,217 (15,911)	7,544 (11,877)
Pages printed, charged from UCC	849,232 (989,220)	774,174 (893,021)
Cards punched	230,823 (240,962)	427,896 (439,625)
Microfilm frames produced	42,916 (493,562)	23,132 (378,317)
MIRJE terminal hours	18,096 (20,568)	13,859 (16,285)
Number of terminal sessions	40,342	33,407
Status plotting production (feet)	6,817	7,591
Tapes mounted	12,392	12,963
Average file storage (char)	3,121.8 million	2,121.9 million
Mean time between failures	104.5/262.2 hours	36.7/55.1 hours
Available during scheduled hours	99.0/99.8 percent	98.7/98.9 percent

(totals in parentheses include staff development, accounting, and maintenance runs)

***DOWNTIME SUMMARY: September, 1980 (Column 1, Cyber 74 : Column 2, Cyber 172)

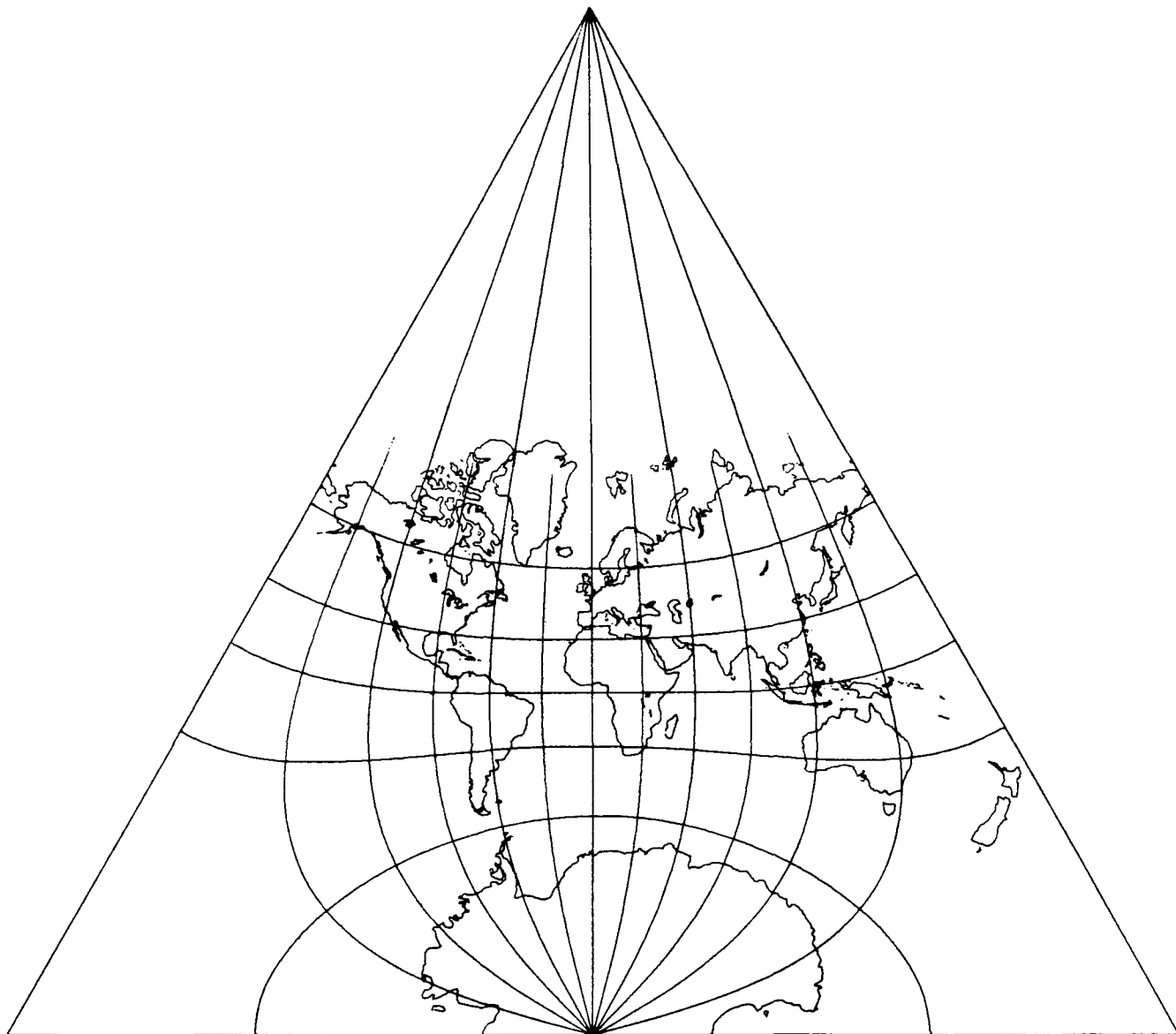
	0800-1800 M-F		other		total	
Total possible scheduled uptime hours	210.0	210.0	299.0	299.0	509.0	509.0
Total downtime hours (see Schedule A)	6.8	0.0	1.7	1.3	8.5	1.3
Total uptime hours	203.2	210.0	297.3	297.7	500.5	507.7
Uptime (percent)	96.8	100.0	99.4	99.6	98.3	99.7
Average downtime per occurrence (min)	67.5	0.0	33.7	80.0	56.2	80.0
Mean time between failures (hours)	35.0	0.0	99.7	149.5	56.6	254.5
Subsystem failures						
SUPIO	7	-	0	-	7	-
TELEX	0	1	0	0	0	1
EXPORT	5	-	0	-	5	-

Schedule A: downtime hours

	Number		Total hours		Average minutes	
(1) Preventive maintenance over-runs	0	0	0.0	0.0	0.0	0.0
(2) Software related problems	3	0	0.6	0.0	11.7	0.0
(3) Hardware related problems	5	1	7.8	1.3	93.8	80.0
(4) Indeterminate problems	0	0	0.0	0.0	0.0	0.0
(5) External Problems	1	0	0.1	0.0	2.0	0.0

***PRODUCTION USAGE SUMMARIES: Cyber 170-720 (MERITSS)

	August, 1980	August, 1979
Number of jobs run	103,332	86,487
Central processor hours	110.2	107.1
MERITSS terminal hours	13,012	10,377
Number of terminal sessions	25,866	20,327
Maximum number of simultaneous users	76	65
Average file storage (char)	416.5 million	387.9 million
Mean time between failures	69.0 hours	33.6 hours
Available during scheduled hours	99.6 percent	98.9 percent



SCHWARZ CONFORMAL MAP IN AN EQUILATERAL TRIANGLE

See last month's Newsletter article "Cartography" for details. This sample map drawn with a coastline boundary file of about 8000 points by P. Voxland, Social Science Research Center.

short courses

UCC Short Course Schedule for Fall 1980

^Computing: What is it?.....; 3:15-5pm, 6-9 Oct (mtwth), Arch 30
^Introduction to UCC.....; 3:15-5pm, 10 Oct (f), Arch 55
Microcomputing.....; 2:15-4pm, 13 Oct-8 Dec (m), Ex 193
^NOS (system configuration)....; 3:15-5pm, 13 Oct (m), Arch 55
^NOS (files/jobs).....; 3:15-5pm, 14-15 Oct (tw), Arch 55
^NOS (permanent files).....; 3:15-5pm, 16 Oct (th), Arch 55
^NOS (program execution).....; 3:15-5pm, 17 Oct (f), Arch 55
NOS (intro to tapes).....; 3:15-5pm, 20 Oct (m), Arch 55
NOS (misc statements).....; 3:15-5pm, 22 Oct (w), Arch 55
NOS (control language).....; 3:15-5pm, 24 Oct (f), Arch 55
Comparing DBMS's.....; 3:15-5pm, 20 Oct (m), Arch 15
^Interactive Systems Commands..; 3:15-5pm, 21-23 Oct (tth), Arch 35
Introduction to System 2000...; 3:15-5pm, 22 Oct-7 Nov (mwf), Arch 30
^Batch Introduction.....; 2:15-4pm, 23 Oct (th), MinMet 116
^XEDIT.....; 2:15-4pm, 27-31 Oct (mwf), LindH 229
SPSS (SPSS basics).....; 3:15-5pm, 27 Oct (m), Arch 45
SPSS (data manipulation).....; 3:15-5pm, 28 Oct (t), Arch 45
SPSS (SPSS files).....; 3:15-5pm, 29 Oct (w), Arch 45
SPSS (On-Line).....; 3:15-5pm, 31 Oct (f), Arch 45
Introduction to Programming...; 3:15-5pm, 28 Oct-20 Nov (tth), Arch 10
Begining FORTRAN.....; 3:15-5pm, 3-21 Nov (mwf), Arch 5
COBOL.....; 3:15-5pm, 3-26 Nov (mw), Arch 10
System 2000/RW.....; 3:15-5pm, 10-14 Nov (mwf), Arch 60
System 2000/PLI.....; 3:15-5pm, 17-21 Nov (mwf), Arch 55
Graphics.....; 3:15-5pm, 17-21 Nov (mtwf), MinMet 116
Graphics Workshop.....; 7:30-9:30pm, 20 Nov (th), Laud# (see note)
SIR.....; 3:15-5pm, 24 Nov-3 Dec (mw), Arch 15

NOTE:

^: up-arrow (^) indicates this course is a basic prerequisite for other, unmarked courses.

#: Class held at Lauderdale conference room, Lauderdale computer site, 2520 Broadway Drive, Lauderdale, MN.

For any more information concerning these short courses, see WRITEUP(CLASSES) or call Lincoln Fetcher at 376-1637.

operations

CYBER 74/172 OPERATING HOURS

CYBER 170-720 OPERATING HOURS

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S|                                     |$$$$$$$$$$$$$$$|
M|*| |<<<<<<<<<<<<<<<<<<<<<<<<<<|
T|*****| |<<<<<<<<<<<<<<<<<<<<<<|
W|*****| |<<<<<<<<<<<<<<<<<<<<<<|
T|*****| |<<<<<<<<<<<<<<<<<<<<<<|
F|*****| |<<<<<<<<<<<<<<<<<<<<<<|
S|*****| |$$$$$$$$$$$$$$$|
    
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M| | |>>>>>>>>>>>>>>>>>>>>>>|
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T|<>| |>>>>>>>>>>>>>>>>>>>>>>|
F|<>| |>>>>>>>>>>>>>>>>>>>>>>|
S|<>| |>>>>>>>>>>>>>>>>>>>>>>|
    
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^ ^ ^ ^ ^
 0100 0400 0800 1715 2400

^ ^ ^ ^ ^
 0130 0745 1800 2400

<><><> Lauderdale, ExpEng, NORMAL rate
 \$\$\$\$\$\$\$ Lauderdale, ExpEng, DELAY rate
 ***** Lauderdale only, DELAY rate

***** up, not attended
 <><><> up, attended

See WRITEUP(HOURS) for schedule of batch job pickup/delivery service.

See WRITEUP(LABHOUR) for a schedule of open hours in the student computer laboratories.

TWIN CITIES CAMPUS PUBLIC REMOTE JOB ENTRY SITES

TWIN CITIES INSTRUCTIONAL COMPUTER LABORATORIES

SITE	ID	SUPERVISOR	PHONE	*
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SITE	SUPERVISOR	PHONE	EQUIPMENT
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>>>East Bank<<<

ElectE 38	4V	V. Zahhos	373-5346	2
EltH N640	4W	D. Anderson	373-5827	2
ExpEng 130	4B	I/O Coordinator	373-4596	1
ExpEng 130	4N	I/O Coordinator	373-4596	1
FrontH	4E	D. Schumacher	373-2740	1
KoltH S191	4Z			4
MinMet 321	41	R. Larson	376-2668	3
Physics 69	44	L. Whitney	376-7627	3
TerrH W106	4I	B. Hackett	373-6621	1
D388 Mayo	24	L. Croatt	373-7714	1
Zoology 314	4J	E. Cushing	373-2232	1

>>>West Bank<<<

SocSci 167	4X	D. Lund	373-3608	2
SocSci 1009	4K	T. Kroening	373-0168	1

>>>St. Paul<<<

BioSci 257A	47	M. Simmons	373-1961	1
ClaOff 125G	48	C. Bingham	373-0988	3
McN H	42	G. Wahlert	373-0939	1
NorH 24	4G	J. Colten	373-0990	1
NorH 24	40	J. Colten	373-0990	1

>>>Lauderdale<<<

User's Room 49	Secretary		373-4912	5
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>>>East Bank<<<

CentH	R. Rickgarn	3-2289	TTY33(2)
ComH	C. Youngdale	3-2453	TTY43(1)
DiehlH 535	N. Sauro	6-7005	CRT(2)
EltH 121,	D. Anderson	3-5827	TTY33(6)
			CDC713(1)
125			Hazeltine(3)
			Teleray(1)
FrontH	D. Schumacher	3-2740	TTY33(1)
HS-A 1-752	L. Ellis	3-0331	TTY33(4)
			TTY43(2)
			Teleray(1)
LindH 25	M. Schneider	3-0137	CDC713(6)
			Decwriter(5)
			Tektronix4013(1)
			Teleray(1)
			TTY43(11)
MechE 308	D. Riley	3-0340	TTY33(4)
			Teleray(3)
			Decwriter(5)
SanfH	M. Kilbury	3-3434	TTY33(1)
TerrH	B. Hackett	3-3567	TTY33(1)
VincentH 4	W. Stenberg	3-2586	TTY33(2)
			CDC713(2)
			Decwriter(7)
			Teleray(2)
WaLib 204*	R. Estelle	3-2538	TTY43(10)
			CRT(2)

>>>West Bank<<<

BlegH 140	D. Lund	3-3608	TTY43(13)
			Teleray(1)
MdbH	R. Baker	3-9818	TTY33(1)
SocSci 167	D. Lund	3-3608	TTY33(5)
			Teleray(3)
			Decwriter(2)

>>>St. Paul<<<

ClaOff 125	C. Bingham	3-0988	TTY33(6)
			Hazeltine(2)
			Decwriter(4)

*for CAI use only

phone numbers

Accounting	373-4548, 373-2521	Information, Lauderdale	373-4912
Computer-Aided Instruction	376-2975	Information Systems	373-7878
Computer Hours (recorded message)	373-4927	Instructional Labs	373-5754
Computer Store	373-4877	Job Status, ExpEng (recorded message)	373-4994
Consulting		Lauderdale Operations	373-4920
HELP-line	376-5592	Lauderdale Services	373-7538
9 AM—5 PM, Monday—Friday		Lauderdale Users Room	373-4921
Business Data Products	376-1761	MECC Interface	373-4573
10-11 AM and 1-3 PM, Monday—Friday		Microcomputers	376-4276
COBOL Language	376-1761	Microfilm Operator	373-4995
11 AM—12 M Monday—Friday		Newsletter Subscription	376-4668
Statistics Packages	376-5062	Permanent File Restoration	376-5605
1-2 PM, Monday—Friday		Professional Services Division (PSD)	376-1764
Data Bases	376-1761	Project Assistance	376-1764
10-11 AM and 1-2 PM, Monday—Friday		Program Librarian	376-1636
Microcomputers	376-4276	Programming Languages	376-7290
10-12 AM and 2-4 PM, Monday—Friday		Reference Room	373-7744
Contract Programming	376-1764	Remote Batch (RJE) Services	373-5754
Data Base Applications	373-7878	Short Courses	376-1637
Educational Services	376-3963	Shuttle Bus Service	376-3068
EDUNET Interface	373-7745	System Status (recorded message)	373-4927
Equipment Purchase or Lease	376-8153	Tape Librarian and EBR Operator	373-4995
Experimental Engineering I/O	373-4596	Technical Writing	373-2522
Field Engineering	376-7584	User Numbers	
Graphics Software	376-1636	Instructional Batch	373-2521
HELP-line	376-5592	Instructional Timesharing	373-7745
9 AM—5 PM, Monday—Friday		Research Batch	373-2521
HOURS-line (recorded message)	373-4927	Research Timesharing	373-2521
Image Processing Center	373-7878	User Services	373-4599
Information, Experimental Engineering	373-4360		

University Computer Center Newsletter

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Minneapolis, Minnesota 55455

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