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# University Computer Center Newsletter

UNIVERSITY COMPUTER CENTER

UNIVERSITY OF MINNESOTA-TWIN CITIES

MINNEAPOLIS, MINNESOTA 55455

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## bulletins

### HOLIDAY HOURS

	-----DOWN-----	-----UP-----
Lauderdale	Sun Dec 23 2200	Wed Dec 26 0800
ExpEng	Fri Dec 21 2400	Wed Dec 26 0800
Lauderdale	Mon Dec 31 1730	Wed Jan 02 0800
ExpEng	Mon Dec 31 1730	Wed Jan 02 0800

## UCC newsletter

Volume 13                      Number 12                      December, 1979

Director: Peter C. Patton  
Editor : Amy Koepke

Comments about the content of this newsletter, or suggestions for changes may be directed to the editor, 235a Experimental Engineering, or call 612/373-7744.

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, or national origin.

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## MERITSS changes

On December 16th, the Cyber 170-720 will begin running the NOS 1.3 Level 485 operating system. With this conversion from KRONOS to NOS, we will be compatible with the Cyber 74/172 and we expect improved response time because of faster mass storage access.

There are, of course, differences between KRONOS and NOS. The most important differences are listed in WRITEUP(UPGRADE). We have been testing NOS on Sundays since November 11, and very few problems have been reported, so we expect that adjustment should not be too difficult.

If you have problems when converting your programs, please call the HELP-line or call me directly, and we will try to resolve them in time for Winter Quarter. Avoid the Christmas rush, test your programs early!

W.T. Sackett, 376-5602

## APL changes

With the MERITSS system upgrade to NOS on December 16, comes the addition of the current version of APL (2.1.013) on the Cyber 172 and the Cyber 170-720. However, APL will no longer be available on the Cyber 74, as its usage does not warrant the expense of obtaining a license.

Changes include full library support (corresponding to standard CDC APL) and use of a different control statement,

APL(parameters)

instead of the control statement:

APLUM(parameters)

Other information on APL is available from the CDC manual, APL Version 2 Reference Manual, publication number 60454000. A new writeup will soon be ready; see WRITEUP(APL).

Rick Marcus, 373-2825

## library changes

The following changes were made on December 16, 1979:

PLOTPAC: correction to handle S tapes properly.

MXTRPl: correction to error message.

AXISP, SYMBOL, and PLOT3D: changed to use FTN standard SHIFT routine (formerly, used LRSHT, a locally written routine).

GNREAD: recompiled for NOS 1.3 FTN. Deleted from MNF library because of Record Manager incompatibilities.

These changes were made on all Cyber systems: Cyber 74, Cyber 172, and Cyber 170-720.

M.J. Frisch, 376-1636

## SPSS 8.0

SPSS Version 8.0 has arrived and is available as a FUTURE product. Documentation is being prepared. This product will be made current in the near future. You will be notified of changes in SYSNOTES and in this newsletter before this change is made.

S.P. Yen, 373-4886

## documentation

We are retiring a document titled User Manual Supplement: A Guide to Record Manager. This supplement, dated December 1977, is out of date and better documentation is available in two related CDC publications:

Cyber Record Manager Basic Access Methods Version 1.5 User's Guide (publication # 60495800)

Cyber Record Manager Advanced Access Methods Version 2 User's Guide (publication # 60499400)

We think that the examples, illustrations, and descriptions in the two CDC documents provide clear explanations of Record Manager. These manuals may be purchased from UCC's Computer Cupboard or directly from CDC:

Control Data Corporation  
Literature Distribution Services  
308 North Dale Street  
St. Paul, Minnesota 55103

M.C. Boyd, 373-2522

## graphics conference

The seventh annual conference on computer graphics and interactive techniques, SIGGRAPH 80, will be held in Seattle, Washington, July 14 through 18, 1980.

Technical sessions will include reviewed papers, films, and videotapes on computer graphics covering topics in research and development, innovative applications, and system management. Sessions are planned on vector and raster graphics. Animations, half-tone and color graphics, and decision-support graphics for business applications are topics of advanced seminars.

For more information, write:  
Harvey Kriloff or Bob Ellis  
Conference Co-Chairmen  
SIGGRAPH 80  
P.O. Box 88203  
Seattle, Washington 98188

## word processing report

This is the first of a series of progress reports from the UCC Word Processing Committee that will appear in this newsletter.

UCC set up a committee last August to study word processing and to explore and define our role in this area. We began our study by talking to many University staff members about their needs. From our discussions, we were able to define terms and establish goals for this study.

COMPUTERIZED TEXT PROCESSING or word processing is a computer based system for creating, displaying, editing, formatting, storing, retrieving, and printing text.

We see two main categories in word processing: OFFICE text processing and TECHNICAL text processing.

Office text processing, using either our Cybers or microcomputer systems, is well established at the University. This processing permits easy document editing and formatting. It is useful for form letters and other repetitive documents, for newsletters, and for reports. Printed text from this type of processing usually mimics a TYPEWRITER: character size and spacing is fixed; line spacing is in half-line increments; underlining, overstriking, and subscripting are possible.

Technical text processing is more complex, and the systems now available are costly to use. Acceptable printed copy from technical text processing would mimic a TYPESETTER. This processing should offer proportional character size, proportional spacing, special characters, font selection, tables, mathematical notation, and non-English alphabets.

After our initial discussions with University staff members, we decided that we would be justified in limiting our study to technical text processing. We established the following goals for our further study:

Full control of the text process from entry to output. This means immediate control of font style and size, special characters, alphabets, tables, mathematical notation, and spacing.

Reduction in the drudgery of the writing process. This means reducing the amount of re-keyboarding and proof-reading now required; this is of particular importance for text containing mathematical symbols, tables, or foreign languages.

Incorporation of output and calculations from the Cybers or other computers into the text process.

The committee is also studying services offered elsewhere in an effort to bring our services up to par.

Crucial to our stated goals are convenience, versatility, and user control. Therefore, we looked for these features as well as technical capabilities when we began our survey of available systems.

We spent considerable time looking at equipment and systems offered to us by vendors in the Twin Cities area, and in discussing procedures with a local commercial service. We spent a substantial amount of time with the staff of the Printing and Graphic Arts department at the University, examining their services, which are excellent. We took a critical look at the systems already in place at UCC. We have input and display terminals, devices for hard copy intermediate output, and programs that edit text, format text, and drive some of our equipment in a manner suited to our goals.

We found a rich supply of hardware and software available to us at the University. What we lack is an integrated system to pull all of this together to produce a reasonably smooth process for the author of technical texts. We are now working on an outline of the steps needed to achieve such a system in an orderly manner.

We will continue to look for equipment and software that might fit into a well-coordinated system and will report further in future newsletters. Those of you who have ideas to offer are encouraged to call us.

We would like to acknowledge the help given us by our friends at Stanford University's computer center. They provided information on all phases of our study. Our hearty thanks.

Reporting for the committee

T.D. Hodge, 373-4599  
M.J. Frisch, 376-1636

## small change

Those of you who read this newsletter regularly may notice a few differences this month. We've made two changes: the print is larger and the columns are wider and set with a ragged right margin. Over the next few months we will be making other design changes. All of this is part of a long term project to improve both the contents and the design of our printed publications. Our goal is to design copy that is both useful AND attractive.

We would like your reactions to these changes. If you find the ragged right harder to read (or easier), please let us know. If you have any comments about our publications, we would like to hear from you. Either drop a note to the editor of this newsletter (the address is on the back page) or call me at

A. Koepke, 373-7744

## micro-cosm

The Computer Assisted Instruction Systems Group is supporting a stable and reliable version of UCSD Pascal, release I.4. This system, with its useful utilities, provides a programming environment far superior to any release level of the stock UCSD system. We provide a post-mortem dump, a Pascal program formatter, a text formatter, simple plotting routines, and other handy little packages. In addition, we provide a sophisticated communications program that allows the Terak to act as an extremely intelligent terminal to the Cyber systems. Many file operations between the University's Cyber systems and the Terak are automated and call for little or no user intervention.

We urge any present or prospective Terak user to talk to the CAI Systems Group before embarking on any time consuming project. We may have what you need so don't waste your time duplicating effort. We CAN help YOU!

Earl Schleske, 376-2975

## special issue

Last month we published our second Special Issue newsletter on Small Computers. The issue focused on the Apple II microcomputer, but included articles of general interest on microcomputers. In case you missed the issue, here's an overview of its contents:

Apple Specifications: standard equipment for the Apple II.

Disk Operating System: tips on using the current disk operating system (3.2) for the Apple.

Up and Down Loaders: new programs for transferring programs, text files, and binaries to and from the Apple.

APLOT: a new program for producing a plot file on the electrostatic plotter. A sample is included.

TEKSIM: teamed with the Apple, displays graphics output from host computer, and if you like TEKSIM, how to lease it.

SUPERCHIP: a new writeup annotating Apple documentation.

Appletizers: a menu of our short course offerings on microcomputers.

Micro-phone: our new telephone consulting service for microcomputer users.

Pascal for the Apple: the long-awaited software improvement.

Apple Prices: an idea of what the Apple should cost.

An Apple a Day: a new package developed by the Division of Health Computer Sciences.

Micros at the U of M: responses from readers on projects involving small computers.

Micro security: advice on securing small and therefore portable computers.

Apple Orchards: three new user groups forming for the Apple II.

Micro Mags: an annotated bibliography of microcomputer periodicals found in our reference room.

Terak-Pascal Manual: a new manual on the Terak from CAI.

COM: a communications link program for the Terak-Pascal System and our host computer under NOS.

Oranges...Not Apples: two articles on microprocessors used in microcomputer systems, the Motorola M6800 and the MOS Technology 6502.

Information on the Apple Writeup, Apple retail locations, and a shortened short course schedule (strictly for micros) round out the issue.

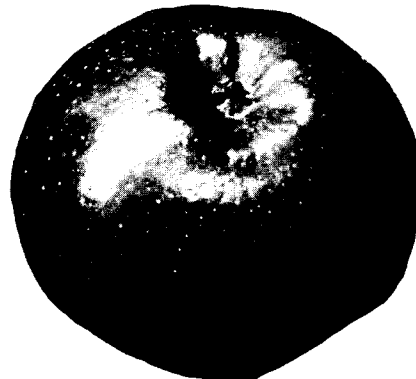
We have published two Special Issues on Small Computers this year. In the first issue (May 1979) we presented background information on microcomputer systems and featured the Terak microcomputer.

We plan to publish a third Special Issue during Winter Quarter 1980. This issue will focus on microcomputer peripherals, but we would like to include a sampler of articles on other microcomputer topics. If you have material that would make an interesting addition to this third issue, please let us know. Write or call:

Editor, UCC Newsletter  
235a Experimental Engineering  
University of Minnesota  
208 Union Street SE  
Minneapolis, Minnesota 55455  
612/373-7744

Articles should be submitted before the end of January, 1980.

N. Miner, 373-7744



## short courses

APEX/MPOS.....	3:15-5:00pm	Jan 8-10 (tth)	Arch 60, JCC
Computing: What is it?.....	2:15-4:00pm	Jan 14-17 (mtwth)	NH 45, LF/SG
Introduction to System 2000..	3:15-5:00pm	Jan 14-25 (mwf)	Arch 15, JCC
Intro to Record Manager.....	3:15-5:00pm	Jan 14 (m)	Arch 60, SAR
Record Manager/BAM.....	3:15-5:00pm	Jan 16-18 (wf)	Arch 60, SAR
Introduction to UCC.....	3:15-5:00pm	Jan 18 (f)	Arch 55, RTF
NOS (system configuration)..	3:15-5:00pm	Jan 21 (m)	Arch 55, RTF
NOS (files/jobs).....	3:15-5:00pm	Jan 22-23 (tw)	Arch 55, RTF
NOS (permanent files).....	3:15-5:00pm	Jan 24 (th)	Arch 55, RTF
NOS (program execution).....	3:15-5:00pm	Jan 25 (f)	Arch 55, RTF
NOS (tapes).....	3:15-5:00pm	Jan 28 (m)	Arch 55, RTF
NOS (misc statements).....	3:15-5:00pm	Jan 30 (w)	Arch 55, RTF
NOS (control language).....	3:15-5:00pm	Feb 1 (f)	Arch 55, RTF
Record Manager/AAM.....	3:15-5:00pm	Jan 21-25 (mwf)	Arch 60, SAR
Computing: What is it?.....	7:15-9:00pm	Jan 21-30 (mw)	Arch 15, LF/SG
COBOL.....	7:15-9:00pm	Jan 28-Feb 25 (mw)	Aero 21, DR
System 2000 New Version Info:	2:15-4:00pm	Jan 24 (th)	MechE 221, JCC
XEDIT.....	2:15-4:00pm	Jan 28-Feb 1 (mwf)	Arch 25, SEC/MB
Sort/Merge.....	3:15-5:00pm	Jan 28-Feb 1 (mwf)	Arch 60, SAR
Introduction to Timesharing..	6:15-8:00pm	Jan 29-31 (tth)	Arch 55, RTF
Introduction to Batch.....	2:15-4:00pm	Jan 29 (t)	Arch 50, MB
COMPASS/CP timing, techniques:	3:15-5:00pm	Jan 29-Feb 14 (tth)	Arch 15, LAL
LISP.....	3:15-5:00pm	Feb 4-15 (mwf)	Arch 15, TT
Intermediate FORTRAN.....	3:15-5:00pm	Feb 4-22 (mwf)	Arch 55, RTF
Introduction to Programming..	3:15-5:00pm	Feb 4-22 (mwf)	Arch 60, RM
FORM.....	3:15-5:00pm	Feb 4-8 (mwf)	MurH 308, SAR
SPSS (SPSS basics).....	2:15-3:30pm	Feb 4 (m)	Bo B6, BH
SPSS (data manipulation).....	2:15-3:30pm	Feb 5 (t)	Bo B6, BH
SPSS (SPSS files).....	2:15-3:30pm	Feb 6 (w)	Bo B6, BH
SPSS (workshop).....	2:15-3:30pm	Feb 8 (f)	Bo B6, BH
BMDP.....	3:15-4:30pm	Feb 4-8 (mwf)	MurH 302, SPY
System 2000 User Aids.....	3:15-5:00pm	Feb 5-7 (tth)	Arch 55, JCC
Tapes.....	3:15-5:00pm	Feb 5-7 (tth)	Arch 60, JJD
Beginning FORTRAN.....	6:15-8:00pm	Feb 5-28 (tth)	Arch 55, RTF
System 2000/RW.....	3:15-5:00pm	Feb 11-15 (mwf)	MurH 308, JCC
Graphing Techniques.....	7:30-9:30pm	Feb 11-17 (mtw)	Laud*, KMM
SPSS (procedures).....	2:15-3:30pm	Feb 11-13 (mw)	Aero 21, BH
SPSS (On-Line).....	2:15-3:30pm	Feb 15 (f)	Aero 21, BH
Text Formatting.....	3:15-5:00pm	Feb 19-21 (tth)	Arch 15, SKG
COMPASS I/O.....	3:15-5:00pm	Feb 19-Mar 6 (tth)	Arch 55, KCM
Advanced System 2000.....	3:15-5:00pm	Feb 25-29 (mwf)	Arch 15, SPN
Programming Style.....	3:15-5:00pm	Feb 25-29 (mwf)	Arch 60, RTF
DMS - 170.....	3:15-5:00pm	Feb 25-26 (mt)	Aero 211, JCC
Query/Update.....	3:15-5:00pm	Feb 27-28 (wth)	Aero 211, JCC
Image Processing.....	7:30-9:30pm	Feb 25-27 (mtw)	Laud*, KMM
Pascal.....	3:15-5:00pm	Feb 25-Mar 14 (mwf)	MurH 308, LF
System 2000/PLI.....	3:15-5:00pm	Mar 3-7 (mwf)	Arch 55, SPN
Introduction to Micros.....	3:15-5:00pm	Mar 3-4 (mt)	Arch 15, GG
Using Micros (TERAK).....	3:15-5:00pm	Mar 5-6 (wth)	Arch 15, GG
SIR.....	3:15-5:00pm	Mar 4-13 (tth)	Arch 60, JCC
Using Micros (AppleII).....	3:15-5:00pm	Mar 10-11 (mt)	Arch 15, MT

\* Lauderdale Conference Room, Lauderdale Computer Site, 2520 Broadway Drive

February 18 (m) is a University holiday so no classes will be held.

February 26 (t) is caucus night so no evening classes will be held.

# statistics

\*\*\*PRODUCTION USAGE SUMMARIES: Cyber 74/172

	October, 1979	October, 1979
System resource units (SRU)	1,105,740 (1,435,085)	1,105,595 (1,513,410)
Batch jobs and MIRJE sessions	117,271 ( 128,866)	107,810 ( 119,798)
Central processor hours inc. DELAY	165/155 ( 187/255)	177/95 ( 203/209)
DELAY queue processor hours	59/22 ( 60/31 )	56/9 ( 57/27 )
MIRJE terminal hours	13,811 ( 16,076)	10,060 ( 12,116)
Mass storage transfers (KPR)	400,858 ( 514,324)	361,203 ( 467,750)
Magnetic tape transfers (KPR)	10,843 ( 14,952)	6,618 ( 12,689)
Pages printed, charged from UCC	887,184 (1,014,077)	943,746 (1,077,251)
Cards punched	405,020 ( 427,476)	557,427 ( 714,096)
Microfilm frames produced	53,523 ( 505,423)	30,620 ( 406,884)
Number of terminal sessions	30,484	24,376
Status plotting production (feet)	6,097	9,363
Tapes mounted	12,303	12,257
Average file storage (char)	2,394.1 million	2,066.4 million
Mean time between failures	38.9/68.0 hours	27.8/88.0 hours
Available during scheduled hours	99.2/99.4 percent	99.0/99.9 percent

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

\*\*\*DOWNTIME SUMMARY: November, 1979 (Column 1, Cyber 74 : Column 2, Cyber 172)

	0800-1800 M-F		other		total	
Total possible scheduled uptime hours	200.0	200.0	281.0	281.0	481.0	481.0
Total downtime hours (see Schedule A)	0.5	4.6	0.1	0.3	0.6	4.9
Total uptime hours	199.5	195.4	280.9	280.7	480.4	476.1
Uptime (percent)	99.8	97.7	99.9	99.9	99.9	99.0
Average downtime per occurrence (min)	9.3	92.7	5.0	20.0	8.3	74.5
Mean time between failures (hours)	66.6	66.6	140.5	140.5	120.3	120.3
Subsystem failures						
SUPIO	12	-	2	-	14	-
TELEX	0	0	0	0	0	0
EXPORT	2	-	2	-	4	-

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	0	2	0.0	0.6	0.0	18.0
(3) Hardware related problems	1	2	0.2	4.4	12.0	140.0
(4) Indeterminate problems	0	0	0.0	0.0	0.0	0.0
(5) External Problems	3	0	0.4	0.0	7.0	0.0

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

	October, 1979	October, 1979
Number of jobs run	243,833	227,534
Central processor hours	139.3	123
MERITSS terminal hours	31,701	26,221
Number of terminal sessions	67,407	56,729
Maximum number of simultaneous users	141	128
Average file storage (char)	431.1 million	346.0 million
Mean time between failures	82.7 hours	243.2 hours
Available during scheduled hours	99.5 percent	99.9 percent



## phone numbers

Accounting .....373-4548, 373-2521  
Computer Assisted Instruction .....376-2975  
Computer Hours (recorded message) .....373-1798  
Computer Cupboard .....373-4877  
    9-11 AM and 1-3 PM, Monday - Friday  
Consulting  
    HELP-line .....376-5592  
        9 AM - 5 PM, Monday - Friday  
    Business Data Products .....376-1761  
        10-11 AM and 1-2 PM, Monday - Friday  
    Statistics Packages .....376-5062  
        1-2 PM, Monday - Friday  
    System 2000 .....376-1761  
        10-11 AM and 1-2 PM, Monday - Friday  
    MICRO-phone .....376-4276  
        10-12 AM and 2-4 PM, Monday - Friday  
Contract Programming .....376-1764  
Data Base Applications .....373-7878  
Educational Services .....376-3963  
EDUNET Interface .....373-7745  
Equipment Purchase or Lease .....373-4877  
Experimental Engineering I/O .....373-4596  
Field Engineering .....376-7067  
Graphics Software .....376-1636  
HELP-line .....376-5592  
    9 AM - 5 PM, Monday - Friday  
HOURS-line (recorded message) .....373-1798  
Information, Experimental Engineering ....373-4360  
Information, Lauderdale .....373-4912  
Information, SICL .....373-9751  
Information Systems .....373-7878  
Instructional Labs .....373-5754  
Job Status, ExpEng (recorded message) ....373-4994  
Lauderdale Operations .....373-4920  
Lauderdale Services .....373-7538  
Lauderdale Users' Room .....373-4921  
MECC, University .....373-4573  
Microcomputers .....373-7745  
Microfilm Operator .....373-4995  
Newsletter Subscription .....373-7744  
Permanent File Restoration .....376-5605  
Professional Services Division (PSD) .....376-1764  
Project Assistance .....376-1764  
Program Librarian .....376-1636  
Programming Languages .....376-7290  
Reference Room .....373-7744  
Remote Batch (RJE) Services .....373-5754  
Short Courses .....376-1637  
Shuttle Bus Service .....376-3068  
Tape Librarian and EBR Operator .....373-4995  
Technical Writing .....373-2522  
User Numbers  
    Instructional Batch .....373-2521  
    Instructional Timesharing .....373-7745  
    Research Batch .....373-2521  
    Research Timesharing .....373-2521  
User Services .....373-4599

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