

University Computer Center newsletter

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Director: Peter C. Patton

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CONTENTS

The Paper Shortage	p. 1	SNOBOL Tips	p. 2
Installation of the CYBER 74	p. 1	Magnetic Tape Conversions	p. 3
To All 1004 Users	p. 1	News from System Notes	p. 3
Spring Quarter Short Courses	p. 2	The Suggestion Box	p. 3

THE PAPER SHORTAGE

--by J. K. Foster & A. Franck

As with the gasoline shortage, the paper crunch has come. Moore Business Forms, Inc., from which UCC gets its computer paper, has cut all its customers to a 1974 allotment of 80% of what was bought in 1973. Furthermore, the price of paper on the new contract with Moore will be double the former price. UCC will probably have to increase its paper charges. To help minimize this increase, users are asked to take positive steps to conserve computer paper. The following should be noted:

- 1) UCC is seriously considering going to 8 1/2 inch deep paper and 8 lines per inch printing on all 1004s. This will be done on a trial basis at the 1004 at Lauderdale as soon as such paper is available.
- 2) Users with large outputs are again encouraged to consider going to microfilm output.
- 3) Users should anticipate increased costs for paper and other supplies in budgetary planning for computer usage.

We close with this comment taken from a letter from the district manager of Moore Business Forms to its salesmen:

"Gentlemen, there will not be enough paper to go around in 1974...that's a fact, not a threat, not just a possibility."

INSTALLATION OF THE CYBER 74

--by L. A. Liddiard (March 26, 1974)

The machine was made available to users on Monday, March 25th, but there have been a larger number of hardware failures than normal for the past two days. These hardware failures should stabilize at a much lower rate within a few weeks. We are grateful for the excellent support that CDC gave us in installing the CYBER 74 with so little disruption to the users. Upgrading the memory of the old CDC 6600 would have taken two to four weeks rather than just 2 days. The CDC Customer Engineers working at the University have again shown their excellence and deserve our thanks.

As we stated in a previous newsletter we expected up to 10% faster execution of jobs. A quick check with 27 FORTRAN test jobs showed a 6.1% execution improvement. Four of the 27 jobs were slower (a maximum of 3% slower), while the remaining were faster (one job was 20% faster and the next was 7.7% faster). The speed improvement does not show up if the main loop of the program is an "in-stack loop," but does show up for most other programs. Note also that 3% is an expected CP time deviation.

TO ALL 1004 USERS

--by R. T. Franta

Since the 1004 is capable of reading and printing at the same time, one can request a display to be printed out while output is listing. This request can cause the display to be printed in the middle of someone else's output. On April 15, 1974, this problem will be corrected by not printing the display until after the current listing has finished. Therefore, if you request a display to be printed, remember that it will not appear until the printer is idle (between jobs).

The same type of problem exists when job card errors occur. No correction to this problem is offered now but we are investigating future solutions.

SPRING QUARTER SHORT COURSES

The following short courses have been scheduled for spring quarter. No fees are charged and registration is required only for the keypunch workshops. Attendance at the session, INTRODUCTION TO THE COMPUTER CENTER, is recommended. The listed reference materials are available in the Engineering Bookstore.

INTRODUCTION TO THE COMPUTER CENTER

A general introduction to the Computer Center; equipment, terminal locations, account numbers, job submissions, keypunch sites, tape purchase, necessary forms; how to use the facilities of the Center.

DAYS : April 29
HOURS : 1:00 - 3:00 PM
ROOM : 18 MechE
INSTRUCTOR: R. Franta
REFERENCES: Materials from instructor

BEGINNING FORTRAN

A presentation of the basic features of the FORTRAN language.

DAYS : April 29, May 1,3,6,8,10
HOURS : 3:00 - 5:00 PM
ROOM : 18 MechE
INSTRUCTOR: R. Franta
REFERENCES: MNF Reference Manual

INTERMEDIATE FORTRAN

ENCODE/DECODE, use of Hollerith characters, ECS, overlays, COMMON, load maps, debugging, dump reading.

DAYS : May 13,15,17,20,22,24
HOURS : 3:00 - 5:00 PM
ROOM : 18 MechE
INSTRUCTOR: R. Franta
REFERENCES: MNF Reference Manual

INTRODUCTION TO LISP

LISP 1.5 is a list-processing language designed for symbolic manipulation and recursive programming.

DAYS : April 22,24,26
HOURS : 1:00 - 3:00 PM
ROOM : 18 MechE
INSTRUCTOR: A. Mickel
REFERENCES: The Little LISPer, D.P. Friedman, S.R.A. Books, 1974.

INTRODUCTION TO PASCAL

PASCAL is a general-purpose programming language with rich data structuring facilities and is geared for structured programming.

DAYS : April 22,24,26
HOURS : 3:00 - 5:00 PM
ROOM : 18 MechE
INSTRUCTOR: A. Mickel
REFERENCES: Materials from Instructor

INTRODUCTION TO THE STATISTICAL PACKAGES

SPSS (Statistical Package for the Social Sciences) and BMD (Biomedical Computer Programs) are two of the statistical packages available at the University.

DAYS : April 8,10,12,15 (SPSS)
April 17,19 (BMD)
HOURS : 3:00 - 5:00 PM
ROOM : 18 MechE
INSTRUCTOR: B. Center
REFERENCES: SPSS: Statistical Package for the Social Sciences, Nie, et alia (McGraw-Hill)
BMD Reference Manual (U of California Press)

SYSTEM 2000

This course teaches the student how to use System 2000, a generalized data base management system. Techniques for defining data bases, retrieving and updating, and using the data base through FORTRAN and COBOL are discussed.

DAYS : May 6,8,10,13,15,17
HOURS : 1:00 - 3:00 PM
ROOM : 18 MechE
INSTRUCTOR: S. Nachtsheim
REFERENCES: System 2000 Reference Manual,
System 2000 Users' Guide

MASS STORAGE ON THE CYBER 74

An introduction to various methods available on the CYBER 74 to utilize direct access mass storage; includes SIS, mass storage FORTRAN, COBOL.

DAYS : May 1,3
HOURS : 1:00 - 3:00 PM
ROOM : 18 MechE
INSTRUCTOR: S. Nachtsheim
REFERENCES: CDC SIS Reference Manual (#60305400)

KRONOS 2.1 INTRODUCTORY COURSES

A series of short courses on KRONOS 2.1 for the CYBER 74 will be given again in May. See the May newsletter and the bulletin boards in ExpEng for schedules after May 1st.

KEYPUNCH WORKSHOPS

Half-hour workshops on the use of the keypunch. Only 1 session is necessary; each session is limited to 10 people. Use the sign-up sheets on the door of Room 223 ExpEng or call 373-2521.

DAYS : April 1,2,3,4,5
HOURS : 8:30-9:00 AM, 10:30-11:00 AM,
1:30-2:00 PM, 3:30- 4:00 PM.
ROOM : 223 ExpEng
INSTRUCTOR: P. Gerlach

SNOBOL CORNER

--by A. B. Mickel

Have you ever wanted to insert a string into another string at a particular position without having to do something like this? For example, insert string 'XYZ' between the characters C and D in the string 'ABCDEF'.

```
STRING = 'ABCDEF'
STRING LEN(3) . FRONT REM . REST = FRONT 'XYZ' REST
```

Instead, do this (in unanchored mode):

```
STRING POS(3) = 'XYZ'
```

This works as POS(3) matches the null string at position 3.

PROCEDURE FOR CONVERTING MAGNETIC TAPES (9-TRACK TO 7-TRACK)

--by T. D. Hodge

- GO TO : Room 366 in the VFW Cancer Research Center (corner of Harvard & Delaware).
- TAKE WITH YOU : 1) For input: 9-track magnetic tape with your name on a paper label.
2) For output: A certified tape with your name on a paper label. (If you do not have easy access to a blanked output tape, you may purchase what you need in Room 366. See item 3 for methods of payment.)
3) A journal voucher from your department or a current account number for the Health Sciences Computer Center (if you do not have either, allow a few extra minutes and they will set one up for you).
- ASK FOR : Warren Johnson (373-0335)
- CHARGES : There is a \$10.00 minimum charge. One hour of tape processing costs \$30.00. For comparison purposes, you can estimate that a 2400' tape will take about one hour to copy from a 9-track EBCDIC tape to a 7-track BCD tape.
- OTHER SERVICES : 7-track to 9-track magnetic tape conversions can be made. Paper tape to magnetic tape conversions can be made if your paper tape is in a format they can read (if you have it, take a copy of your paper tape code table with you).

NEWS FROM SYSTEM NOTES

--from SVSNOTE #56

To all users: bin 0 (zero) is now reserved for use by the ROUTE utility only. Any job with a bin card having a bin number of 0 (zero) will be aborted.

To SPSS users: a new SPSS, version 5.5, is available for users who wish to test it before it is permanently placed on the system. To access the new version, use the following control cards:

NEW,SPSS.

or

NEW,SPSS.
SPSS,file1,file2,file3.

SPSS uses files in the following order on the SPSS control card:

file1 is the SPSS control card (and possibly, data) input file. The default is INPUT.
file2 is the standard print file. The default is OUTPUT.
file3 is the auxiliary BCD output file (matrices, etc.). The default is BCDOUT.

In addition, the following files are used, but their names must not be changed:

SVFILE - the file upon which a save file is written.
GTFILE - the file for inputting a save file.

To all users: on Friday, March 8, 1974, UCC experienced a slight mishap with disk packs UCC102 and UCC104. Since the mishap, both disk packs have been recovered but a few subdirectories may have been lost during the recovery. Jobs run to re-create lost subdirectories will be considered for refund by UCC. Questions should be directed to T.D. Hodge, 232 ExpEng, 373-4599.

THE SUGGESTION BOX

(Unsigned suggestion cards are ignored. Questions may be re-worded for clarity.)

- Q/S Get a new RJE terminal or fix the one you have. The terminal doesn't work properly half the time.
- A We assume the site with which you are concerned is Lauderdale. If so, this is the Engineering test site. Hence, we expect users to bear with us when this system is used for test purposes. For example, we recently were testing a new communications plugboard to improve I/O throughput as well as enhance the reliability of the 1004s. The plugboard testing is now complete and we believe this site is currently operating reliably.
- (A. Franck)
- Q/S Restrict smoking to users outside the work area. Some thoughtless people leave cigarettes burning on the equipment (1004 and keypunch). This makes a mess for everyone. Also, it is time that non-smokers stand up for their right to a breath of fresh air.
- A A sign will be placed in an appropriate location to indicate smoking is prohibited in the keypunch and 1004 area.
- (A. Franck)

Q/S How about putting a card sorter at the Lauderdale site? Its very inconvenient to run back and forth between ExpEng and Lauderdale to sort. (It would save gas for the fuel shortage too!)

A We wish we could afford the luxury of a sorter at Lauderdale. The cost of such equipment installed at Lauderdale cannot be justified. May we suggest that you compare two costs:

1. The time required for you to go to and from ExpEng to sort a deck of cards (the cost of gas could be accounted for also).
2. The time and cost of sorting on the CYBER 74 and punching out the sorted deck.

Not only should the user measure UCC in terms of our responsibilities, but the user should also measure his effectiveness in terms of his goals.

(A. Franck)

Q/S The coffee in this machine (Lauderdale) is terrible, and tonight the cocoa smells of ammonia (or something like it) -- can something be done about it? Also, can we get a dollar bill changer in here?

A We have passed these facts on to Vending Services. There is little else we can do. In regard to the bill changer, Vending Services says that there is not a large enough volume of sales at Lauderdale to justify the cost of installing and servicing a bill-changing machine. We will continue to forward this question to them at reasonable intervals, however.

(A. Franck)

Q/S On March 1, 1974 I sent a transient tape job to Lauderdale where it was run and the tape returned to ExpEng by 1 PM. The output was not returned by 3:20 PM and, by inquiry at ExpEng, I found out that a system crash had lost my output file which was needed for an important meeting on March 2. I suggest that transient tapes and their output be matched together before being returned from Lauderdale in order that valuable user time not be wasted trying to get the job re-run.

A We're sorry this happened. To ensure that this problem does not re-occur, a special request slip is available at each station which can be filled out, asking that the tape be returned with the deck and output.

(D. Sabre)

Q/S I haven't been here (Lauderdale) for several months, but the tumbrel drivers are just as snotty as ever. I know you reject this suggestion every time, but why couldn't they wait, say 2 minutes, at the card receiving desk before rolling back. (They could straighten up something if you don't want to waste time.) Often all one needs is to see if a file has been established to submit his next deck, yet they will not accept anything once they have begun to roll away. I really think they get pleasure out of denying this -- that's what powerless people often do to get 'one up' on someone; deny them some small service, and be nasty about the refusal besides. If so, I surely gave a lot of pleasure during this long night.

P.S. Once she didn't even come into the work room, but looked in, saw nothing, and turned back, rejecting decks even then moving toward the trays.

A Operations people pick up input submitted in the Users' Room at 15 minute intervals. We are currently discussing the possibility of extending the time spent picking up these jobs.

(D. Sabre & A. Franck)

Q/S Why is there a 136 character record limit on SPSS? Is it possible to re-compile (or whatever) these programs to allow for longer records? I hope so! It appears the other statistical packages will allow longer records. Hence, if one uses 'other' packages (i.e., UMST), and then needs to resort to SPSS, there is an added step of re-writing a data tape. Why, oh, why?

A The 136 character record limit is imposed by the FUN compiler, not by SPSS. The UMST programs, as single overlays, are compiled with the MNF compiler which has a 150 character record limit. When we compile the multiple overlay SPSS with the new MNF (in the near future), you will also be able to use 150 character records with SPSS.

(R. Hotchkiss)

Q/S Please put stools near the ExpEng output bins so short people can reach the top ones. Its a little hard to get your output if you can't reach the bin.

A Rather than stools (which may prove to be stumbling blocks) why not try this? There are 9 bins in a vertical row and the top bins are numbered 5, 14, 23, 32, etc. Thus, when you pick up a bin card, divide the bin number by nine. If the remainder is 5, put it back and use the next bin card. If you don't want to divide, just add the digits in the number. If this gives you a two-digit number, add those digits again. If the final digit (after this addition) is a 5, put the bin card back and use another one. (You need not use the bin cards in strict sequence.) For example:

bin # 194: 1 + 9 + 4 = 14; 1 + 4 = 5 put this bin card back
bin # 328: 3 + 2 + 8 = 13; 1 + 3 = 4 use this bin card.

(T. Hodge)

CYBER 74 OPERATING HOURS

CONSULTING SCHEDULE

	12:01AM	2AM	3AM	4AM	8AM	4PM	Midnight
Sunday							
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						

//// (Lauderdale, ExpEng, West Bank)
 |||| (Lauderdale, ExpEng)
 ... (Lauderdale only)

EAST BANK	GENERAL COMPUTING	STATISTICAL COMPUTING
140 ExpEng	Mon- 9AM-5PM Thurs: 7PM-9PM Fri : 9:00-5PM Sat : 2:00-2PM Su : 7PM-9PM	
205 ExpEng		Mon : 1:00PM- 3:00PM Tues : 8:30AM-12:30PM Thurs: 11:00AM- 3:00PM
N640 EltH		Mon : 1:00AM- 2:00PM Wed : 9:00AM-12:00 N Fri : 1:00AM- 2:00PM
ST. PAUL	GENERAL COMPUTING	STATISTICAL COMPUTING
125C ClaOff	Mon : 8:00AM- 6:00PM Tues : 8:30AM-12:00 N Wed : 2:00PM- 6:00PM Thurs: 8:30AM- 1:00AM Fri : 8:00AM- 6:00PM Sat : 9:00AM-12:00 N	Mon : 1:00PM- 5:00PM Tues : 8:30AM- 2:00PM Wed : 1:00PM- 3:00PM Thurs: 8:30AM- 2:00PM
WEST BANK	GENERAL COMPUTING	STATISTICAL COMPUTING
25 BlegH*	Mon-Fri: 9AM-12 N 1PM- 4PM	Mon-Fri: 9AM-12N 1PM- 4PM
167 SocSci		Mon : 9:00AM-12:30PM Wed : 2:30PM- 5:30PM Thurs: 9:00AM-12:30PM
LAUDERDALE	GENERAL COMPUTING	STATISTICAL COMPUTING
	Mon- Thurs: 1:30PM-3:30PM 7:30PM-9:30PM Fri : 1:30PM-3:30PM	Thurs: 1:30PM-3:30PM

*Social science computing only.

MEDIUM SPEED REMOTE TERMINALS

(Hours will vary from site to site.)

Site	Supervisor
38 ElectE (East)	J. Guentzel/373-5404 M. Cook/373-3895
N640 EltH (East)	J. DeWitt/376-7377 N. DeWitt/376-7377
S191 KoltH(East)	T. Faulkner/376-7024 J. Abdallah/373-2348
321 MinMet(East)	C. Swanson/373-5475 R. Olfke/373-5680
69 Physics(East)	Bob Scarlett/373-0243 Dave Olson/376-7175
167 SocSci(West)	G. Lutgen/373-3608
415 CofH (StP)	D. Nelson/376-7003 T. Ehlen/376-7003
24 NoH (StP)	J. Colten/373-0990 D. Rignell/373-0990
257 BioSci(StP)	R. Comstock/373-0928 H. Meyer/373-3067
125G ClaOff(StP)	C. Bingham/373-0988
User Room (Laud)	Shift Sup./373-4940

TELEPHONES

373-4548	Account Clerk, 6600
373-7753	Account Clerk, 6400
373-4596	ExpEng I/O
376-7584	Field Engineering
373-2521	Keypunch supervisor
373-4940	Lauderdale Shift Supervisor
373-4995	Microfilm Operator (leave a message)
373-4876	Operations (R. Folden)
373-4994	Recorded Message
373-7744	Reference Librarian
376-3963	Remote Job Entry Coordinator
373-4995	Tape Librarian (leave a message)
373-4360	UCC Office
373-4599	User Services (T. Hodge)
373-4921	Users' Room (Lauderdale)
373-3608	West Bank I/O

KEYPUNCH LOCATIONS

(number of keypunches is in parentheses)

East Bank	St. Paul	West Bank	Lauderdale
38 ElectE (1)	208 ExpEng (8)*	69 Physics (1)	
N640 EltH (1)	223 ExpEng (4)		
130 ExpEng (2)	S191 KoltH (1)		
131 ExpEng (1)	321 MinMet (1)		

*includes 1 interpreting card punch.

REFERENCE MANUALS

[Copies are available for reference in Room 140 ExpEng, Lauderdale, West Bank Computer Center, and at the medium speed terminal sites.]

	CDC publication #
APEX	86615300B
ALGOL Version 2	60306100D
COBOL version 3	60253000E
COMPASS Version 2	60279900D
FORTRAN EXTENDED Version 3	60329100D
FTN DEBUG Users' Guide	60329400C
FORTRAN (RUN/FUN) Version 2.3	60174900F
MIMIC Simulation Language	44610400E
MODIFY	60281700D
PERT/TIME	60133600C
SCOPE Version 3.2	60189400L
SIMSCRIPT Version 2	60178300C
SIMULA	60234800E
SORT/MERGE Version 3	60252600D
6000/7000 Computer Systems	60100000W
BMD & BMDX: Biomedical Computer Programs	
IMSL Library Catalog	
MNF Reference Manual	
OMNITAB II Programmers Reference Manual	
SPSS: Statistical Package for the Social Sciences	
UMST: U of Minnesota Statistical Programs	
UCC Users' Reference Manual	

RETURN TO:
UNIVERSITY COMPUTER CENTER
227 EXPERIMENTAL ENGINEERING
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MN 55455

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UCC NEWSLETTER

AT THE ABOVE ADDRESS, OR CALL
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ROOM 111 WALKER
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