

# UNIVERSITY COMPUTER CENTER newsletter

MILL  
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Director: Peter C. Patton

227 EXPERIMENTAL ENGINEERING  
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## FALL QUARTER OPEN USERS' MEETING

WHO : EVERYONE IS INVITED  
WHAT : OPEN FORUM  
WHEN : WEDNESDAY, DECEMBER 1, 2-5 PM  
WHERE : 193 EXPERIMENTAL ENGINEERING  
WHY : ANNOUNCE CHANGES COMING UP,  
DISCUSS PROBLEMS,  
COFFEE & COOKIES!!!

\*\*\*\*\*

BE SURE TO USE THIS

CATLIST,PN=PF01.

NOW AND THEN IF YOU HAVE  
EVER USED THIS DEVICE.  
IF YOU FORGET A LARGE FILE  
ON A SPECIAL DEVICE, YOUR  
BILL COULD BE QUITE  
SURPRISING!

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????????????????????

University of Minnesota computer users who have concerns about future services to higher education users in Minnesota are invited to call User Services at UCC to voice their concerns. Users are also invited to bring their questions about state-wide services to the open user's meeting this quarter (see notice, above).

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ON OCTOBER 28 AT 5 PM, PF DEVICE 10 WAS LOST AND WAS RELOADED AS OF 8 AM. SEE P 8 OF THIS NEWSLETTER.

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The keypunches that were housed in 208 ExpEng have been moved to the U1004 RJE sites throughout the campus.

## CONSULTING

### GENERAL CONSULTING

Telephone consulting for the 6400 timesharing system is slowly being moved over to the HELP-line (376-5592); the HELP-line already handles MIRJE consulting. Machine status information for the Cyber 74 is available on 373-4994; machine status for the 6400 is reported on 373-1798 (when the machine is down).

General consultants will help users find errors indicated by a compiler or the operating system, help users interpret error messages, help set up debugging runs, help users understand the uses of control statements and job setups, and direct users to writeups and other documentation.

Statistical consultants will do all of the above for users of the statistical packages and routines.

Undergraduates who attend classes where specific computer assignments are made should be aware that their classes have lab assistants who should be consulted for help on assignments; these assignments should not be brought to the UCC consultant. Our consultants are not supposed to work through your program logic or to write program statements for you. If you need that kind of assistance, we can arrange it through our Information Systems Services Group. (This service is chargeable. For information, see S. Nachtsheim, 131 ExpEng, 373-7878.)

### STATISTICAL CONSULTING

On the St. Paul Campus, the School of Statistics and the University Computer Center jointly sponsor a consulting service offering aid in utilizing the statistical computing packages maintained by UCC. These consultants are able to help users carry out analyses and can aid in defining and interpreting output. For further information on consulting, please call Sanford Weisberg (373-1068).

In addition to the consulting, the School of Statistics holds a Statistical Clinic (in 125C ClaOff) for several hours a day during the week. This clinic operates on an open door basis and is intended to be the first contact point with the School of Statistics for all graduate students having routine questions concerning data analysis associated with research. For further information, call F.B. Martin, 373-1048.

### SYSTEM 2000 CONSULTING

Starting November 1, there will be dedicated hours for System 2000 consulting. During this time, someone will be manning the telephone so that users can be assured of getting answers to questions. This does not mean that users cannot call at other hours; it only guarantees that a consultant will be available at designated times. The hours for the remainder of Fall Quarter will be: 10:00 - 11:00 AM AND 1:00 - 2:00 PM Monday through Friday. These hours will probably change from quarter to quarter. The phone number to call is 373-2522.

--T. Hodge, 373-4599

## ENGINEERING

The University Computer Center has been in existence for a number of years, yet we feel that many people may not be aware of all the services that are provided by the Systems Engineering Group. The following are some of the services offered to departments and staff members within the University:

### (1) Maintenance contracts:

Annual service contracts are available or work may be performed on a time and material basis for the following terminals:

Teletype	Univac 1004 RBT
LA36 Decwriter	Data Products Portacom
TI Silent 700	Hazeltine 2000
Tektronix 4013	Control Data 713
Video System 2000	Research Inc. Teleray

### (2) Purchasing contracts:

The University Computer Center, through the purchasing department, has contracts with local vendors for the purchase of the equipment listed below. Other University departments, and staff members purchasing equipment through departments, may also use these contracts.

LA36 Decwriters  
Research Inc. Teleray CRTs  
Multitech acoustic couplers

### (3) Terminal rental:

We have a limited number of computer terminals for short term rental to other departments. These terminals include teletypes, Decwriters, and a Teleray CRT. This equipment is rented as available, first come, first served, on a monthly basis.

Anyone desiring more information on any of these services should call Dan Whealdon at 373-4877 or Abe Franck at 376-7291.

--D. Whealdon, 373-4877

## VIDEO

The Learning Resources Libraries at the University now have three instructional video tapes on computers available for viewing:

- (1) Operating a Univac 1004 RJE terminal
- (2) How to keypunch
- (3) A new tape on the use of t/s terminals

The tapes are less than 35 minutes long and are oriented toward the beginning user. However, anyone needing information on these topics may find them useful. The Learning Resources Libraries on the Twin Cities campus are in 204 Walter Library (East Bank) and in Temporary South of Coffey (student section). The keypunch and timesharing tapes are also available in the Diehl Hall Learning Resources Library. The tapes should also be available at the resource libraries on the other campuses.

--L. Fetcher, 376-1637

## graphics

The University Computer Center has recently acquired an image digitizer and an image recorder; both are high resolution DICOMED products.

The digitizer accepts 35mm color or black and white slides as input, produces a digital image of the slide - up to 2048x2048 sample points. This digitized image can then be easily shipped to the Cyber 74 for processing. A package named SADIE has been provided to facilitate such processing.

The image recorder accepts digital images consisting of up to 4096x4096 sample points and records them on either 35mm, 70mm, or 4x5 polaroid film in either color or black and white.

These devices are connected to a PDP 11/20 (soon a PDP 11/40) and are located in the 143 Space Science Center.

Call me for additional information.

--M. Franta, 373-9751

## V3 products

The old versions (Version 3) of COBOL, SORT/MERGE, SCOPE Indexed Sequential (SIS), and System 2000 (Version 2.30) products will be removed at the start of winter Quarter. Users are asked to make necessary preparations for this changeover. Documentation is available in the UCC Reference Room to aid in COBOL and SORT/MERGE conversions. If further assistance is needed, please call either John Cosgrove at 373-2522 or Howard Kurs.

--H. Kurs, 373-5754

## I M S L

A large number of Universities granting advanced degrees are subscribers to the IMSL library. In many cases, graduate students are utilizing library elements to aid in satisfying research requirements for their degrees.

If, in the opinion of the author, listings of IMSL library source code must be reproduced in the resultant thesis or dissertation in order that the results be duplicatable by others, IMSL grants permission for such reproduction.

In cases of such usage, IMSL requests that the author make the following points in the research document in a manner noticeable to someone interested in the listings:

- (1) The listed code, part of a proprietary product, belongs to the International Mathematical & Statistical Libraries, Inc. (IMSL), in Houston, Texas.
- (2) The listings are reproduced with the permission of IMSL.
- (3) The listings may not be extracted for other purposes, or used as the basis for any software development.

Those users doing numerical calculations will be aware that a large number of quality routines are available in the IMSL library and they may have used some of these. We have been asked by IMSL, which is a private company, to point out that the routines are proprietary, and that use by non-University people is at least unethical and that such users should take out an RJE/TS subscription, currently \$250 per quarter, including a copy of the multi-volume manual. Copies of the subscription form are available from Mike Frison, 2350 ExpEng.

We advise users that the request is reasonable for all except the most casual user, and we consider the claim for a return on the very heavy outlay as certainly equitable.

--M. Frisch, 376-1636

## tape cleaning

The charge for user-requested non-bulk tape cleaning has been reduced from \$1.00 per kilo-foot to \$.50 per kilo-foot; the setup charge per tape has been increased from \$.10 to \$1.00. These changes were made to more accurately reflect the actual handling costs. To illustrate these new charges:

A 3200 foot tape was \$3.30, is now \$2.60.

A 2400 foot tape was \$2.50, is now \$2.20.

A 1200 foot tape was \$1.30, is now \$1.60.

A 600 foot tape was \$.70, is now \$1.30.

We still clean and repack user stored tapes free of charge annually and after every twenty assignments. A user can find out when his tapes were last cleaned by using the TAPES(AUDIT,LO=F) utility.

Tape storage charges have been changed from \$1.00 per calendar quarter to \$.50 per month. Every third tape over 100 is stored free of charge.

--Q. Roggenbuck, 376-7289

## software

University groups considering the purchase or lease of software packages from outside vendors for use on the facilities of the University Computer Center should carefully consider any usage agreement signed with the vendor. In particular, if there is any slight prospect that another group within the University could use the package, it is best to sign the agreement in the name of the University of Minnesota rather than the name of the single group. If necessary, UCC can purchase the package and cross-charge the user. This way, other groups can take advantage of the package without having to pay the vendor for a copy. UCC is willing to sign such contracts for users and we can also help with installing the package, if necessary.

--M. Frisch, 376-1636

# FTN

Control Data Corporation has informed us that they plan to write a new version of FTN; this version will correspond to the new ANSI FORTRAN standard that is expected to be approved shortly. CDC also sent a list of items that they propose to delete from the current FTN. They have asked us if we have any objections; we, in turn, are asking you for your opinions. From what you tell us, and from our own ideas, we will tell CDC the opinions expressed by December 15, 1976.

CDC has promised to provide a SIFT program to translate from current to new versions of FTN. A few items on this list cannot be "sifted" however (items 21, 23, 29, 30, 31, 34, and 35). Also, numbers 39 and 43 are only partially siftable. There may be bugs in a SIFT program and it may not be very fast. If you have a large program with too many changes to make easily by hand, you could have trouble.

At present we do not plan to purchase this new FTN. Instead, we plan to re-write (and rename) MNF to conform to the new standard. We are likely to keep compatible with any future FTN, however. Thus, any changes CDC makes in FTN might also be made to our renamed MNF. We need your views to help us decide which of the features we can keep or delete. Some of the items in the list directly conflict with the new standards (8, 14, 19, 20, 21, 22, 31, 33). For this reason, they must be deleted. The remaining items can be regarded as extensions to the standard so a choice can be made as to whether they should be deleted.

When reviewing the items in the list below, you should answer the following questions:

Do I want CDC to retain this item?

If CDC does delete this item, how much work would I have to do to change my software?

IF YOU DO NOT REPLY TO US WE WILL ASSUME THAT YOU DO NOT OBJECT TO THESE DELETIONS!

Send your comments to Mike Frisch, 227 Experimental Engineering, before December 15.

--M. Frisch, 376-1636

This is what CDC plans to delete:

- (1) Comment lines denoted by \$ in column 1 (use C or \* instead). e.g., \$THIS IS A COMMENT.
- (2) Multiple statements per line, using \$ statement separators. e.g., A=B \$ C=D
- (3) Non-blank characters in columns 1-5 of a continuation line (MNF already detects this). e.g., A=B  
123456+C
- (4) Octal constants denoted by suffix B. e.g., 77B. CDC proposes to change the form of octal constants to something else.
- (5) Octal and Hollerith constants preceded by a + or - sign in a DATA statement. e.g., DATA K/-3HABC/
- (5a) Octal and Hollerith constants preceded by a + or - sign in an arithmetic expression being treated as typeless. Thus, R = +5HABCDE would now be considered as converting an INTEGER to a REAL, whereas R = 5HABCDE would not have any conversion.
- (6) Hollerith constants longer than 10 characters. e.g., DIMENSION J(2)  
DATA J/20H1234567890ABCDEFGHIJ/  
A new type, CHARACTER, replaces such usage.
- (7) Unscripted array name used to denote first element. e.g., DIMENSION A(2) \$ A = B same as A(1) = B.
- (8) A\*\*B\*\*C same as A\*\*(B\*\*C). New standard says A\*\*B\*\*C must be evaluated as (A\*\*B)\*\*C.
- (9) Alternate form of the DATA statement. e.g., DATA(A=1.0). (Use DATA A/1.0/ instead.)
- (10) List items in a DATA statement of the form (constant list) or rf\*(constant list).  
e.g., DIMENSION B(6)  
DATA A/(1.0)/,B/3\*(1.0,2.0)/  
(Use DATA A/1.0/,B/1.0,2.0,1.0,2.0,1.0,2.0/ instead.)
- (11) TYPE as a keyword in type statements. e.g., TYPE COMPLEX Z (use COMPLEX Z instead).
- (12) ECS statement (use LEVEL statement instead).
- (13) LEVEL statement with array names. CDC proposes to modify the LEVEL statement.
- (14) ENTRY statement. New standard uses a somewhat different form.
- (15) STOP 'C...C' and PAUSE 'C...C'. (Use STOP 'C...C' and PAUSE 'C...C' instead.) Note that on our system, " is usually printed as # and ' is usually printed as †.
- (16) Complex type in arithmetic IF statement. e.g., COMPLEX Z  
IF(Z) 10,20,30
- (17) Complex type in relational expressions except .EQ. and .NE. e.g., COMPLEX Z,I  
IF(Z.GT.I)GO TO 10
- (18) Two-branch arithmetic IF statement. e.g., REAL J  
IF(J) 10,20
- (19) RETURNS list and RETURN i
- (20) One-trip DO statement. e.g., N=5  
DO 10 I=7,N  
executes loop once. New standard says loop is not executed.

- (21) Redefining DO loop parameters inside the loop affects loop iteration count. e.g., DO 10 I=1,N  
N = N - 1  
New standard says changing loop parameters inside will not affect the count.
- (22) Out of range index on computed GO TO gives a fatal error. e.g., N = 3  
GO TO (10,20),N  
New standard just goes to next statement without error.
- (23) Statement function reference behaves as if expression is written in place of reference. Each argument is written in place of reference. Each argument is evaluated and, if necessary, converted to type of dummy argument. (UCC believes this change will not affect anyone.)
- (24) Continued END statement. e.g., E  
IN  
2D
- (25) Sense lights (SLITE, SLITET routines). CDC recommends use of logical variables instead.
- (26) \*.\* in a FORMAT (use "...") instead.
- (27) bX in FORMAT meaning 1X. e.g., 10 FORMAT(X,A10). Use 10 FORMAT(1X,A10) instead.
- (28) Redundant parentheses in I/O lists. e.g., READ 5, ((A(I),I=1,10))
- (29) Reading into Hollerith field descriptor. e.g., READ 10  
10 FORMAT(10H )
- (30) Variable format being simple variable. e.g., INTEGER X  
READ (5,X) A  
Use INTEGER X(1) instead.
- (31) Double precision item corresponding to two format descriptions. e.g., DOUBLE PRECISION D  
PRINT 20, D  
20 FORMAT (2A10)
- (32) READEC and WRITEC routines. CDC recommends MODLEV instead.
- (33) A few unfortunately named user functions. New standard has some (such as LEN) which may conflict with user's.
- (34) ROUND option on FTN control statement. CDC would instead provide UNROUND option.
- (35) C\$ DEBUG
- (36) Optional comma after format edit description of the forms: nX  
nHc...c  
"c...c"  
e.g., 30 FORMAT(1XA10)
- (37) Two-branch logical IF statement. e.g., IF(A.GT.B)10,20
- (38) Intrinsic functions AND, OR, XOR, and COMPL. CDC recommends using masking expressions instead.
- (39) EOF function. New standard uses END= (see MNF Manual, page 9-8).
- (40) Compiler list directives C/ LIST,ALL and C/ LIST,NONE. (CDC would change to C\$ LIST,ALL and C\$ LIST,NONE.)
- (41) Inventing the END statement when missing. CDC would make a missing END statement be a fatal error.
- (42) Time and date functions DATE, JDATE, TIME, CLOCK, SECOND, used as both functions and subroutines. CDC would replace with a slightly different form.


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The MNF compiler places file names defined in the PROGRAM statement in the symbolic reference table. This is unfortunate, especially when one defines a file with a letter from a-h, o-z, such as FILEDAT. MNF makes this file name a variable name with an attribute of REAL. Subsequent definition of FILEDAT as an integer is of no avail. This is inconsistent with FTN and one would hope that MNF could be changed to be compatible with FTN.

E.A.: 25August1976

You are correct in the way that file names on the PROGRAM card are handled on current MNF. We have fixed this on FUTURE,MNF.

L. Liddiard



The Advanced System 2000 short course originally scheduled for November 8,10,12 has been re-scheduled for November 29, December 1,3 (MWF). The room and time are unchanged (ChemE 50, 2:15 - 4:00 PM.

How about a short course in Advanced FORTRAN?  
D.S.: 14September1976

This class was given once before and will most likely be offered again during Winter Quarter.  
R. Franta

I would be really helpful if you would fix up COST to work for DELAY. COST is most useful for such large and time consuming production runs.  
B.C.: 16September1976

Fixed.  
N. Reddy

Previously, the FTN feature that accepted and converted 029 punches also correctly converted quotes used in format statements. It no longer does. Since IBM FORTRAN uses quotes in formats, this is very inconvenient. Please make another change to correct this special 029 use. (This same problem also exists in MNF, see attached samples.)  
B.W.: 15September1976

When we moved to Level 11 of KRONOS, we found that CDC had abandoned the three sets of 029 punches (FORTRAN, SNOBOL, COBOL) and introduced a unified 029 punch set that does not resemble any of the three previous sets. Your deck would have worked on the old FORTRAN 029 set but the quote mark has a different punch combination on the new set. We are sorry about this inconvenience but we use this new set to be compatible with CDC software. You should be able to re-punch your cards in the new set by using GENREAD or similar procedures.  
N. Reddy

Why don't you fix multi-file tape problems and develop a simple procedure/function to write a backup tape for a multi-file tape?  
P.V.: 19September1976

Most 9-track multi-file problems that I am aware of are the LABEL MISSING type. This seems to occur because of tape mis-positioning by the hardware. Several hardware updates have been recently added to address areas relating to this positioning difficulty. With the coming of another 9-track unit, CDC personnel will have a better opportunity to 'tune' the units, an opportunity they have been denied because users expect two drives to be up at all times. With the arrival of the third drive, users should not expect three drives up at all times. Creating a backup tape of a multi-file set is simple, though not as easy as it used to be. Use the following for single reel multi-file sets:

```
BLANK(VSN=SNyyyy,VA=$ $,ID=$YOUR SECRET$)
    blank the new tape without label protection
RESOURC(NT=2)
LABEL(OLD,VSN=SNxxx, ID=$TAPE ID$,F=F,FC=5200,NS=1,
      PO=R)
LABEL(BACKUP,VSN=SNyyyy, ID=$YOUR SECRET$,F=F,
      FC=5200,NS=1,PO=W)
SKIPF(BACKUP)    skip label
SKIPF(OLD)       skip label
COPY(OLD,BACKUP)
```

For 9-track tapes, the use of the NT parameter may be required in BLANK and LABEL statements. Along with RESOURC(NT=2) for multi-file, multi-reel tapes, other procedures are required which will be outlined in TAPEUSE.

W. Elliott

Please restore the dayfile message that shows when less than 10% of the funds are left. It is inconvenient to be turned off completely and suddenly; I'd rather slide consciously into ruin.  
D.R.: 13October1976

We are working on it but can't give you a definite completion date.

J. Foster

I am somewhat disturbed by the plan to automatically dispose (to the fast printer) files that are over 200 PRUs in length. One of the value functions of the 1004 is the ability to look at output and be able to end what turned out to be garbage. Haven't we lost this capability with automatic disposition? I would suggest instead that the first 200 PRUs of output be returned to the terminal. Upon completion of the printout or upon receiving an END,LP, the output would be fully disposed. However, the user should have the option of discarding the output file before it reaches the high speed printer. Perhaps a user can end printout with a DISCARD,LP, which would both terminate output at the terminal and at the high speed printer.

E.A.: 25August1976

Your suggestion has merit and was considered during the original planning stages. We decided that this type of feature would turn into a "holding queue" and use large amounts of disk space which is at a premium. Since we have received numerous complaints about long output, we were forced to do something and this was the most viable alternative. If you think 200 PRUs is too small, it can be changed; your comments or suggestions would be helpful.

R. Franta

The sequence numbers on punched binary are a constant value. I made several calls to the HELP line about this problem and it was fixed on September 22nd. Now the old problem has occurred again. What's going on?

M.S.: 30September1976

Through a human error, the correction which was put into the system on September 22 was not made permanent in the system for about a week. Now the correction is permanent. We will take steps to ensure that such things do not happen in the future.

N. Reddy

I would guess that this has been suggested before, but I would like to see the MNF default to the E parameter at E=3.

E.A.: 25August1976

The default is E=2 on timesharing and E=0 on batch versions of MNF. The MNF compiler's main "forte" is in diagnosing compilation and execution errors. If the MNF user does not desire such messages, he may, of his own will, suppress levels of messages. The writers of MNF, after putting in much effort to do good error diagnostics, do not plan to change the current level settings.

L. Liddiard

PRODUCTION USAGE SUMMARIES

<u>CDC Cyber 74</u>	<u>September, 1976</u>	<u>September, 1975</u>
Number of jobs run	55,735 ( 62,762)	41,192 ( 48,103)
Central processor hours	143 ( 180)	95 ( 124)
Mass storage transfers (KPR)	179,541 (219,536)	-
Magnetic tape transfers (KPR)	5,489 ( 7,654)	-
Pages printed	598,992 (692,506)	517,826 (644,173)
Cards punched	526,616 (545,582)	367,032 (407,962)
Microfilm frames produced	6,991 (194,286)	13,130 (152,558)
Tapes mounted	8,224	7,029
Average file storage	798.9 million characters	529.3 million characters
Mean time between failures	13.9 hours	10.6 hours
Percentage available during scheduled hours	98.2 percent	92.6 percent

<u>CDC 6400</u>	<u>23 Aug-30 Sept</u>	
Number of jobs run	87,722	55,624
Central processor hours	107	40
Terminal hours	10,310	7,041
Number of terminal sessions	21,311	17,551
Maximum number of simultaneous users	65	57
Average file storage	213.1 million characters	165.8 million characters
Mean time between failures	64.9 hours	92.7 hours
Percentage available during scheduled hours	99.2 percent	99.6 percent

CYBER 74 DOWNTIME SUMMARY -- September 30 through October 26, 1976

	<u>Monday-Friday</u> <u>0800 - 1800</u>	<u>other</u>	<u>total</u>
Total possible scheduled uptime hours	200	274	474
Total downtime hours (see schedule A)	.4	.4	.8
Total uptime hours	199.6	273.6	473.2
Uptime percentage	99.8 percent	99.9 percent	99.8 percent
Average downtime per occurrence	4.6 minutes	4.5 minutes	4.5 minutes
Mean time between failures	39.9 hours	45.6 hours	43.0 hours
Subsystem failures:			
SUPIO	16	7	23
TELEX	0	0	0
EXPORT	4	1	5

Schedule A: <u>downtime hours</u>	<u>Number of occurrences</u>	<u>total hours down</u>	<u>average minutes downtime</u>
1) Preventive maintenance over-runs	0	0.0	0.0
2) Software related problems	10	0.7	4.0
3) Hardware related problems	1	0.1	6.0
4) Indeterminate software/hardware problems	0	0.0	0.0
5) External problems	0	0.0	0.0

SUBMISSION SITE USAGE SUMMARY, TELEX EXCLUDED -- October 1 - 31, 1976

Submitted from	total jobs	%	pages printed	%	cards read	%
Central site	3,178	5.5	236,714	24.1	1,411,970	15.3
ExpEng	7,669	13.4	206,063	21.0	2,173,864	23.5
West Bank	7,126	12.4	119,055	12.1	1,259,657	13.6
6400	1,002	1.7	-	-	-	-
SUPIO	38,395	66.9	421,467	42.9	4,411,904	47.7
TOTAL	57,370		983,299		9,257,395	

## DOCUMENTATION

### New/updated WRITEUP documents

ARCHIVE	04SEP76	PF dump/Load utility (21p)
CALLPFM	23SEP76	FTN4 PF routines (7p)
CALLPRG	14SEP76	Library search extension (7p)
CATALOG	26OCT76	Catalog a file (2p)
CATLIST	01NOV76	Catalog a permanent file (3p)
CHANGER	01OCT76	Extended CHANGE utility (1p)
COPYL	28SEP76	Cyber common utility (2p)
EISPACK	14SEP76	EISPACK routines (indexed)
FUNPACK	14SEP76	FUNPACK programs (indexed)
GETSAVE	01OCT76	PF transfer utility (1p)
ITEMIZE	28SEP76	Cyber common utility (3p)
LPKODE	01OCT76	LP/IP/MIP package (2p)
PASCLIB	26SEP76	PASCAL library (indexed)
PFILES	01NOV76	PF request processor (7p)
PURGER	01OCT76	Extended PURGE utility (1p)
POLISH	11OCT76	Edit ANSI FORTRAN modules (3p)
TAPES	14OCT76	Tape library manager (10p)

### New publications

For the New User: A Brief Guide (formerly called "the Compleat Guide for the Neophyte") FREE, in 235a ExpEng.

## BRIEF NOTES

UCC has been making a daily pickup and delivery run to Health Computer Sciences. Since the U1004 has been removed from MasonH, this daily service will be terminated on November 19th.

Permanent files on UCC devices 10 and 20 were lost at 5 PM on October 28th. Files were re-loaded as of 4 AM, October 28th. This affected all users with a user index (not user number) ending in a 1 or a 4. Determine your user index by executing a LIMITS control statement. Also affected by users of direct access files that resided on device 20. These files are identified by the presence of the number 20 under the DN column on the output from the CATLIST,L0=F control statement.

The UCC newsletter may be used by University departments and staff members for advertising computer terminals, computer related equipment, or computer software that is for sale, loan, or otherwise may be acquired by other departments within the University.

The UCC presently has FOR SALE a used Univac 1710 keypunch. The keypunch is in working condition and service can be obtained from Univac on a time and materials basis. Contact Dan whealdon, 373-4877 or Abe Franck, 376-7291.

### RETURN TO:

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227 EXPERIMENTAL ENGINEERING  
208 UNION STREET S.E.  
MINNEAPOLIS, MINNESOTA 55455

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