

UNIVERSITY COMPUTER CENTER newsletter

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9-17-75*

Director: Peter C. Patton

227 EXPERIMENTAL ENGINEERING
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* ALL MIRJE INSTRUCTIONAL NUMBERS WILL BECOME INVALID ON SEPTEMBER 15. CALL MERITSS *
* (M. SKOW, 373-7745) FOR TIMESHARING INSTRUCTIONAL NUMBERS FOR FALL QUARTER. IF YOU *
* HAVE A PROBLEM, CALL THEA HODGE, 373-4599. *

CONTRIBUTIONS FOR THE NEWSLETTER WILL BE CHEERFULLY ACCEPTED, DEADLINE FOR THE OCTOBER NEWSLETTER WILL BE EARLY THIS MONTH (BIG ISSUE COMING UP), PLEASE SUBMIT ARTICLES BY SEPTEMBER 15.

ACM 75**COMPUTERS AND THE QUALITY OF LIFE**

-- by T.D. Hodge

The annual conference of the Association for Computing Machinery will be held at the Radisson Hotel Downtown (7th Street between Nicollet Mall and Hennepin Avenue) on October 20, 21, and 22. This is an opportunity to meet and share ideas with computer professionals from all over the United States and Canada. There will be technical sessions, tutorials, and panel discussions. A list of the topics to be covered includes computer networks, data structures, computational methods, high level languages, memory management, operating systems, microprocessors, software management and documentation, file design, computer art and music, and others. Twenty Special Interest Groups (SIG's) and Special Interest Committees (SIC's) each have at least one technical sessions; SIGBDP has 9 sessions!

The keynote speaker, Dr. Alan F. Westin of Columbia University, has chosen the topic "The Next Decade of the Computer Revolution: Privacy, Participation, and Power." He will also participate in a panel on "Information and Public Policy."

The University's two computer systems, the Cyber 72 (6400) and the Cyber 74, will be used for demonstrations in connection with various sessions and possibly during the 6th Annual Computer Chess Tournament which begins Sunday afternoon, October 19, with the first round at 1:00 PM. The preliminary program and preregistration information are available from Naomi Estes, MISRC, 93 Blegen Hall, University of Minnesota, Minneapolis, Mn 55455, or call her at 373-7872.

CHESS TOURNAMENT

--by G. Boos

The Sixth United States Computer Chess Championship tournament will be held as part of the 1975 Annual Conference of the ACM in Minneapolis in October. A four round Swiss style tournament is planned. The field is limited to twelve teams. In addition, a special exhibition will be given by David Levy, an International Master from England, who will take on all comers simultaneously. Levy has a 1000 pound bet with a British programmer that by 1978 no chess program can beat him in a normal match. It looks as if Levy will win the bet.

Last year RIBBIT, a program written by Jim Parry, Ron Hansen, and Russel Crook, captured the title by upsetting CHESS 4.0, the work of David Slate and Larry Atkin of Northwestern University. CHESS 4.0 has been champion since the first ACM tournament in 1970. The tournament is being sponsored by Monroe Newborn of Columbia University, Ben Mittman of Northwestern University, and Richard Harbeck.

timesharing**LOW SPEED TERMINAL PURCHASE**

University Computer Services (UCS) plans to purchase additional low speed terminals (CRT's and Decwriters) for use in the University's instructional computer laboratories. If the vendors of this equipment can be guaranteed that a multiple purchase will be made over a specified period of time, prices will be lower. Therefore, if there are any departments or other users who definitely plan to purchase timesharing terminals in the current fiscal year, participating in this planned purchase may lower their costs. Anyone interested should call Abe Franck (376-7291) at UCC as soon as possible for further information.

The University Computer Center also has a Field Engineering division able to offer service on low speed terminals. Call Doug Parkes (376-7067) or Abe Franck (376-7291) for information.

mecc news*--by T.D. Hodge*

We are now able to make available (to University of Minnesota users) U110 account numbers validated for DEMAND mode. MECC is hoping to make available all of Univac Category I software in DEMAND mode by this Fall, including two Univac batch FORTRAN compilers. The Real Time FORTRAN processor date has been postponed to January 1, 1976. Acceptance testing has also been postponed; the new date is tentatively set at April 15, 1976. This means that development will continue concurrently with operations for much of this school year.

Operating hours during September will be:

September 2 - September 14 8 AM - 5 PM Monday through Friday
 September 15 - September 28 8 AM - 5 PM Monday, Wednesday, Friday
 8 AM -10 PM Tuesday, Thursday
 12 PM - 2 PM Saturday
 4 PM - 8 PM Sunday

Call 373-4599 and leave your name, telephone number, and address. We will have a user number set up for you.

rje news*--by L. Fetcher & R. Franta*

After getting many requests, UCC has decided to implement an automatic, large output diverting system on the medium speed remote terminals. Each closed shop site will be able to set its own output limits and choose the site to which diverted output will be sent. Open shops will be regulated by UCC.

The divert criterion will be the number of disk sectors used by the output file. Implementation is scheduled for December, 1975 during quarter break. More details will appear in later newsletters.

library changes & additions*--by M.J. Frisch*

July 28 & August 5, 1975 - The PDP-11 program that drives the Statos 31 plotter was speeded up to 170 line steps per second. Autostep mode was corrected to operate properly.

TO RUN23 USERS OF THE MINNESOTA SUBPROGRAM LIBRARY

Because the library SYSLIB is the last library searched during loading (which can result in problems in certain cases), UCC will remove the routines of the Minnesota Subprogram Library from this file and transfer them to a file called RUNMINN on October 1, 1975. Note that this change will affect only RUN23 users.

This means that RUN23 users who have calls to routines in the Minnesota Subprogram Library must add the following two cards just before the LGO. card, or just before any card which loads a RUN23-compiled program:

FETCH,RUNMINN.
 LIBRARY,RUNMINN.

The list of routines in the Minnesota Subprogram Library can be found in the writeup "Index to UCC Software" which is available in 140 ExpEng, in 235a ExpEng, or by calling 373-7744.

PF users*"THE MEMO" --by R.J. Hursh*

After the monthly permanent file archive procedure has been completed, a program is run that creates a list of all direct access permanent files that are less than 100 sectors in length. A computer generated memo is then sent to the person responsible for account numbers that contain one or more of these "inefficient" direct access files. The memo explains how to convert an inefficient direct access file to an efficient indirect access file which will make better use of disk space and also save the user money.

Some users have expressed concern upon receiving one of these memos because the file names listed in the memo were created under SYSTEM 2000. UCC realizes that the inefficient files created by SYSTEM 2000 are not a reflection on user carelessness. The memo was mainly intended to be informative. Should you receive one:

- (1) If the file names listed are SYSTEM 2000 origin, please ignore the memo.
- (2) If the file names listed are not of SYSTEM 2000 or some other data base system origin, please consider converting the files to indirect access.

USER BACKUP TO LARGE DATA FILES --by T.D. Hodge

Dick Hendrickson of the Physics Department is willing to make available to others the procedure and the program(s) he uses to backup large data files. The program uses one reasonable method for detecting changes to a file. He has been concerned because of occasional but still serious random damage to such files on disk packs. UCC does not take responsibility for Hendrickson's programs but is willing to photocopy his writeup and make it available to users upon request. For more information, call Dick at 373-3361 or see him in Room 385 Physics.

short courses

There will be more short courses offered this Fall than ever before. We are in the process of scheduling the courses now; see the October newsletter for the final dates, times, and locations of the classes. Here is the tentative schedule:

INTRODUCTION TO UCC	:	Wednesday, October 1; 2:15 - 4:15 PM, 209 Aero
Beginning FORTRAN	:	October 6,8,10,13,15,17 (MWF); 2:15 - 4:15 PM, 250 Aero
KRONOS Control Cards	:	October 20,22,24,27,29,31 (MWF); 2:15 - 4:15 PM, 21 Aero
COBOL	:	October 7,9,14,16,21,23 (TTh); 3:00 - 5:00 PM, 21 Aero
SYSTEM 2000	:	October 28,30, November 4,6,11,13 (TTh); 3:00 - 5:00 PM, 21 Aero
Introduction to Data Management	:	November 17,19,21,24,26,28 (MWF); 3:00 - 4:00 PM, 313 Aero
Record Manager	:	October 20,22,24,27,29,31 (MWF); 2:15 - 4:15 PM, 319 Aero
SORT/MERGE	:	November 3,5,7 (MWF); 3:00 - 5:00 PM, 319 Aero
COMPASS	:	October 6,8,10,13,15,17 (MWF); 2:15 - 4:15 PM, 319 Aero
PASCAL	:	November 3,5,7,10,12,14,17,19,21 (MWF); 3:00 - 5:00 PM, 193 ExpEng
SPSS	:	November 18,20 (TTh); 2:15 - 4:15 PM, 319 Aero
*PLI: Programming Language Interface:	:	November 18,20,25 (TTh); 2:15 - 4:15 PM, 317 Aero

*Not to be confused with PL/1 which is a higher level language in the experimental stage at UCC.

classroom instructors

Instructors of classes which use the computer should begin considering their needs now. Requests for UCC writeups and manuals must be received two weeks in advance. This includes the "Student Guide to Timesharing" and the "Student Guide to Batch Processing." Instructors should also be conversant with the "Memo to Instructors." All UCC documentation is available by calling, writing, or visiting the UCC Reference Room, 235a Experimental Engineering, 373-7744.

computer downtime

JULY 29 THROUGH AUGUST 26, 1975

	Monday-Friday 0800-1600	Other	Total
Total possible scheduled uptime hours	210	294	504
Total downtime hours (see Schedule A)	22.05	3.27	25.32
Total uptime hours	187.95	290.73	478.68
Uptime percentage	89.5 percent	98.9 percent	94.98 percent
Average downtime per occurrence	34.65 minutes	17.82 minutes	30.79 minutes
Mean time between failures	5.10 hours	26.43 hours	9.99 hours
Subsystem failures ¹			
SUPIO	15	16	31
TELEX	3	2	5
EXPORT	6	5	11

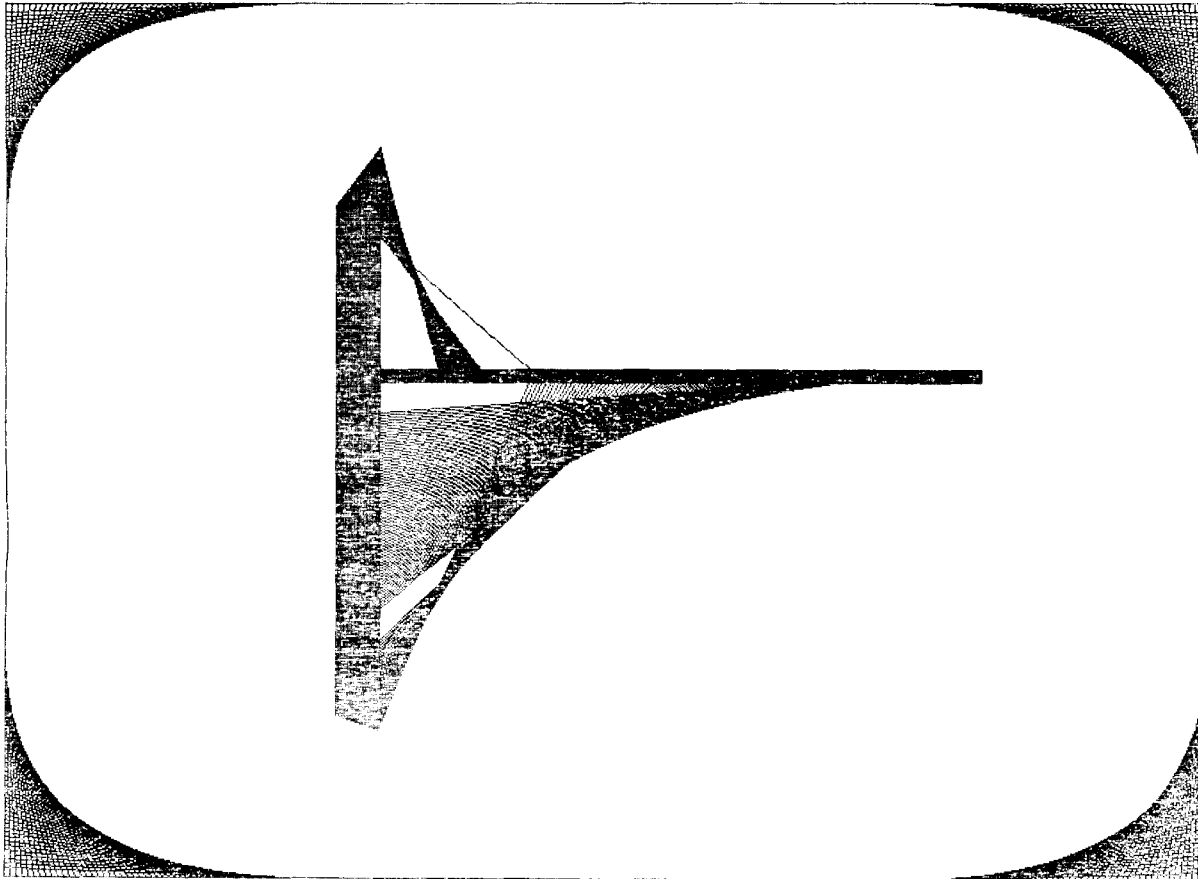
Schedule A: downtime hours

	number of occurrences	total hours down	average minutes downtime
1) Preventive maintenance over-runs	4	.683	10.25
2) Software related problems	8	2.88	21.62
3) Hardware related problems	13	5.68	26.23
4) Indeterminate software/hardware problems	29	16.06	33.24
5) External problems	0	0	0

¹Subsystem failures refer to times that the specific subsystem aborted other than when the entire system failed.

R. Dykstra

PLOT CONTEST WINNER IS EDWIN WONG, MECHANICAL ENGINEERING GRADUATE STUDENT.



the suggestion box

- Q/S Increase the number of consultants competent in PASCAL. There is increasing emphasis by CICS on the use of PASCAL in programming assignments yet the frustration and wasted time resulting from a lack of available consultants discourages the use of PASCAL. Both Andy Mickel and John Strait are considerate and helpful; perhaps their consulting hours could be increased until others are available. (August 26)
- A Many members of the UCC staff are studying PASCAL now. We hope to have more PASCAL consulting available by Fall Quarter. Remember, however, that consulting directly related to course assignments is supposed to be provided by departmental T.A.'s. (T. Hodge)
- Q/S Much of the world utilizes IBM equipment. A quick look at any help wanted section drives home the fact that experience on IBM equipment would be an invaluable asset in finding employment in DP for U of M graduates. The University currently has IBM equipment on campus. Accepting the fact that it is currently utilized, what arrangements can be made to supply access for students? (August 5)
- A Personally I agree that a one-quarter course on IBM and other computer systems with actual use of these systems could be a valuable part of a student's experience and academic record. However, curriculum questions must properly be raised with the academic departments involved. UCC's role is to provide service on the computers in its jurisdiction, which, by the way, does not include any IBM computers. Therefore, such arrangements as you mention would have to be made directly with the appropriate computer management through your academic department. (R. Hotchkiss)
- Q/S I recently received a memo concerning wasteful disk storage...results from the automatic allocation of files by System 2000. (August 6)
- A We are aware of this. However, it would be costly to build recognition of such files into the memo maker. Be assured that the memo you received is not a hand slap; it's just a reminder. If you are confident of your own efficiency you may easily ignore the memo. Many users appreciate the reminder. (T. Hodge)
- Q/S When control cards like REWIND do not do anything they should give some sort of dayfile message. The sequence:
LGO.
REWIND,TAPEIO.
CCF,TAPEIO,OUTPUT.
will probably get a message like "EOI ENCOUNTERED" and not copy anything to output. This in turn causes a programmer to look at his program to see why it didn't write anything on TAPEIO. If REWIND had produced a message like "THERE AIN'T NO TAPEIO" the mistyped file name would probably be easily spotted. (July 23)
- A This is a good idea. There are also some cases when you'd like a dayfile message when a new disk file is created; for example, the sequence:
CBF,LGO,TAPEII.
CBF,DATA,XAPEII.
where XAPEII should have been TAPEII. UCC will consider adding some features to provide dayfile messages in these cases. (K. Matthews)
- Q/S I think the MNF error message, "COMMON BLOCK LENGTH EXTENSION ILLEGAL" should be changed to a caution, at least when the B option is used, since:
(1) This isn't a FORTRAN error (loader error).
(2) There are situations where it is legal. (July 31)
- A The only legitimate case I can think of is in assembling unrelated routines. This case is quite rare and the case of wrong length common blocks in related routines is a very serious error. We will consider making it a warning. (E.J. Mundstock)
- Q/S Please give us some warning before you change MNF. It's hard to remember that MNF will change at the start of a school quarter. Why don't you "freeze" FUTURE MNF about a month before you expect to replace current MNF and announce this in SYSNOTES. Once frozen, the only changes allowed would be to fix serious new bugs. I'd personally be happy to try FUTURE,MNF. and give you a list of your new errors, but I'd like to do it at a time convenient to me, not have to do it on the first few days of each quarter. (July 23)
- A We will announce two weeks ahead of time in SYSNOTES that a change in MNF is to be made. (E.J. Mundstock)
- Q/S I believe UCC should warn DUMPPF/LOADPF users of the following danger: in the event of local damage to the dump file (e.g., tape bad spots), the information required to reconstruct (via LOADPF) the original file from its corresponding dump record may be destroyed. (I am speaking of the CIO or other control words used to represent record structure.) This means that recovery of any data from a damaged dump record may be impossible after the point of damage regardless of the original (non-dump) file's record structure. Essentially, this means that the amount of data which can be recovered is potentially less with dump files than when files are simply copied to and from the dump media. Of course, the reason for DUMPPF/LOADPF is convenience, and this purpose is fulfilled nicely. However, particularly with relatively unreliable tape facilities, this convenience does have a price, and I think users should be informed of this hidden cost! (July 24)
- A This is a good point. We will add a paragraph to the next version of the DUMPPF writeup explaining that partial DUMP type records are unusable. (K. Matthews)

CYBER 74 OPERATING HOURS*

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

..... Lauderdale only
 ||||| Lauderdale, ExpEng
 ||||| Lauderdale, ExpEng, West Bank

*UCC operators stop accepting jobs at the manned high-speed stations about 15 minutes before operations end to enable the queues to clear on time. SUPIO comes up 1/2 hr. after operation begins and closes down 1/2 hr. before operation ends (RJE medium speed terminals). The operator issues a 10 minute warning before TELEX is dropped (MIRJE).

MEDIUM SPEED REMOTE TERMINAL SITES (RJE)

site	supervisor
38 ElectE (East Bank) 4V	J. Guentzel/373-5404 M. Cook/373-3895
N640 EltH (East Bank) 4W	J. DeWitt/376-7377 N. DeWitt/376-7377
S191 KoltH (East Bank) 4Z	T. Faulkner/376-7024 J. Duff/373-2348
321 MinMet (East Bank) 4L	C. Swanson/373-5475 V. Bongiorno/373-2309
69 Physics (East Bank) 44	R. Scarlett/373-0243 R. Hendrickson/373-3611
167 SocSci (West Bank) 4X	J. Shea/373-3608
257 BioSci (St. Paul) 47	R. Comstock/373-0979 R. Cardellino/376-3407
125G ClaOff (St. Paul) 48	C. Bingham/373-0988
415 CofH (St. Paul) 2L	D. Nelson/376-7003 T. Ehlen/376-7003
24 NorH (St. Paul) 4Q	J. Colten/373-0990
Users' Room (Lauderdale) 49	Shift Coordinator/373-4940

CONSULTING SITES & HOURS^{††}

LAUDERDALE USERS' ROOM (general consulting)	
Monday - Friday	1:30 - 3:30 PM
Monday - Thursday	7:30 - 9:30 PM
EXPERIMENTAL ENGINEERING 140 (general consulting)	
Monday - Friday	9:00 AM - 5:00 PM
Monday - Thursday	7:00 PM - 9:00 PM
Saturday	10:00 AM - 2:00 PM
Sunday	7:00 PM - 9:00 PM
EXPERIMENTAL ENGINEERING 140 (statistics packages)	
See the schedule posted in 140 ExpEng.	
SOCIAL SCIENCES 167 (statistics packages)	
See the schedule posted in 167 SocSci (West Bank)	
CLASSROOM OFFICE BUILDING 125 (statistics packages)	
See the schedule posted 125 ClaOff (St. Paul)	
BLEGEN HALL 25 (general consulting)	
See the schedule posted in 25 BlegH (West Bank)	

^{††} The consulting sites remain the same throughout the year. However, the hours will vary.

REFERENCE MANUALS

[Copies are available for reference in 140 ExpEng, Lauderdale Users' Room, West Bank Computer Center, all the medium speed terminal sites, and in the Reference Room (235a ExpEng).]

Revision D	ALGOL Version 3 Reference Manual
Revision C	APL*CYBER Reference Manual
Revision B	BASIC Reference Manual
1973	BMD Reference Manual
Revision E	COBOL Version 3 Reference Manual
Revision E	COBOL Version 4 Reference Manual
Revision E	COMPASS Version 3 Reference Manual
Revision D	FTN Version 3 Reference Manual
Revision G	FTN Version 4 Reference Manual
Revision B	FTN DEBUG User's Guide
1974	IMSL Library 3, Edition 4 Catalog
Revision C	KRONOS 2.1 Reference Manual
1974	MNF Reference Manual
Revision D	MODIFY Reference Manual
	OMNITAB II Programmer's Reference Manual
1974	OMNITAB II, An Introduction to
Revision C	SIMSCRIPT Version 2 Reference Manual
Revision G	SORT/MERGE Version 4 Reference Manual
1970	SPSS: Statistical Package for the Social Sciences
1974	SPSS Version 5.5 and SPSS 5.8 SYSTEM 2000 Reference Manual
1973	SYSTEM 2000 Users' Guide
Revision C	T/S User's Reference Manual
Revision B	Text Editor (EDIT) Reference Manual
Revision E	UPDATE Reference Manual

TELEPHONE NUMBERS

373-4548	Account Clerk
376-3963	Educational Services (R. Franta)
373-4596	ExpEng I/O
376-7067	Field Engineering
373-2521	Keypunch Supervisor
373-4940	Lauderdale Shift Coordinator
373-4995	Microfilm Operator
373-4876	Operations (R. Folden)
373-7744	Reference Librarian
376-3963	RJE Services (R. Franta)
373-4995	Tape Librarian
373-4360	UCC Main Offices
373-4599	User Services (T. Hodge)
373-4921	Users' Room (Lauderdale)
373-3608	West Bank I/O

REMEMBER THE HELP-LINE: 376-5592

KEYPUNCH LOCATIONS

[The number of keypunches at each site is in parentheses.]

East Bank	St. Paul	West Bank
38 ElectE (1)	257 BioSci (1)	90 BlegH (1)
N640 EltH (1)	125G ClaOff (1)	86 BlegH (11)
130 ExpEng (2)	415 CofH (1)	167 SocSci(1)
131 ExpEng (1)	24 NorH (1)	
208 ExpEng (14)*		
S191 KoltH (1)		
321 MinMet (1)	Lauderdale	
69 Physics(1)	Users' Room (5)*	

*includes 1 interpreting card punch.

(continued from page 6)

Q/S You must warn users when you mess up their permanent files. Your foul-up in mid-June cost us over \$40 in phone calls and several man days of work and delayed a graduate student for a month in part of his research. This could have been avoided if you had taken a sheet of paper, written some message on it and posted it at ExpEng. Since not all people see warning messages before they submit jobs, you should, if the user wants this feature, actively notify him of a permanent file error; the best way to do this would be to cause all GET and ATTACH operations to fail with an explanatory message until the user takes some positive step to indicate that he is aware of the possible damage to his files. For example, you could implement a control card like "IKNOWIT." to clear this abort condition. (July 23) ...loss of permanent files is a MAJOR event and you MUST warn users BEFORE they run jobs... (August 6)

A UCC maintains a current copy of SYSNOTES at ExpEng and we will begin (again) to post a copy at Lauderdale. When there is a major permanent file malfunction (as the one in early August) we will post a larger sign at ExpEng and Lauderdale saying something like

"SOME PERMANENT FILES HAVE BEEN LOST. READ THE SYSNOTES"

Usually when we have a permanent file disaster, the permanent files affected are destroyed. This was not the case in early June. There were three crashes within a week during which some permanent files suddenly had random parts of other files on them instead of the correct data. Mainly because of our inexperience in handling permanent files, these files remained on the disks and a SYSNOTE explained the problem.

This was a great hardship for the users affected. The files could be accessed and dumped and the user was unaware that the actual data on the file was bad. Now we have developed a better procedure so that if/when this happens again the permanent files with bad data on them will actually be destroyed. The GET and ATTACH cards will now fail because the file is not present, giving the user the opportunity to re-create the file. (K. Matthews)

brief notes

PUNCH CARDS are now available from a vending machine on the first floor of the Experimental Engineering Building.

COBOL 4.3 AND SORT/MERGE 4.0 will become the standard versions in September, replacing COBOL 3 and SORT/MERGE 3. These new standard versions make use of RECORD MANAGER. FUTURE versions of the COBOL 4.3 compiler, SORT/MERGE 4.0 processor, and RECORD MANAGER will also be made available in September.

INSTRUCTIONAL VIDEO TAPES on the operation of a keypunch will be available shortly after September 15 from the Learning Resources Center. This tape will be available to the public and will replace the keypunch classes previously offered by UCC. As the quarter progresses, there will be other instructional video tapes released on such subjects as teletypes, Univac 1004 user terminals, and a tour of the computers at the Lauderdale site. These tapes will be available on all the University campuses. More details on dates of availability and methods of accessing will follow in future newsletters.

RETURN TO:

UNIVERSITY COMPUTER CENTER
 227 EXPERIMENTAL ENGINEERING
 UNIVERSITY OF MINNESOTA
 MINNEAPOLIS, Mn 55455

 IF YOU WISH TO HAVE YOUR NAME
 REMOVED FROM THIS MAILING LIST,
 WRITE TO:

EDITOR
 UCC NEWSLETTER
 AT THE ABOVE ADDRESS OR CALL
 373-7744.

UNIVERSITY ARCHIVES
 ROOM 11 WA LIB
 MINNEAPOLIS CAMPUS