



## timesharing

--by P.C. Patton & L.A. Liddiard

At the beginning of August, the University announced the purchase of the CDC 6400 computer that had been leased and managed as the MERITSS system by the University since September 1971. This system had grown from an initial 32 ports to the large 250 port timesharing system that ran during the 1974-75 academic year and provided service to educational institutions in Minnesota in cooperation with the Minnesota Educational Computing Consortium (MECC). Although the computer is now owned by the University, all Minnesota interactive instructional computing needs which require CAI and other packages and processors not yet available on the MECC Univac 1110 system will continue to be served during the 1975-76 academic year by the MERITSS CDC 6400 computer system.

Last year several University instructional users transferred to the Cyber 74 in order to provide enough capacity for MECC on the MERITSS system. This year, all University instructional timesharing will be on the MERITSS CDC 6400 and/or on the MECC Univac 1110; the Cyber 74 MIRJE system will serve research, staff and administrative users only. In order to provide a stable environment, the University will run the same MERITSS KRONOS 2.1 operating system (upgraded through Level 9) that was used in the last academic year. The CDC 6400 will remain at its present location in Lauderdale for the year.

Mr. Michael Skow will continue as Assistant Director for Instructional Timesharing and CAI to coordinate the MERITSS operation. Several of the previous system programmers and consultants will continue to provide services as they did last year. The day-to-day operation of the CDC 6400 will be placed under UCC's Operations Group.

Each current University user of MERITSS or MIRJE will receive a letter by August 23 explaining in detail the alternatives and procedures for the forthcoming year. Each service (MERITSS & MIRJE) will be adjusted to make them more easily usable for those transferring from one to the other; for example, the 52.2K limit of MERITSS will expand to 55K to match the MIRJE limit and the MIRJE service will take on the attractive and useful features in the MERITSS system.

Prospective users of instructional timesharing should contact Michael Skow at 373-7745 and users with research or administrative needs should contact Thea Hodge at 373-4599.

In addition, one or more pages of this newsletter will henceforth be devoted to information for the timesharing MIRJE and MERITSS systems.

## Permanent files

--by K.C. Matthews & R.J. Hursh

### OLD MOMS SUBDIRECTORY FILES

When we converted from MOMS to the KRONOS operating system on September 1, 1974, all MOMS subdirectory files were copied to tape before being loaded as KRONOS permanent files. At that time we explained that we would save these tapes for one year. After September 1, 1975, therefore, it will no longer be possible to request files from these tapes. The tapes will be used for KRONOS permanent file dumping and archiving.

### PERMANENT FILE WRITEUP

A permanent File Users' Guide is now being written and will be available by September 30. This document will contain:

- a) An elementary introduction to the permanent file commands.
- b) Information on secured permanent files.
- c) Guidelines on permanent file usage and permanent file size.
- d) The internal (COMPASS) permanent file FET (file environment table) and details on how internal requests at UCC differ from those on the standard CDC KRONOS operating system.

### CHANGES IN PERMANENT FILE SECURITY

In order to better structure the FET for permanent file requests, all UCC changes to the permanent file FET are being placed in a new central memory word. This should not affect most users since the permanent file control card routines will be altered at the same time. Users who make COMPASS calls to PFM and have been selecting file security in the internal calls should call K.C. Matthews at 376-5605 to discuss the new call format. These changes will go into the system on the new deadstart tape scheduled for September 11, 1975.

When the changes go into effect, the default file security for a newly created permanent file will always depend on the job origin. Files created from MIRJE jobs are *secured* by default. Files created from all other jobs are *unsecured* by default. This represents a slight change in operation in the following case: when a REPLACE, lfn. is done, an indirect access file called lfn is created if there is no existing permanent file of the same name. Previously, files created by REPLACE were always unsecured, even when created from a MIRJE terminal. On September 11, files created from a MIRJE terminal with REPLACE will always be secured.

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#### ARCHIVING PERMANENT FILES

Last January it became necessary to remove unused permanent files from the disk at monthly intervals. The procedure is called archiving. Near the 1st of each month, all unsecured permanent files that were not accessed during the previous month and all secured permanent files that were not accessed in the previous three months are copied to an archive tape and then purged from the disks. Listings containing the names of files copied to archive tapes are posted at 140 ExpEng, the Lauderdale Users' Room, and the West Bank Computer Center. These listings can also be obtained with control cards. The control card

WRITEUP,ARCHIVE.

will give the most recent archive listing. Older listings can be obtained with the control card

WRITEUP,AFmmyy.

where mmm is the three character abbreviation for the month and yy is the year. Archive tapes are saved for one year. To get an archived file restored, a form titled "Request for Permanent File Restoration" should be completed and sent to the Permanent File Librarian at Lauderdale. There is a \$5.00 charge for each file restored. These forms are available at the three high speed stations (West Bank, ExpEng, and Lauderdale) or from a representative of User Services. Comments, questions, or complaints concerning permanent file archiving may be directed to Bob Hursh at 376-5605.

#### BACKING UP SECURED PERMANENT FILES

A new policy is now in effect for backing up secured permanent files. We hope that this policy will minimize the time involved in copying secured files by UCC and, at the same time, provide a better backup for secured files.

Two kinds of backup dumps are done for secured files: a *full dump*, done twice each week, copies all secured permanent files to tape. An *incremental dump*, done twice each day, copies to tape all those files which have been created or changed during a certain period.

Full dumps are done at 2 AM Monday morning and at 3:30 AM Thursday morning. Incremental dumps are done at 6 PM each day and at the end of operations each day. (On Saturday, incremental dumps are taken at 4 AM and at 4 PM.) If it is necessary to reload secured files, both the incremental dumps and the full dumps must be reloaded. These dumps are saved for one week.

At the end of each month the full dumps are saved apart from the normal backup tapes. These end-of-month tapes will be saved for a period of three months.

#### DISK STORAGE SPACE

UCC has a large amount of disk storage space but, unfortunately, demand has exceeded the available space on numerous occasions. In July we added 2 new drives, making a total of 11 disk drives. Each drive holds a CDC 844-21 disk pack containing 1632 tracks of 107 sectors each, or 175,000 sectors. Each sector contains 640 characters so one 844-21 pack holds 111 million characters.

Our disk drives are currently utilized as follows: eight of the drives hold user permanent files, including the user number LIBRARY familiar to many timesharing users. One drive holds the pack with system files of all control card accessible programs and libraries and the permanent files used by the program WRITEUP. The tenth drive holds permanent files used by UCC staff members and is about 60% full. The remaining drive is used for the privately owned packs of several users.

Much temporary disk storage space is also required during daily operations. This space is needed for the local files used by each job, input and output queue files, and rollout files needed for jobs not currently executing. The space not reserved for permanent files is used for these working files. The working files may reside on any device except the private pack device.

Occasionally one of the user permanent file devices becomes full. This causes two problems:

- (1) Each user number is associated with a specific device. When one device becomes full, all the user numbers assigned to that device can neither create new permanent files nor replace existing permanent files.
- (2) Because of an unresolved problem in the operating system, the working files assigned to a full device can become unreliable. Portions of these working files (most often output files) disappear. This is usually a section of several files which disappears from the middle of the file. This problem is under investigation and we hope to have it solved before the start of Fall quarter.

Some of the disk filling problem occurs because certain account numbers use an extremely large amount of disk storage. At the end of June, fifteen account numbers had more than 10,000 sectors each. These fifteen numbers used about 30% of the permanent file space available. The situation has improved with the addition of the two new drives but we expect devices to become full again during the school year.

To help the disk space problem, UCC will begin the following policy on September 1, 1975. It will be our policy to *suggest* that no account number should have more than 20,000 sectors (12.8 million characters) stored on the user permanent file disks. Users of more than this amount of storage should consider using removable packs. To make removable pack usage more feasible for these cases, we will establish a set of UCC removable packs; the first of which will have the packname UCC001. Users of these UCC packs should contact Robert Hursh at Lauderdale (376-5605) to reserve the required amount of space on a specified UCC pack. Storage must be reserved on the UCC packs in blocks of 10,000 sectors, with a 20,000 sector minimum. To enable us to plan UCC packs efficiently, users should reserve the maximum amount to be used. The space must be reserved (and paid for) for a full quarter; storage will be billed on the amount reserved or the maximum amount used during a quarter, whichever is greater. A full private pack rents for \$80.00 per quarter. The UCC pack user will be charged for the fraction of the private pack used (for example, 30,000 sectors would be charged  $30/175 \times \$80.00$  or \$14.00 per quarter). Each job accessing the UCC removable packs will be charged the \$2.00 pack mount charge.

What will happen to users who do exceed 20,000 sectors on the non-removable permanent file base? Hopefully, we will be able to tolerate the situation if the permanent file space is plentiful. However, we will try to telephone users of amounts in excess of 20,000 sectors. But if the space situation does become critical (as it has in the past) accounts exceeding the maximum *may* be moved to a UCC pack *without warning*. We will

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then try to inform the user affected as soon as possible.

Large users will encounter some disadvantages: (1) removable pack users normally experience slower job turnaround than users who access the normal permanent file base. Unfortunately, this is a fact one must put up with if large mass storage requirements exist. (The lower cost reflects the fact that the removable disk storage is not constantly on line.) (2) Removable packs may not normally be accessed from MIRJE terminals. Fortunately, no MIRJE user has over 10,000 sectors in files. (3) Finally, UCC does not backup secured permanent files on removable packs. Each user must provide his own backup.

Our primary aim in establishing this policy is to let the jobs requiring smaller amounts of file space (the great majority of our jobs) to pass through the system quickly.

## NEW DUMPPF AND LOADPF VERSIONS

New versions of DUMPPF and LOADPF are available with FUTURE control cards. These versions have several new features and bugs in the old versions have been corrected. Specifically, the NP (no purge) option now works correctly.

A new writeup for FUTURE,DUMPPF and FUTURE,LOADPF is available via the WRITEUP,NEWDUMP control card. The new features of note described in this writeup are the P parameter for updating dump tapes and the UI parameter. The new versions of DUMPPF and LOADPF will become the current versions on the deadstart tape scheduled for September 25, 1975.

## tapes

### REFUNDS & LIABILITY -- by W.J. Elliott

Now and then a tape drive will damage a tape. Generally, this is due to the condition of the tape prior to being mounted on the tape unit and not to a defect in the tape unit itself. Some conditions which contribute to magnetic tape failure are:

- (1) Humidity extremes
- (2) Dust contamination
- (3) Stress caused by temperature variations
- (4) Surface contamination
- (5) Edge damage

To keep tapes in good condition, it is important that they be stored and handled carefully at all times which we strive to do with the tapes stored on site. User owned transient tapes submitted with a job deck should arrive at the computer site several hours in advance of their request by the program. This will allow the tapes to acclimate to proper operating humidity and temperature. This is especially necessary during the extreme weather conditions encountered in Minnesota. The Tape Librarian (373-4995) will answer specific questions on these matters and has a sheet showing suggested hours needed to acclimate tapes to computer room conditions.

It is the policy of UCC that if a tape breaks or is damaged while in our possession (that is, after being accepted at the input station) and the fault lies with UCC (i.e., faulty hardware or operator error caused the damage), then the following statements define the maximum liability accepted by UCC for damages:

- (1) UCC will replace the tape with a new blank tape.
- (2) UCC will allow a UCC-credit for the cost required to reconstruct the damaged tape by copying from a tape or disk backup medium (or an equivalent UCC-credit if no backup medium exists).

No other liability is expressed or implied.

## user libraries

--by M.J. Frisch

May 30, 1975	PLOTPAC	Defined a previously undefined variable.
June 2, 1975	OMNITAB	Dynamic storage and random access overlay version.
June 13, 1975	PROCERC	Changed from calling SYSTEM to calling SYSTEM: .
June 22, 1975	PDP-11 STATOS 31 driver	Speed increased to 120 line steps/second.
July 7, 1975	SPSS	CTAB (contingency table analysis) added to SPSS 5.8.
July 23, 1975	AXISP, SKALE	Error messages corrected; negative DELTAV allowed in AXIS.

**special language processors**

## LANGUAGE PROCESSOR USAGE -- by A.B. Mickel

Below is a table of usage totals for all language processors available on the Cyber 74 computer system for the period July 1, 1974 through June 30, 1975. Also given are the totals for interactive use under MIRJE (beginning in November, 1974). Figures for the previous two fiscal years are given for comparison.

For the first two months (July and August, 1974) MOMS was the operating system supervisor; KRONOS was the running system for the remainder of the 1974-75 fiscal year.

Because the Cyber 74 user community overlaps greatly with the users of MERITSS, some totals of MERITSS use which may interest some users are (for the last fiscal year):

ALGOL 1,998 jobs  
 APL 6,658 jobs  
 LISP 1,303 jobs  
 PASCAL 8,928 jobs  
 SNOBOLC 36,494 jobs

LANGUAGE PROCESSOR	TOTAL USAGE	MIRJE USAGE	% MIRJE USAGE	TOTAL USAGE	TOTAL USAGE
	1974-75	1974-75	1974-75	1973-74	1972-73
ALGOL	2,581	92	3.6	1,976	1,351
APL	605	590	97.5	n/a	n/a
BASIC (batch)	174	-	-	492	15
BASIC (interactive)	271	255	94.1	n/a	n/a
BATCHER	30,032	-	-	46,998	31,144
COBOL	33,711	258	0.8	29,450	18,644
COMPASS	20,030	8,343	41.9	14,737	19,607
EMULATE	2,413	-	-	2,606	4,687
FTN	56,284	4,599	8.2	22,035	21,323
FUN	11,861	-	-	89,911	87,691
GPSS	1,064	-	-	n/a	n/a
LISP	665	523	78.6	291	n/a
MIMIC	787	-	-	403	n/a
MIXAL	11,842	120	1.0	14,642	8,148
MIXBYTE	607	113	18.6	n/a	n/a
MNF	225,501	55,185	24.5	86,094	68,861
PASCAL	13,968	9,086	65.0	1,306	n/a
PLONE	39	-	-	9	n/a
RUN23 (RUN)	37,282	3,931	10.5	28,595	43,924
SIMS	642	3	0.5	615	104
SIMULA	2,310	402	17.4	1,031	355
SNOBOL	1,823	94	5.2	3,292	4,754
SNOBOLC	5,505	3,870	70.3	1,468	n/a
UMRPG	721	-	-	2,392	n/a
UTALGOL	75	-	-	62	n/a

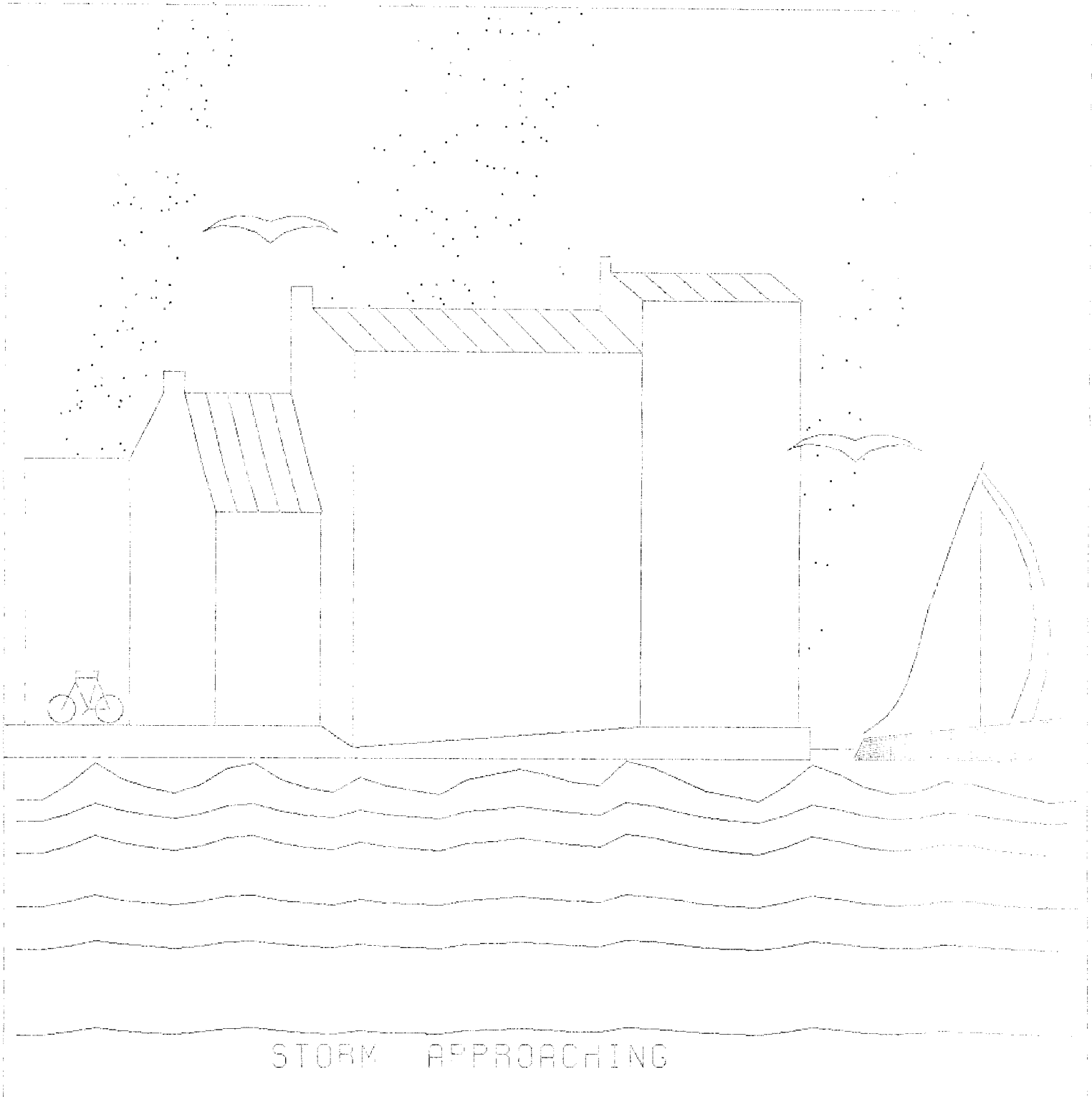
n/a = statistics not available

**KRONOS**

## KRONOS 2.1 CHANGES COMING UP -- by T. Lanzatella

On Thursday, August 14, 1975, the amount of CP time granted to a batch job upon receiving a time limit error will be changed from the current 20 octal seconds to 4 octal seconds.

THIS MONTH'S PLOT CONTEST WINNER IS WALTER MACEWICZ, CICS UNDERGRADUATE.



**computer downtime summary**

JUNE 26 THROUGH JULY 28, 1975

	Monday-Friday 0800 - 1600	Other	Total
Total possible scheduled uptime hours	230	315	545
Total downtime hours (see Schedule A)	8.57	4.25	12.82
Total uptime hours	221.43	310.75	532.18
Uptime percentage	96.27 %	98.65 %	97.65 %
Average downtime per occurrence	29.17 minutes	15.94 minutes	22.76 minutes
Mean time between failures	13.04 hours	19.42 hours	16.14 hours
Subsystems failures <sup>1</sup>			
SUPIO	15	7	22
TELEX	2	2	4
EXPORT	8	3	11

Schedule A: downtime hours

	number of occurrences	total hours down	average minutes downtime
1) Preventive maintenance over-runs	3	.3	6
2) Software related problems	11	5.15	28.09
3) Hardware related problems	2	2.0	60.00
4) Indeterminate software/hardware problems	19	5.37	16.10
5) External problems	0	0	0

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

*R. Dykstra*

**MECC news**

UNIVAC 1110 USER NUMBERS ARE AVAILABLE --by T.D. Hodge

I can now provide you with a user number and library space (permanent file space) on the Univac 1110. Call 373-4599, leave your name, departmental affiliation, best mailing address, and telephone number. Call back in 48-72 hours and your number and space will be waiting. MECC names your permanent file space as a private library with the following naming convention: MECC\*yourname where "yourname" is taken from the name you give us when you call for a user number. This file space will then be available to you when you log on. After you get your user number and file space, try out the system. Some documentation has arrived and is available for reference in the UCC Reference Room, 235a Experimental Engineering. Mrs. Koepke is attempting to set up a convenient ordering procedure for documentation for University of Minnesota personnel. By the time you read this, we may be able to try Univac's DEMAND FORTRAN (FORTRAN V). Real Time BASIC and certain documented file commands have been tried satisfactorily by various users during test hours in June and July.

After you have read the Univac FORTRAN manual and have tried the new system, and still believe you may have problems with conversion, please let me know as soon as possible. We are in the process of considering the best way to transfer files from MERITSS and MIRJE to the Univac 1110. MECC personnel have assured us that they will bend every effort to assist us.

**user services****AN OPEN LETTER TO ALL KRONOS USERS:**

In recent weeks a bug in our current operating system has repeatedly appeared. One or more sections of a local or permanent file may disappear as the file is being written. When this occurs no messages or warnings of any kind are issued to the user. Thus, the user may not be aware of the loss of data until subsequent attempts to use the file in the same job or in later jobs. The problem seems to occur when the system is short of disk space.

Although U.C.C. has failed to notify users of this danger, there has been an awareness of the problem. Until it is resolved, all users should take extra care to assure the integrity of any files which cannot be re-created easily or which must be correct. Various system utilities including VERIFY and CATALOG are helpful for this purpose. U.C.C. has also given some assurance that credit will be granted for jobs plagued by this problem, but, as usual, it is up to the user to prove that the problem has occurred.

JAMES F. MINER

Consultant/Programmer  
Social Science Research Facilities Center

(Ed. note: for more information, please see the article, "Disk Storage Space" on page 3 of this newsletter.)

**documentation/publications**

Machine retrievable documents available via WRITEUP:

AMEND Unit record manager.  
CALLPRG Library search extension.  
CATALOG Catalog file.  
CATLIST Catalog permanent file.  
CCINDEX Index to UCC documentation.  
CONTROL Control card processor.  
COPYU Copy unit record.  
COST Calculate job cost.  
DISPOSE Describe DISPOSE control card.  
DMPCOR Central memory dump routine.  
DMPECS Dump extended core storage.  
DRESS Prepare source file for MODIFY/UPDATE.  
DUMPPF Permanent file dump/load utility.  
ERRMESS Dayfile error messages.  
EXAMINE Magnetic tape content determinator.  
FILES Local file manipulator.  
ISIS Interactive statistics instructional system.  
LIBEDIT Library editing program.  
MF501 Output file to microfilm.  
MODIFY Source library editing program.  
NOTE Timesharing system notes.  
PACKMS Pack random file.  
PASCAL PASCAL information file.  
PFILES Permanent files request processor.  
PREVIEW Preview display dump.  
PTR Timesharing version of PTRLIST.  
PTRLIST Program Trouble Report.  
REBLOCK Converts S tapes to internal format.  
RJECOM Remote Job Entry commands.  
SITEBIN Shelf locations for output distribution.  
SNOINFO CAL 6000 SNOBOL at the U of M.  
SNPSHOT Write/restore registers and dump memory.  
SYSNOTE Cumulative system notes.  
TESTCR Card reader testing routine.  
TESTLP Printer and line test program.  
TIDY Tidy FORTRAN source program.  
TSTATS Tape mounting statistics.  
TYPESET Text reform program.  
UNPAGE Edit carriage control characters.  
XEDIT Extended interactive text editor.  
1004SET Univac 1004 character set conversion.  
AFJAN75 Archived files for January 1975.  
AFFEB75 Archived files for February 1975.  
AFMAR75 Archived files for March 1975.  
AFAPR75 Archived files for April 1975.  
AFMAY75 Archived files for May 1975.  
ARCHIVE Archived files for June 1975.

UCC writeups, available free in 140 ExpEng:

Index to Cyber 74 User Software  
Neophyte Users' Guide  
Pocket Guide to UCC Facilities  
Short Course Guide  
Student Guide to Batch Processing  
UCC MINN Subprogram writeups (see "Index" for names of specific subprograms)  
ALMAP/FORPREP  
BASIC at the UofM  
CAL SNOBOL  
CTAB  
GPSS  
ISIS User's Manual  
LISP at the UofM  
MIX at the UofM  
PASCAL at the UofM  
RPG at the UofM  
SLIP at the UofM  
SNOBOL at the UofM  
SPSS Version 5.8 (update only)  
SPSS Version 6.0  
S2KIND (A System 2000 procedure)  
UMTIMER  
UNPAGE  
UTALGOL at the UofM  
WRITEUP  
XEDIT 2.0  
KRONOS Conversion Guides:  
Compilers  
SORT/MERGE  
COBOL  
Permanent Files  
Control Cards  
Tapes  
KRONOS Abridged Guide to Control Cards



## the suggestion box

- Q/S I would like to see the high speed card reader and a 501 printer moved to where it would be user accessible. The 501 printer is as rugged as the Univac 1004 and it is very old and could easily be replaced by a newer model. The card reader is rugged also, and besides, someone could stand around and watch instead of picking things up every 90 minutes. (July 1, 1975)
- A Currently, printer output has decreased at UCC due to user awareness of the paper wastage problem (and probably the increased charges). When usage picks up again we may be able to get a new printer but this would not be for at least a year and a half. (L. Liddiard)
- Q/S Publish terminal site codes in the UCC Pocket Guide. (July 18, 1975)
- A We will publish the site codes in the newsletter, beginning with this one and in the Pocket Guide (the latest edition should be ready in a few weeks). (T. Hodge)
- Q/S Currently, the Cyber 74 is being used to support a relatively small number of terminals. The benchmark studies which have been done on KRONOS indicate that above 30 terminals, batch operation begins to deteriorate. If the terminals are becoming such a "scarce resource" as Thea Hodge indicated in the June newsletter, why don't we increase the number of terminals and let the batch processing go just a tad slower. It seems that the big batch hangup now is not in the computer but in input, output, and operator. Thus, slowing down the batch computing a little should have no great affect on batch turnaround. Please note that I am not simply a timesharing advocate but use both batch and timesharing as they seem appropriate. (June 19, 1975)
- A The installation of an additional 32K of memory and the proposed transfer of instructional timesharing from MIRJE to MERITSS (see article elsewhere in this newsletter) should allow an increased number of terminals for research and other use on the Cyber 74. The batch hangup was indeed in the computer since lack of memory (due to 100K assigned to timesharing) allowed the input queue to grow and slowed down tape jobs since they tended to stay on the rollout queue. The past week's statistics (July 21-25) show that the additional 32K is a great help in maintaining the previous timesharing ability while processing batch jobs faster. (L. Liddiard)
- Q/S A long time ago there were listings on the walls by the keypunches with all the funny symbols and what the multi-punch codes were. Could you please put some similar information in the keypunch areas again. I realize that this information is available in the reference manuals. However, the favor you would be doing most users would be greatly appreciated. A simple xerox copy of the page from the KRONOS reference manual would be sufficient but the larger-than-life-size computer listing would be best. (July 1, 1975)
- A Will be done. (L. Liddiard & R. Franta)
- Q/S I would like to see instituted a \*nap card (i.e., "next available processor"). A lot of the stuff I do is not all that sensitive to word length and I am more concerned with turnaround time. It is possible to, for instance, define sets of FORTRAN, BASIC, etc. which will run on the Univac 1110, CDC 6600, CDC 3300, CDC 3200, etc. I realize the printer situation but sharing the load over the whole system would result in better use of equipment and faster turnaround. (July 1, 1975)
- A This assumes that a card deck can be externally routed to any processor or that the input can be internally transmitted (via packet switching, for example) to any processor. Neither of these procedures is available at this time. Wouldn't it be lover-ly! (T. Hodge)
- Q/S I would like to see a new class of file on the Cyber. Perhaps a "temporary" file or a "msfile." This might solve disk problems. My idea is to have it offered at reduced rates and remain on either only for the day (until end of operation) or until 96 hours after last access -- sort of between a permanent and scratch file. (June 6, 1975)
- A Since we are attempting to remain as standard with CDC as possible, we checked to see if CDC allows temporary files under KRONOS. They do not allow this capability so we have to reply in the negative to your request. (T. Hodge)
- Q/S Why should PURGE,pfn. be a fatal error if pfn has already been purged? This happened to me. I was merely purging prior to running another job entirely unrelated. The file had been purged earlier. I don't see why this should ever be a fatal error. (June 18, 1975)
- A This is the standard KRONOS. If you do not want a fatal error, use the NA (no abort) option; that is, PURGE,pfn/NA. (L. Liddiard)
- Q/S It appears that PURGE,oldpl. does not always work, that is, actually do the purging. I would like to have a dayfile message "OLDPL, PURGED." (July 11, 1975)
- A PURGE will wait for all users currently using a file before purging it. Thus, it is possible to give the message but the file will still exist until the last user is done. If you have an actual example of PURGE not working we would like to see the dayfile. (L. Liddiard)

- Q/S Build a provision into UMST630 for printing out only a limited number of observations rather than always printing out all data and all transformed data. For large problems this leads to wasted paper, wasted money and slow turnaround. (July 21, 1975)
- A We continue to make the UMST programs available to their many fans; however, we have agreed to the decision of the Subcommittee on Statistical Packages that no changes or modifications will be made to the UMST programs. We recommend UNPAGE, although it does not completely answer your suggestion. (T. Hodge)
- Q/S The decision to abandon the GPR31 routines for the STATOS seems to be a poor one. Surely many users have a large investment in STATOS programming which would be tedious to convert to PLOTPAC. Why doesn't the UCC write a new set of STATOS routines which look the same to the user but which call PLOTPAC subroutines, or produce output in the same form as PLOTPAC does? (June 18, 1975)
- A Our original announcement (February 1974) stated that the GPR31 package was temporary. We had not planned to take so long in replacing it but time slipped by. The conversion from GPR31 to PLOTPAC is not very hard, we think, but a full set of routines to emulate GPR31 exactly would be too complex. Instead, we are willing to consult with any users who have conversion problems and help them do necessary re-programming. For users who do not want to convert, we can provide a binary copy of GPR31 to keep for themselves. In summary, UCC does not wish to keep supporting forever the type of inefficient software that GPR31 represents. (M. Frisch)
- Q/S Now that you print out the number of PRU's on the output file and have DISPOSE capability, couldn't you automatically DISPOSE any job of more than, say 120 PRU, to Experimental Engineering if that job originated at a 1004? Sometimes people are both rude and belligerent and clog a terminal for a long time. Even setting the limit at 100 PRU's would be ok. Perhaps only do this during peak hours (before 10 AM, for example). (July 11, 1975)
- A The entire area of DIVERTing large files to high speed printers is being actively pursued by a UCC committee under the direction of Richard Franta and with input from the I/O station supervisors. We will report on the results of this study soon. (L. Liddiard)
- Q/S ATTENTION MIMIC USERS: To suppress the annoying load map at the beginning of your output, use the following control cards:
- Jobcard  
ACCOUNT card  
FETCH, MIMIC.  
LDSET, OMIT=SR1/SR2/SR3/SR4/SR5.  
MIMIC.
- The LDSET card tells the loader not to look for the optional user-supplied FORTRAN functions (see MIMIC manual) with dummy names SR1 through SR5. If, however, you want to use one or more of the functions, say SR1, you must remove those function names from the LDSET card, e.g.,  
LDSET, OMIT=SR2/SR3/SR4/SR5.
- A Thanks for the suggestion. (M. Skow)
- Q/S The COMPUTER DOWNTIME SUMMARY as published in the UCC newsletter can be misleading...to the user unaware of the distribution of system failures with respect to the time of day. As these statistics are now presented they do not square with my observation that RJE and MIRJE users constrained by the standard University work-day seemingly suffer an uptime percentage figure considerably less than the published values. Specifically, the uptime percentage figure should more properly be calculated by a weighted procedure incorporating the number and duration of jobs in a given time interval. Publication of the actual time of day distributions would be desirable, editorial constraints of the newsletter aside. An additional statistic for the RJE and MIRJE user would be the weighted probability that an attempted login will fail and/or that their job will be fatally interrupted due to a system failure. (July 18, 1975)
- A Please note that this month's statistics are now for 0800 - 1600 hours and "other hours." Additional statistics are given on SUP10, TELEX, and EXPORT, since the previous monthly statistics were only for the main computer. We hope these meet your planning needs. (L. Liddiard)
- Q/S On Sunday, June 29, 1975, I was retrieving files from a tape that had been set up recently and used successfully several times...my tape suddenly developed an unrecoverable parity error, rendering it useless. This tape was a backup for files due to expire on June 30 and I was performing a last check of the contents. The tape was a new purchase from UCC...the next day, during emergency attempts to backup files, I happened to retry using the "bad" tape...it read successfully - on another tape drive. This is only the most recent of a long series of bad experiences with seemingly damaged tapes, actually damaged tapes, and extreme tape drive variability. I find I trust tapes very little and am forced to do many extra runs and keep multiple backup copies. This is discouraging and very expensive. You need new tape drives to clear up your chronic lack of reliability with respect to tapes...as for the disk pack reliability.... (July 7, 1975)
- [and]
- The Lauderdale tape drives (at least some of them) are really BAD NEWS! I have had more bad tape experience than I care to recall. (The problems with tapes are probably second only to permanent files and MNF.) I believe that acquisition of reliable tape drives is called for. However, while we wait -- and I guess I'm cynical enough to believe that it will be a LONG wait -- two things could be done:
- (1) Publish (via WRITEUP) a summary of recent error dayfile entries for each drive;
  - (2) Allow users to select (via a control card, e.g., USEMT,...) the drives which should or should not be used in a job.
- This might give us a fighting chance! (July 7, 1975)

# 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) 4B	C. Bingham/373-0988
415 CofH (St. Paul) 2L	D. Nelson/376-7003 T. Ehlen/376-7003
24 NorH (St. Paul) 40	J. Colten/373-0990
Users' Room (Lauderdale) 49	Shift Coordinator/373-4940

## CONSULTING SITES & HOURS<sup>††</sup>

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)	

<sup>††</sup> 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.

A While it is true that our tape units are not the young, sprightly wonders they were 9 years ago, they still perform well for a majority of the users. Our staff of engineers is working tirelessly to keep the kinks out of the bailing wire. Perhaps your troubles will be solved by the new 9-track units; at least we will be able to discover if your problems are hardware oriented.

A scan of the error statistics for June indicates that units 52 and 53 had more than their share of parity errors but not a statistically excessive amount. Both units have since undergone maintenance.

If you believe that there is a "problem" unit or an "exceptional" unit on which to run or not run your tapes, call the Operations Supervisor at 373-4920 who will try to accommodate your special requests. This will ensure that units with real problems are corrected. (W. Elliott)

## RETURN TO:

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

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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.  
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UNIVERSITY ARCHIVES  
ROOM 11 WA LIB  
MINNEAPOLIS CAMPUS