

MORE INFORMATION ON TAPES

--by W.J. Elliott

MULTI-FILE TAPES -- Multi-file tape operations are now available on an experimental basis. A few bugs still remain which are under investigation by CDC (hopefully, they will improve the documentation also). Briefly, multi-files are a way of consolidating several logically separated files onto a single tape reel. The logical end-of-information is retained for each file.

The multi-file reel is divided into *sections*. When *reading*, each section is treated exactly as if it were a separate KRONOS labeled internal format tape. New sections may be appended to the end of the multi-file or an existing section may be re-written (with the accompanying destruction of all sections which follow the re-written section).

Each given section is referenced or created separately using a LABEL card specifying the "QN" and "SI" parameters:

QN = section number :1 to 4 decimal numbers (required).
 SI = set identifier :1 to 6 characters (required).
 FI = file identifier:1 to 17 characters (optional).

For example:

BLANK(VSN=SN0000, ID=\$MYTAPESIDENT\$)	<i>Not needed if this is already a KRONOS labeled tape.</i>
LABEL(TAPE, VSN=SN0000, QN=1, SI=si, FI=\$fi\$, W)	<i>QN=1 for first section. SI and FI specified must <u>remain</u> the same for all future sections (this is a bug).</i>
GET(INFO)	
COPY(INFO, TAPE)	<i>Write INFO to section 1.</i>
LABEL(TAPE, VSN=SN0000, QN=9999, SI=si, FI=\$fi\$, W)	<i>Append a new section (section 2). Note that when appending a section, QN may equal any 1-4 digit number. However, to access this section, you must use QN=2 (section 2).</i>
GET(MORINFO)	
COPY(MORINFO, TAPE)	<i>Write MORINFO to section 2.</i>
LABEL(TAPE, VSN=SN0000, QN=9999, SI=si, FI=\$fi\$, W)	<i>Append another section (section 3). (QN=9999 means append.)</i>
ATTACH(DATABASE)	
COPY(DATABASE, TAPE)	<i>Write DATABASE to section 3.</i>
EVICT(TAPE)	<i>Give unit back to the system.</i>

More sections may be appended as you wish. You will be able to retrieve the data only if you specify the identical SI and FI for all sections on the tape.

Now comes the time to read a section (say, DATABASE) for use in a program. Since DATABASE was written to section 3, you would do the following:

LABEL(DATABASE, VSN=SN0000, QN=3, SI=si, FI=\$fi\$, R) *Which accesses section 3 (QN=3).*

Only one section of a multi-file tape is available at any one time directly from tape. Another LABEL card with a different QN parameter may be used to reference any existing section. The only exception is when attempting to access section 1 (QN=1) when already positioned at another section. In this case, an EVICT is required before the LABEL card. Therefore, if you expect to use section 1, access it first if possible.

MULTI-REEL TAPES -- When a file extends to more than one tape, you can specify the sequence of "VSN's" which are to comprise the file. KRONOS will handle the intermediate requests for tapes as you exhaust them. The process works equally as well for reading and writing. All tapes eligible for use in the chain must be KRONOS Internal format and, of course, labeled. Protections specified by the FA and FI parameters on the first tape in the chain propagate to all tapes utilized while creating the multi-reel set. That is, the FA and FI will be the same for all tapes in the multi-reel set. It is possible to reference any tape in the set separately at a later date if desired.

Suppose your three tapes (SN123, SN234, SN345) are to comprise the multi-reel set. Then:

LABEL(TAPE, VSN=SN123/SN234/SN345, other parameters)

or VSN(TAPE=SN123/SN234/SN345)
 LABEL(TAPE, other parameters)

then COPY(BIGFILE, TAPE, V)

will accomplish the task. Of course, not all three tapes need be used, but no more than those specified can be used, so be generous if there is any doubt. Now, if you really want to get fancy, you can combine the concepts of multi-reel with multi-file (after crossing your fingers and whistling loudly a few minutes).

GUIDELINES FOR TAPE USERS (OR GIVE THE OTHER FELLA A BREAK)

Follow these guidelines and the other guy's tape turnaround time will be faster (after all, you're the other fella most of the time)!

- (1) Run your oversized jobs (CM > 100K, MT > 2) after 5 PM. These large jobs are probably the biggest cause of slow job turnaround, especially when a few of these "biggies" get together.
- (2) Do all operations possible (compile, etc.) before requesting tapes and private packs.
- (3) Release tapes, packs, and ECS as soon as possible (see RETURN/EVICT below).
- (4) Copy short files from tape to disk and release tapes before program execution.
- (5) Request private packs and then tapes. Packs are a lot harder to pry off a drive and we only have one drive!
- (6) At all times, try to think of private packs and tapes as the proverbial hot potato. Manage their use carefully and get rid of them as quickly as possible!

GIVING IT ALL BACK (OR HOW TO TURN EVICTION TO YOUR ADVANTAGE)

Captain KRONOS says: "The RETURN card decrements your RESOURC allocation if you are at your specified limit when the RETURN card is executed. The tape is unloaded and the unit is made available to other users. The EVICT card leaves your RESOURC allocation untouched while unloading the tape and making the unit available to other users."

So: Use the EVICT card if you are at the maximum allocation and need the tape unit for another reel. Use the RETURN card if you are done with the unit (which you previously reserved with a RESOURC card) and no longer need it for the rest of the job.

PERMANENT FILE ARCHIVING

--by R.J. Hursh

Some changes have been made to the permanent file archiving procedure that was described in the January newsletter. The most significant change concerns the length of time that a file may remain inactive before being dumped to an archive tape and then purged from the disk. This time is now 30 days for unsecured files and 90 days for secured files. Also, the file length (in sectors) will not be considered. All files, including those less than 100 sectors, will be archived if they remain inactive for this length of time.

The first scheduled archive dump was performed on February 9. Unsecured permanent files which had not been accessed since January 1st were archived. (No secured files were archived.) A list of the names of the permanent files that were archived is posted at Lauderdale, Experimental Engineering, and West Bank. These names are associated with a user index rather than a user number. (Output from the LIMITS control card contains the user index for a given user number.) Any user can obtain a copy of the archive listing by using the control card WRITEUP,ARCHIVE. ARCHIVE will always contain the file names of the most recent dump. Older listings of this ARCHIVE file can be obtained with the control card WRITEUP,AFmmmyy where "mmm" is the month and "yy" is the year. For example, after March 1st, the list of files not accessed during January and archived in February could be obtained by using the control card WRITEUP,AFJAN75.

In accordance with hallowed tradition, before a file can be restored a form must be filled out. These forms (entitled "Request for Permanent File Restoration") are available from UCC Operations or User Services. Instructions for use are on the forms. Keep in mind that, when a file is restored, all previous access and permit information will be lost.

BUSY PERMANENT FILES

--by K.C. Matthews

A permanent file (direct access only) is considered to be "busy" when one job wants to read it while it is already ATTACHed in WRITE mode to another job or if one job attempts to ATTACH it in WRITE mode when it is currently ATTACHed to another job in READ mode.

The Control Data documentation (see the KRONOS 2.1 Reference Manual, page 5-71, for a description of the NA keyword) states that unless the NA (no abort) parameter is specified on the control card, a job will abort when trying to ATTACH a busy permanent file. The NA parameter forces the job to roll out to wait until the file is not busy. However, early in Fall Quarter, UCC changed the default handling of busy permanent files so that jobs would be rolled out by default whenever a busy condition was encountered rather than being aborted. This change was made for two reasons:

- (1) It separates the action of the NA parameter for "real" permanent file errors from its action on a file that is merely busy.
- (2) It seemed more convenient, since the user would probably want to wait for the file to become not busy anyway. We have decided to change this permanent file policy again. The immediate reason is that several jobs have recently worked themselves into situations where they were rolled out and never would roll in. These situations were due to innocent errors on the part of the programmers involved. However, in addition to the inconvenience to the user, this situation presents a serious problem in the case where a job could be rolled out "forever" taking with it a private disk pack or one or more tape units. This type of problem would severely hinder the allocation of already scarce resources.

A secondary reason for changing the policy is that UCC feels that a programmer should consider what may happen if there are two jobs in the system attempting to ATTACH the same permanent file, with one ATTACH in WRITE mode. One cannot ever be certain which job will get the file first. Depending on what the jobs are doing, this may adversely affect the results of each job.

Therefore, beginning Sunday, March 30, 1975, permanent file requests will no longer roll out by default if the requested file is busy. Jobs attempting to ATTACH a busy file will be aborted. However, since we still feel that reason (1) above is still valid, a new "WB" parameter has been implemented. (WB means "wait if busy.") This means that if the ATTACH control card has WB after the "/" in its parameter list, the job will roll out if the file to be ATTACHed is busy. The WB parameter has already been implemented, so users can begin to put it on their ATTACH cards now. This change on March 30th means that WB will no longer be the default value. The NA parameter on the ATTACH card will continue to apply only to errors other than busy files. The actions of NA and WB are independent.

We also realize that some "eternal" roll outs will still occur with jobs using the WB parameter. We are continuing to try to develop software which will detect certain abnormal conditions and which will improve the scheduling of both jobs and system resources.

M O R E C H A N G E S C O M I N G U P

MNF PSR4 LIBRARY CHANGES -- by C.F. Schofield

This new version of MNF will be available starting Spring Quarter 1975. A change in the execution time library may affect some MNF users. The old routines RUNSYS, SYSTEM, and SYSTEMP are replaced by FORSYS=, ENDXIT, SYSTEMC, and SYSTEMP. The external changes caused by the new routines are:

- (1) All execution errors are now fatal (unless SYSTEMC is called). Thus, a negative argument to SQRT will abort the job.
- (2) No "error summary" is printed (this was a table showing how many times each execution error occurred).
- (3) The execution CP time taken by the job is printed in the dayfile.
- (4) The error message (e.g., "ARGUMENT NEGATIVE") is now printed in the dayfile (as well as the OUTPUT file).
- (5) If SYSTEMC has been called in order to make an error non-fatal, then the maximum number of times that the error is permitted to occur is 20 (it used to be 4095).

We feel that these changes represent improvements for most users and they result in a saving of nearly 1000 octal words of execution core required (unless SYSTEMC is called to make errors non-fatal).

MORE MNF CHANGES -- by L.A. Liddiard

As stated in previous newsletter articles, MNF will be changed on March 31, 1975. In order to ensure that a stable version is available for user tests, FUTURE,MNF will be frozen as of March 17, 1975. During this two week period it is essential that any user who is currently using PAST,MNF test out FUTURE,MNF to be sure that it corrects his problems since PAST,MNF will be deleted unless several users can demonstrate that their particular problem has not been corrected. A diagram of the changes:

ON MARCH 31, 1975:

```

FUTURE,MNF. --> MNF
MNF.        --> PAST,MNF.
PAST,MNF.   --> disappears

```

Some time during Spring Quarter a new version of MNF will be made available that will use CDC's FORTRAN Common Library (FCL) and Record Manager (as does FORTRAN Extended Version 4.3 and COBOL Version 4). This version will be obtained from the system by use of the FETCH command.

OPERATING SYSTEM CHANGES: KRONOS LEVEL 7 -- by L.A. Liddiard

The current KRONOS 2.1 Level 6 operating system will be changed to Level 7 on March 24. This level of the operating system mainly corrects various bugs in Level 6; the main external change to the user will be that the CDC 713 CRT's will have the back arrow character as the default backspace code. (Note that the current underline character for delete will still work.)

S P E C I A L L A N G U A G E P R O C E S S O R S

PASCAL STATUS TO CHANGE -- by A.B. Mickel

Between Winter and Spring Quarters the new PASCAL compiler (the relocatable version) which has been available since August, 1974 via the NEW and FUTURE control cards will become the "current" compiler. The stability of this compiler has improved with the recent inclusion of several updates sent from Zurich and some of our own local fixes, thus warranting the change. (The exact date of the change will be announced in SYSNOTES.)

Although several minor bugs remain in the compiler, they are well documented and will appear in the Program Trouble Report lists.

The sequence of commands needed to access the new compiler will be:

```

RFL(54000)
PASCAL(parameters)
RFL(20000)
LGO.

```

The old compiler (compile-to-core version) which now possesses "current" status will be placed under FETCH rather than PAST. This change reflects the fact that this compiler is really not an "older" version of the relocatable one. The two compilers are not compatible and cannot process the same programs. PAST,PASCAL will be reserved for older versions of the relocatable compiler. After this announced change is made, the compile-to-core version will be accessed by:

```

RFL(50000)
FETCH(PASCAL)
PASCAL(parameters)

```

This compiler is still a valuable tool because there are many existing programs using VALUE declarations which are hard to convert to the first release of the new compiler.

PASCAL usage at the University of Minnesota has markedly increased since November (when we reported 200 runs per month). The November, December, and January average has been 1500 runs per month on both the Cyber 74 and MERITSS systems. Perhaps the most important explanation for the increase in usage is the increased capabilities of the compiler (because it fully implements the standard PASCAL language).

The primary reference for PASCAL is the book PASCAL User Manual and Report (Jensen & Wirth, Lecture Notes in Computer Science, Volume 18, Springer-Verlag, 1974) which is now available in the Engineering Bookstore. Local PASCAL documentation can be obtained with this job:

```

Jobcard with T1 and CM10000.
ACCOUNT card
WRITEUP,PASCAL.
D (6-7-8-9 card)

```

UNWANTED DATA FILES

--by K.C. Matthews

Sometimes it is convenient for a programmer to have a procedure for making data "disappear" rather than being actually written to a file. In our late MOMS system, the file name NULL served this purpose. One could execute the control card

```
COPYBR,TAPE3,NULL,47.
```

to skip past 47 records on file TAPE3. Data transferred to file NULL was discarded. This is not true with the KRONOS operating system. The above control card will copy 47 records from file TAPE3 to a mass storage file named NULL (and the job will be charged for the mass storage sectors transferred to file NULL).

There are, in general, three ways of not writing data in KRONOS. The first two are useful only for specific system utility packages:

- (1) In the COPY utilities, the 1st and 2nd arguments specify the source and destination file names. Making these two file names the same causes data to be skipped. For example, the control card:

```
COPYBR,TAPE3,TAPE3,47.
```

skips 47 records on file TAPE3 with no wasteful disk data transfer. The "same name" technique causes data skipping in the following utilities:

```
COPY      COPYBF    CBR      COPYCR
COPYEI    CBF      COPYCF   CCR
COPYX     COPYBR    CCF
```

Note that the control cards SKIPF, SKIPR, SKIPB, and SKIPEI are also useful for file positioning. SKIPEI is the fastest way to position a disk file at end-of-information.

- (2) Many system utility programs and compilers allow file names to be specified with an equivalence in the control card call. For example, in the control card

```
FTN(B=XYZ)
```

the "B=XYZ" specifies that the FORTRAN Extended compiler is to write its object program on file XYZ. Equivalencing B to "0" (zero) selects no object code from the compiler. The control card

```
FTN(B=0)
```

would produce a listing of a FORTRAN program but no object code file. The control card

```
FTN(L=0)
```

would compile a FORTRAN program but produce no source listing (the L= parameter specifies the listing file name).

In all cases the documentation should be consulted to see what may be equivalenced to "0". Equivalencing an input file to zero causes no information to be read from the file, that is, the input file looks like an end-of-information. The following commonly used routines allow parameter equivalencing to zero:

```
FTN      LIBEDIT  UPDATE (allows L=0)
COMPASS  COBOL
MODIFY   MNF
```

Note that one can have a file name "0" in KRONOS so equivalencing a file name to zero works only in programs specifically designed to recognize "0" as an exception. The control card

```
COPYBR,TAPE3,0,47.
```

causes 47 records on file TAPE3 to be copied to a file named 0. The job is then charged for the PRU's transferred to file 0.

- (3) The ASSIGN control card can be used to assign a file to the system Null Equipment (NE). The null equipment returns end-of-information whenever read; data written to NE disappears. The job is not charged for PRU's transferred to or from the null equipment. The control card

```
ASSIGN,NE,TAPE5.
```

creates a file TAPE5 which is assigned to the null equipment. Any data written on TAPE5 will be discarded free of charge. Suppose, for example, you are testing a FORTRAN program which writes on a file TAPE5.

You currently are not concerned with saving the data written on TAPE5. Then, the control card sequence

```
ASSIGN,NE,TAPE5.
```

```
MNF.
```

will test the program and accumulate no charges for PRU's transferred to TAPE5.

LIBRARY CHANGES & ADDITIONS

--by M.J. Frisch

January 20, 1975:	GPM	Correct errors.
February 2, 1975:	SPSS, OMNITAB, BMD, UMST	Routine added to gather usage statistics.
February 4, 1975]	UMTIMER	New version.
February 20, 1975]		
February 6, 1975:	CATLIST	Copy of MERITSS routine.
February 9, 1975:	ARTHUR	Correct errors.
February 10, 1975:	FVR, CBIN, IBIN, NLSYSTEM	Removed (see January newsletter).
February 13, 1975:	MF501	Correct errors.

THE SUGGESTION BOX

[Unsigned card will be ignored. We reserve the right to re-word questions for clarity. The date when each card was received is printed (in parentheses) after the question.]

Q/S *I suggest that you inform users when you set arbitrary FL's and TL's on student jobs! (Feb. 18, 1975)*

A The FL's were set from the start and have not been changed. In the KRONOS "Instants" we stated that time limits were actually Control Data's "multiple of 8" but that we would change to an "exact second" time limit when it was possible. This has been done; however, we did not announce the exact date. In any event, time limits are not ARBITRARILY set by UCC. Student jobs are assigned the time limit given by the instructor. (L. Liddiard & J. Foster)

Q/S *Would higher authority please ban radios in the staff offices at Lauderdale. They are extremely annoying to at least this one user! (Feb. 18, 1975)*

A The UCC staff at Lauderdale will be asked to have their radios at low volume, just as other users of space at Lauderdale are requested to exercise care in their conversational volume and other general noise. (L. Liddiard)

Q/S *On January 28, 1975, the 6 PM driver to West Bank did not pick up materials in the "TO LAUDERDALE" mailbox. Why? (Feb. 18, 1975)*

A We're not sure why this happened. Make sure that all materials going to Lauderdale on any of the 4 daily runs are in the "TO LAUDERDALE" box by 10 minutes before the hour (9:50, 1:50, 5:50, 8:50). Our drivers have many things to keep track of but generally they do a commendable job. (J. Larson)

Q/S *The next time the operations staff at ExpEng tears a hole in a card in my deck I would appreciate their re-punching the card and running the deck instead of reject the deck with the message "CARD READER COMPARE ERROR." (Feb. 18, 1975)*

A The operator would have to leave the room to re-punch the card. This results in much wasted operator time and could result in another operator continuing the card reading with the result that the damaged card(s) would be missing and their position in the deck lost. There's also the possibility that the operator may mis-punch or mis-position the card, thus resulting in a bad run for the user. We feel that the solution with the least possible bad results is to let the user make his own corrections. (J. Larson)

Q/S *I don't understand how a program is run through BATCHER in ExpEng. The computer operators sit in the back room reading books and turnaround time is more than an hour even when there are only about 5 people waiting for their programs. (Feb. 18, 1975)*

A Part of the problem was that output priority for BATCHER was set incorrectly and has since been corrected. Operators at ExpEng do I/O procedures on a continuous basis when the system and all equipment is functioning properly. Operators at ExpEng have been asked to leave the work area during lunch, break periods, or anytime they are not scheduled to work, to avoid giving you the false impression that they are "just sitting around and doing nothing." (J. Larson)

Q/S *I definitely believe that somebody ought to do something about stolen programs. You should change the way you give back jobs. This is the second job I've lost and I'm definitely frustrated! (Feb. 18, 1975)*

A It is a sad comment that your decks are being stolen. I hope the thieves are not training to be computer programmers. However, you may avoid the problem by reading in your decks on one of the 1004 terminals. Since you will then also be able to collect your own output, complete privacy and security is ensured. The 1004's also have the advantage of better turnaround times. (C. Schofield)

Q/S *To save paper, place the banner and dayfile pages on the same page, first or last, of each output. An ideal solution would be to put these both on the first page of each output and to place the number of pages message on the last page as an extra line (not by itself). This would allow operators to easily separate jobs. SYSNOTE should be posted at each site and made available through a command but it should not be printed on every job. Many thousands of pages are wasted every day by this procedure. (Feb. 18, 1975)*

A Whether your suggestion would actually save paper or not depends upon the combined length of the banner and the job dayfile. Much more paper would be saved if users put some effort into reasonable formatting of their printed output. Whilst there are other advantages in having the dayfile first, the systems staff have already rejected the idea (Newsletter, Decmeber, 1974, page 8). We will try to put only very important information into SYSNOTES in order to keep it short, but there must be some mechanism for getting important information to users other than through our newsletter or through posted items (which are delayed and often ignored). (C. Schofield & L. Liddiard)

Q/S *Please publish a list of down times as a percentage of operating hours and as a percentage of West Bank hours. Also, the number of times files have been lost on the disk due to problems. (Feb. 21, 1975)*

A This sounds like a good idea. We will collect and publish this information when feasible. (R. Hotchkiss)

Q/S *Please do not re-run jobs in the case of system down time between input and output steps. Tape and disk files can be destroyed by subsequent re-runs under certain circumstances. (Feb. 18, 1975)*

A The reasons why users should not present jobs that cannot be re-run are given in the UCC newsletter, December 1974, page 8. Also described is a method to prevent a job from being re-run by means of control cards. (C. Schofield)

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

MEDIUM SPEED REMOTE TERMINAL SITES (RJE)

site	supervisor
38 ElectE (East Bank)	J. Guentzel/373-5404 M. Cook/373-3895
N640 EltH (East Bank)	J. DeWitt/376-7377 N. DeWitt/376-7377
S191 KoltH (East Bank)	T. Faulkner/376-7024 J. Duff/373-2348
321 MinMet (East Bank)	C. Swanson/373-5475 R. Oelfke/373-5680
69 Physics (East Bank)	R. Scarlett/373-0243 D. Olson/376-7175
167 SocSci (West Bank)	J. Shea/373-3608
257 BioSci (St. Paul)	R. Comstock/373-0979 R. Cardellino/376-3407
125G ClaOff (St. Paul)	C. Bingham/373-0988
415 CofH (St. Paul)	D. Nelson/376-7003 T. Ehlen/376-7003
24 NorH (St. Paul)	J. Colten/373-0990 D. Rignell/373-0990
Users' Room (Lauderdale)	Shift Supervisor/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	
See the schedule posted in 125 ClaOff (St. Paul)	

*These general consultants can also answer questions about the statistics packages: D. Eggers, B. Hinkley, and S.P. Yen.

[†] The consulting sites remain the same throughout the year. However, the hours will vary. The Lauderdale and ExpEng general consulting hours will be shortened during the weeks when classes are not in session and during Summer Session. Hours at other sites vary from quarter to quarter, depending on available staff.

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 A	BASIC Reference Manual
1973	BMD Reference Manual
Revision E	COBOL Version 3 Reference Manual
Revision D	COBOL Version 4 Reference Manual
Revision E	COMPASS Version 3 Reference Manual
Revision F	FORTRAN 2.3 (RUN23) Reference Manual
Revision D	FTN Version 3 Reference Manual
Revision F	FTN Version 4 Reference Manual
Revision B	FTN DEBUG User's Guide
1973	IMSL Library 3, Edition 3 Reference
Revision C	KRONOS 2.1 Reference Manual
1974	MNF Reference Manual
Revision E	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
	SYSTEM 2000 Reference Manual
1973	SYSTEM 2000 Users' Guide
Revision C	T/S User's Reference Manual
Revision A	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 Supervisor
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

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.

BRIEF NOTES

- THE HELP LINE -- This is to remind you again that there is now a central information source which you may call for information on just about anything. 376-5592 is UCC's HELP line. Call between 9 AM and 5 PM Monday through Friday. (There is no truth to the rumor that the digits 6-5592 are shorthand for "My KRONOS Job Went Bananas.")
- DOCUMENTATION/PUBLICATIONS -- These writeups have been revised, reprinted, and are available in Room 140 ExpEng: DOTPROD, DOTPRD, XEDIT, ISIS, UMTIMER. The KRONOS Conversion Guides have been reprinted and are again available in 235a ExpEng. (Call 373-7744 if you cannot conveniently pick up your own copies.)
- NEW INDEX TO CONTROL CARDS -- A new version of the "Control Card Index to Documentation" is now available (updated from the October version). It contains the new software support level designations which were explained in the December newsletter. To get a copy of this index, use the control card, WRITEUP,CCINDEX.
- USERS' MEETING -- An open users' meeting was held on Thursday, February 20th at 2 PM, and was reasonably well attended. Information was presented, questions and problem areas were discussed, and suggestions made. One suggestion, which may be of interest to many users, was for the formation of a Users' Group to enable users to influence UCC decisions more efficiently. Please see the announcement on page 1 of this newsletter.
- DELAYED INPUT SLIPS -- The Delayed Input slip (shown below) has been put into use at the ExpEng and Lauderdale staffed I/O facilities. This slip will permit UCC to delay processing of jobs, thus alleviating some of the afternoon congestion in job processing. If you want to submit several small jobs at once, you may do so using only 1 slip by placing the jobs in a box and placing the slip on the first job. Please mark the number of jobs involved on the slip.

U.C.C.	DELAYED INPUT SLIP	U.C.C.
<p>IF YOU SUBMIT A JOB BEFORE 6:00 P.M. ON A WEEKDAY AND DO NOT NEED THE OUTPUT BACK UNTIL THE FOLLOWING MORNING, PLEASE PLACE THIS SLIP IN FRONT OF YOUR JOB CARD. ALL JOBS SUBMITTED WITH THIS SLIP WILL BE READ IN BEFORE 8:00 P.M. YOUR COOPERATION IN USING THIS SLIP WILL HELP ALLEVIATE THE AFTERNOON CONGESTION IN OUR SYSTEM AND ALLOW FASTER TURNAROUND FOR USERS WITH TIME CRITICAL JOBS. THANK YOU</p> <p>DATE---/---/--- TIME----- USER SIGNATURE----- 02/21/75 J.O.L.</p>		

RETURN TO:
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MINNEAPOLIS, Mn 55455

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AT THE ABOVE ADDRESS, OR CALL
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