

PASSWORDS, TIME LIMITS, THEFT OF COMPUTER TIME

--by R.L. Hotchkiss

In our February newsletter we advised users to change passwords frequently and, especially, to change their initial password DUMMYPW. DUMMYPW stands for DUMMY PASS WORD but it appears more and more that the DUMMY stands for the user who doesn't drop that password for another. Recently, a student hit the time limit when running his job on an assigned instructional account number. A friend (or chance acquaintance) said "Oh, use this number _ _ _ _ _ , it has no time limit." He was right, it didn't and the student used \$700 worth of computer time. Needless to say, the true owner of the account (with password DUMMYPW) objected when he received the bill. The student was found (don't ask how, we have our secrets) and a hold placed on his records until the matter was straightened out. The moral of this story:

MORAL 1: CHANGE YOUR PASSWORDS, at least occasionally, especially from DUMMYPW and especially when password security has been breached and we warn you (as happened on March 11). The control card to change passwords is:

```
PASSWOR,old password,new password.
```

For example:

```
PASSWOR,DUMMYPW,NEWPWL.
```

changes the password from DUMMYPW to NEWPWL. Passwords may be any combination of seven or fewer letters and digits. On MIRJE, passwords may be changed with this command:

```
PASSWOR,oldpw,newps (CR)
```

Needless to say, this command is illegal for instructional user (account) numbers. Instructional user number passwords can only be changed by the instructor who must call Mr. Foster at 373-5757, identify himself, and then request the change.

MORAL 2: GET A TIME LIMIT SET ON YOUR ACCOUNT NUMBER if you can be certain that there is a reasonable limitation for all jobs. Call James Foster at 373-5757 to do this.

MORAL 3: IT IS ILLEGAL TO USE AN ACCOUNT NUMBER THAT IS NOT YOUR OWN unless you have the owner's full permission. Please advise all students of this in courses which use the computer.

LEVELS, RELEASES, PSRs...WHAT DOES IT ALL MEAN?

--by S.P. Nachtsheim

A frequent problem in knowing what is right or wrong with a program or the operating system itself, is determining exactly under which software system a program is compiled or run. This determination is made by knowing what version of the software is used and further, what level of modification code is incorporated into that version. In order to explain this, it is necessary to understand a few CDC definitions:

version - a number attached to CDC product sets that designates the type and major revision number of that software.

PSR - Program System Report: bulletin issued by CDC that tells systems personnel of detected bugs in the software products. These reports are placed on microfiche and distributed periodically.

release - a function periodically performed by CDC in sending new versions, corrective code, etc. to computer sites for installation (level is another name for release).

revision - an update to a CDC manual which corrects errors, describes new features, etc.

All of these terms have something to do with correctly determining the type of compiler being used. For example, there are currently two FORTRAN Extended (FTN) compilers on the system: FTN 3.0 and FTN 4.2. FTN 3.0 is an older stable compiler and is no longer supported by CDC; FTN 4.2 is a new compiler supported by CDC. The '4' following 'FTN' designates a major revision (from FTN 3.0); the '.2' designates a minor revision to the version '4' compiler. These revisions are received from CDC in the form of 'releases' and the releases correspond to the PSR's. The FTN 4.2 was installed in the release corresponding to PSR 383. This means that all bugs reported through PSR 383 have been corrected. Continuing with FTN, the release at PSR 387 will change the version to 4.3, the release at PSR 393 will leave the version at 4.3 (PSR393) and the release at PSR 397 will change the version to 4.4.

Normally, the user need not be concerned with this numbers game. However, releases often correspond to revisions in the CDC reference manuals and many times the revisions are available well before the software is updated to correspond to the revision. For example, if all the available revisions are put in the COBOL manual (see article elsewhere in this newsletter), the manual will reflect COBOL at version 4.3 PSR 393, when the COBOL installed on our system is COBOL 4.3, PSR 387. Installation of new versions is announced in this newsletter and in SYSNOTES. As manual revisions become available, these will also be announced so that the user is aware of which manual revision correctly describes the available software.

NEW VERSIONS OF COBOL AND SORT/MERGE

--by S.P. Nachtsheim

On May 19, 1975, new versions of COBOL, SORT/MERGE, Basic Record Manager, and Advanced Record Manager will be made available for user testing via the FUTURE control card. These products are substantially different from the current COBOL and SORT/MERGE (SORTMR3) that are on the Cyber 74, and therefore will require extensive testing and some conversion on the part of users. COBOL 4.3 and SORT/MERGE 4.2 will remain experimental software until September 1, 1975; at that time they will replace the current COBOL 3 and SORT/MERGE 3 as standard, supported UCC software. Shortly thereafter (November 1, 1975) COBOL 3 and SORT/MERGE 3 will be permanently removed from the system.

COBOL 4.3 and SORT/MERGE 4.2 are a part of the Control Data version 4 common product set. The main distinguishing feature of the version 4 product is the use of Record Manager. Record Manager is a product used by COBOL, FTN, SORT/MERGE (and available through COMPASS), which performs most of the input/output for a program. Record Manager promotes file compatibility among these languages and makes a wide variety of record types, blocking factors, and access methods available to the user.

Specifically, Record Manager provides Sequential, Word Addressable, Indexed Sequential, Direct Access, and Actual Key access methods. Sequential may be used for disk or tape; Word Addressable is disk-oriented and replaces the mass storage I/O available in FTN 3 and COBOL 3 (READMS,WRITMS/ACCESS MODE IS RANDOM); Indexed Sequential is disk-oriented and replaces Scope Indexed Sequential; Direct Access and Actual Key are new access methods with no counterpart in past versions.

COBOL 4.3 appears to be a significant improvement over COBOL 3.0. In addition to the new features incorporated into this compiler, compile time, mass storage transfer, and memory utilization appear to have improved significantly. The results of the preliminary tests by UCC staff indicate:

- (1) CP time to compile is reduced by about 25%.
- (2) Mass storage transfers during compilation - reduced by about 40%.
- (3) Field length to load is increased by about 15%.
- (4) Field length to run is decreased by about 10%.

In addition, CP time to run appears to be slightly improved over COBOL 3.0. COBOL 4.3 can be accessed via the following control cards:

```
FUTURE(COBOL)
COBOL(...parameters...)
```

The compiler requires a minimum of 60000 words of Central Memory. The COBOL which is available to MIRJE users in the COBOL subsystem is a version of COBOL 3 and will not be changed.

SORT/MERGE 4.2 represents an updated version of the sort package accessed via the SORTMRG control card. It can understand all of the Record Manager sequential file organization record types and blocking factors and may be accessed via:

```
FUTURE(SORTMRG)
SORTMRG(...parameters...)
```

OTHER UTILITIES

In addition to these two main packages, a number of utilities have also been placed on the system and may be used via the FUTURE control card. These utilities are:

<u>utility</u>	<u>control cards</u>	<u>function</u>
FILE	FUTURE(FILE) FILE(...parameters...)	This is a control card which directs Record Manager to change various parameters in the File Identification Table (FIT) at the time a program is run.
CREATE	FUTURE(CREATE) CREATE(...parameters...)	This is a utility which will build a file using the Direct Access file organization method.
IXGEN	FUTURE(IXGEN) IXGEN(...parameters...)	This utility performs an analysis of key uniqueness on data intended for use in the Direct Access file organization with a user-supplied hashing algorithm.
SISTAT	FUTURE(SISTAT) SISTAT.	A utility which provides statistics on Indexed Sequential files.
ESTMATE	FUTURE(ESTMATE) ESTMATE(...parameters...)	A utility which assists the user in determining the best allocation of index information for Index Sequential files.

KNOWN PROBLEMS

COBOL:

- (1) The debug/trace package does not work correctly.
- (2) If USAGE IS INDEX is specified for an independent elementary item, diagnostic 734 is generated. However, the code generated appears to be correct.

RECORD MANAGER:

- (1) Record Manager will not handle blocked binary records such as those written by the FTNBIN routine. A conversion routine will be provided by UCC.
- (2) Users of READMS/WRITMS under FTN 3.0 will have to re-create their mass storage files.
- (3) Users of mass storage I/O under COBOL 3.0 will have to convert their files via a utility to be provided by UCC.

DOCUMENTATION

*COBOL Conversion Guide (UCC)	Record Manager Guide for Users of Fortran Extended (CDC#60385200A)
*SORT/MERGE Conversion Guide (UCC)	Record Manager Guide for Users of COBOL (CDC#60385300A)
COBOL Version 4 Reference Manual (CDC#60384100E)	Record Manager Reference Manual (CDC#60307300F)
SORT/MERGE Versions 4 & 1 Ref. M. (CDC#60343900G)	

*These will be available after May 19, 1975.

THE USE OF MULTIPLE ACCOUNT CARDS

--by K.C. Matthews

The ACCOUNT control card may be used as often as desired in a Batch job (or in BATCH mode from a MIRJE terminal). Since some confusion has arisen over the functions of different account numbers in a job, we present this article in hopes of clarifying some of the confusion. We will consider Batch and MIRJE use separately.

BATCH

There must be at least one ACCOUNT control card in each Batch job. This card follows the job card (or the BIN card, if present). We will call the user number associated with this required ACCOUNT card the *initial account*. A subsequent ACCOUNT card may appear anywhere in the control card sequence. This ACCOUNT card specifies another user number which we will call the *current account*. Until the second ACCOUNT card is encountered, we will consider the *initial account* to be the same as the *current account*.

Each ACCOUNT card must specify a valid user number and the correct password must be given for that user number. The *initial account* must be validated for Batch access to the system (some user numbers are validated only for MIRJE access). All job costs (CP time, PRU's transferred, cards punched, etc.) are charged to the *initial account*. Also, the validations in force during the job (maximum time limit, maximum field length, etc.) are those belonging to the *initial account*.

However, permanent file operations and magnetic tape operations always refer to the *current account*. This is what makes multiple ACCOUNT cards useful. A user can begin execution under one user number and then ACCOUNT to another user number for permanent file access. For example, if one wants to use the private file A1 under user number XXX6001 and then save some results under the user number XXX6002, this job may be used:

```
JOB,CM55000.
ACCOUNT,XXX6001,PASS1.
GET,A1.
ACCOUNT,XXX6002,PASS2.
MNF,I=A1,E=2,B.
SAVE,LGO.
```

In this case, the job costs are charged to the *initial account*, XXX6001 and the file A1 would be found in the permanent file catalog of XXX6001 (since this was the *current account* when A1 was gotten). However, the file LGO is saved under the user number XXX6002 since this was the *current account* when the file was saved. Permanent file storage costs are charged to the user number under which the file is cataloged. When a permanent file is created (by DEFINE, SAVE, and sometimes REPLACE) it is created in the CATALOG of the *current account*, and costs will be charged against that user number until the file is purged. In the above example, storage costs for file A1 go to user number XXX6001 and storage costs for file LGO go to user number XXX6002.

Some magnetic tape operations on labeled tapes are restricted to the owner of the tape, with the owner being the *current account* when the tape is BLANKed. When a check is made for the owner of an already blanked tape, the owner's user number in the label must correspond to the *current account* of the job.

One final confusing note. The LIMITS control card gives the validations belonging to the *current account*, and if the *current account* is not the same as the *initial account*, the validations listed will not be those under which the job is running, since the job always runs under the validations of the *initial account*.

MIRJE

The *initial account* for a MIRJE terminal user is the log-in user number. This *initial account* is required to even enter the MIRJE system, just as an ACCOUNT control card is required to begin a Batch job. For MIRJE jobs also, all job charges accrue to the *initial account*.

When in the BATCH subsystem, a MIRJE user may issue an ACCOUNT card. This ACCOUNT card changes the *current account* for BATCH operations only! Since tapes cannot be used under MIRJE, this will affect permanent file users only. However, the simple permanent file commands are not BATCH operations; herein lies the difficulty. For example, if a MIRJE user enters

```
GET,XYZ
SAVE,ABC/CT=PU,M=R
DEFINE,SAM/FS=US
PURGE,RALPH
```

These are all simple TELEX permanent file commands. They are considered simple because they refer to a single permanent file and TELEX interprets these simple permanent file requests without having to submit a BATCH control card. In these cases, the user number for the permanent files involved is the *initial account*.

If an ACCOUNT card had been issued in the BATCH subsystem and then the command
GET,X,Y
entered, X and Y would be sought in the catalog of the *current account*. This is because the command GET,X,Y is not simple and a BATCH control card is submitted to get the files. However, the commands

```
GET,X
GET,Y
```

would cause files X and Y to be sought under the *initial account* because TELEX interprets these as simple commands.

Is this sufficiently confusing? Follow this rule: "If the MIRJE permanent file command has only one file, the *initial account* is used; in all other cases, the *current account* is used." "All other cases" includes cards executed in procedure files (since these are not MIRJE commands) and all permanent file operations done within a program.

One can also force permanent file accesses to be made under the *current account* by starting the command with "X," since all MIRJE commands beginning thus are forced to be executed as BATCH control cards. For example, the commands

```
X,GET,X
X,GET,Y
```

would cause the files X and Y to be sought for in the *current account* catalog.

(continued from page 4)

Some additional cautions:

- (1) A LIMITS or CATLIST command in MIRJE always requires a BATCH control card to be executed; hence the *current account* is used for these commands.
- (2) Someday (perhaps next Fall) all MIRJE permanent file commands will be executed as BATCH control cards. Then, subsequent ACCOUNT cards will not be so confusing. When this change comes from CDC, we will announce it in this newsletter at least one month before it is implemented.

DIFFERENT VERSIONS OF SPSS

--by S.P. Yen & D. Anderson

A new SPSS manual is now available in the University bookstores. This manual SPSS: Statistical Package for the Social Sciences, Second Edition (maroon cover) documents Version 6.0 of SPSS. However, the SPSS now available on the Cyber 74 system is Version 5.8 which is documented in these three publications:

- (1) SPSS (blue cover; no longer in print)
- (2) SPSS 5.5 update (yellow cover)
- (3) SPSS 5.8 update (white cover; correction pages only)

A user will need all three of these publications if he wants to know all the statistical programs and data manipulations available with SPSS.

Those users who have the new SPSS manual with the maroon cover should keep these differences in mind when using SPSS:

- (1) The following Version 6.0 control cards will not be considered valid on our system:

ADD CASES	DATA LIST	GET ARCHIVE	MERGE FILES	SAVE ARCHIVE
ADD DATA LIST	DO REPEAT	LIST ARCHINFO	RAW OUTPUT unit	SORT CASES
ALLOCATE	END REPEAT	LIST FILEINFO	RUN SUBFILES	WRITE FILEINFO

- (2) The following Version 6.0 control cards will be valid on our system but the format to be followed is that found in Appendix B, pages 562-575 rather than the format described in the body of the manual:

ADD VARIABLES	CROSSTABS	ONEWAY	PRINT FORMAT	REGRESSION	TMISS
AGGREGATE	DUMP	PARTIAL CORR	PROCESS SBFILES	SUBFIL	NO OF CASES ESTIMATED
BREAKDOWN	FACTOR	PEARSON CORR	READ VECTOR	SUBFILE LIST	

- (3) The following Version 6.0 statistical programs are not on our system:

ANOVA
 CANCELL (use CANON on our system)
 DISCRIMINANT (use DISCRIM on our system)
 FREQUENCIES (use CODEBOOK on our system)

- (4) The following statistical programs and control cards are on our system but not in the Version 6.0 manual:

REJECT IF	ECOLOGY	UNIFORM	POISSON	TETRACHORIC	NPAR TESTS
ERASE DOC	LAG	NORMAL	FASTBREAK	RELIABILITY	

UCC statistical program consultants in 140 Experimental Engineering are available to help you if you have problems using SPSS.

SYSTEM 2000 NEWS

--by S.P. Nachtsheim

SYSTEM 2000, Version 2.40 is expected from MRI in the next few weeks. Some of the major new features will be:

- (1) A TALLY component WHERE...
- (2) A LINK command for logically interconnecting data bases.
- (3) The ability to generate internal labeled tape requests.
- (4) A LOAD command in the Programming Language Interface which reduces CP and mass storage time (and cost) by up to 40%.
- (5) Incorporation of the Report Writer into regular SYSTEM 2000.

Watch SYSNOTE for installation dates and information.

*****CAUTION***** There is a major bug in the current Report Writer that causes the LOGICAL PAGE function to work incorrectly. This will be corrected in the next (2.40) release.

SYSTEM 2000 AND INDIRECT ACCESS FILES

SYSTEM 2000, the main data base management system at UCC is designed to work with large collections of data. It therefore is oriented toward large files, and by default, uses direct access permanent files. For the learning environment, most users begin with small data bases and correspondingly small files. The use of direct access files wastes a large amount of disk space when the data base is small. To alleviate this problem, a KRONOS procedure file has been developed that allows SYSTEM 2000 to utilize indirect access files for storing the data base.

The procedure file, S2KIND, combines the six data base files into two indirect access files and stores them. Various options are available for creating, updating, and purging. A complete writeup is available from the Reference Room.

P A S C A L I N F O R M A T I O N

--by A.B. Michel

Presented here is a potpourri of new PASCAL developments. PASCAL usage at the University of Minnesota is averaging 1500-2000 runs per month, a large increase over what was reported last Fall.

Interim local documentation is now available on a machine retrievable file accessed via a WRITEUP, PASCAL control card. This document describes:

- (1) Accessing PASCAL under both timesharing and Batch.
- (2) How to use the new PROGRAM heading statement to pass files to PASCAL programs.
- (3) A discussion of all additional predefined procedures and functions for PASCAL.
- (4) A discussion of compiler options and compilation and run-time error messages.
- (5) How to use the external function interface to link to FORTRAN, COMPASS, and library subprograms.

Since UCC obtained the new PASCAL compiler last August (distinguished from the old compiler in that this one generates relocatable binary code accepted by the standard KRONOS loader) eight correction updates have been received from Wirth's group via Colorado. These updates have fixed numerous problems encountered with the compiler last Fall and Winter quarters. The compiler had proved stable enough to have warranted its move to the "current" version by the end of Winter quarter. Future changes and updates to the compiler will be announced in SYSNOTES, and will always be placed under FUTURE, PASCAL for experimental access. Only when a FUTURE version proves stable under testing will it replace the current version and then only between academic quarters.

According to the recent PASCAL newsletter (letter #3, edited by George Richmond, University of Colorado), PASCAL is rapidly spreading to other computer systems. In addition to the CDC 6000/Cyber 70 series implementation, PASCAL has been written for these computer systems:

```

Burroughs   : B4700, B6700
CDC         : 3300, 3600
Data General: 840
DEC        : System 10, PDP-8, PDP-11/20, PDP-11/45
Honeywell  : G635
IBM        : 360/370 (4 implementations)
Raytheon    : 704
TI         : ASC
Univac     : 1100 series, AN/VYK-20
Xerox      : Sigma 6, Sigma 7

```

and these non-USA computer systems:

```

CII         : Iris 80, 10070
ICL         : 1900 series
Phillips    : P1400
Telefunken  : TR440

```

The DEC PDP-8 version is being developed at the Social Science Research Facilities Center, University of Minnesota, by Jon Cross.

U N P A G E I S N O W A V A I L A B L E

--by A.B. Michel

UNPAGE is a utility routine which can be used to 'squeeze' output to conserve paper by editing carriage control characters (substituting paper-saving ones). Essentially, UNPAGE processes the OUTPUT file onto itself, inserting a pleasing three line boundary for all page ejects which it finds. The other default UNPAGE carriage control substitutions are:

rather than:	whose effect is:	this is substituted:	which does this:
1	page eject	blank	single space
-	triple space	blank	single space
2	bottom of form	zero	skip one line
0	double space	blank	single space
R	auto page eject	Q	clear auto eject

The carriage control characters +, /, Q, S, and T are unchanged by UNPAGE. Any other characters in column one are edited to a blank.

To use UNPAGE, insert these three cards at the end of the control card record in a deck:

```

UNPAGE.
EXIT.
UNPAGE.

```

UNPAGE is very efficient in terms of CP time used and requires only 7000 octal words to run. More complete documentation on UNPAGE (including additional features and uses) can be obtained by using the control card WRITEUP, UNPAGE.

In future, UCC plans to implement a control card to perform this task by changing the system sector of OUTPUT print files, thus 'squeezing' listings without incurring additional CP time. Therefore, UNPAGE serves only as an interim solution to the paper wastage problem.

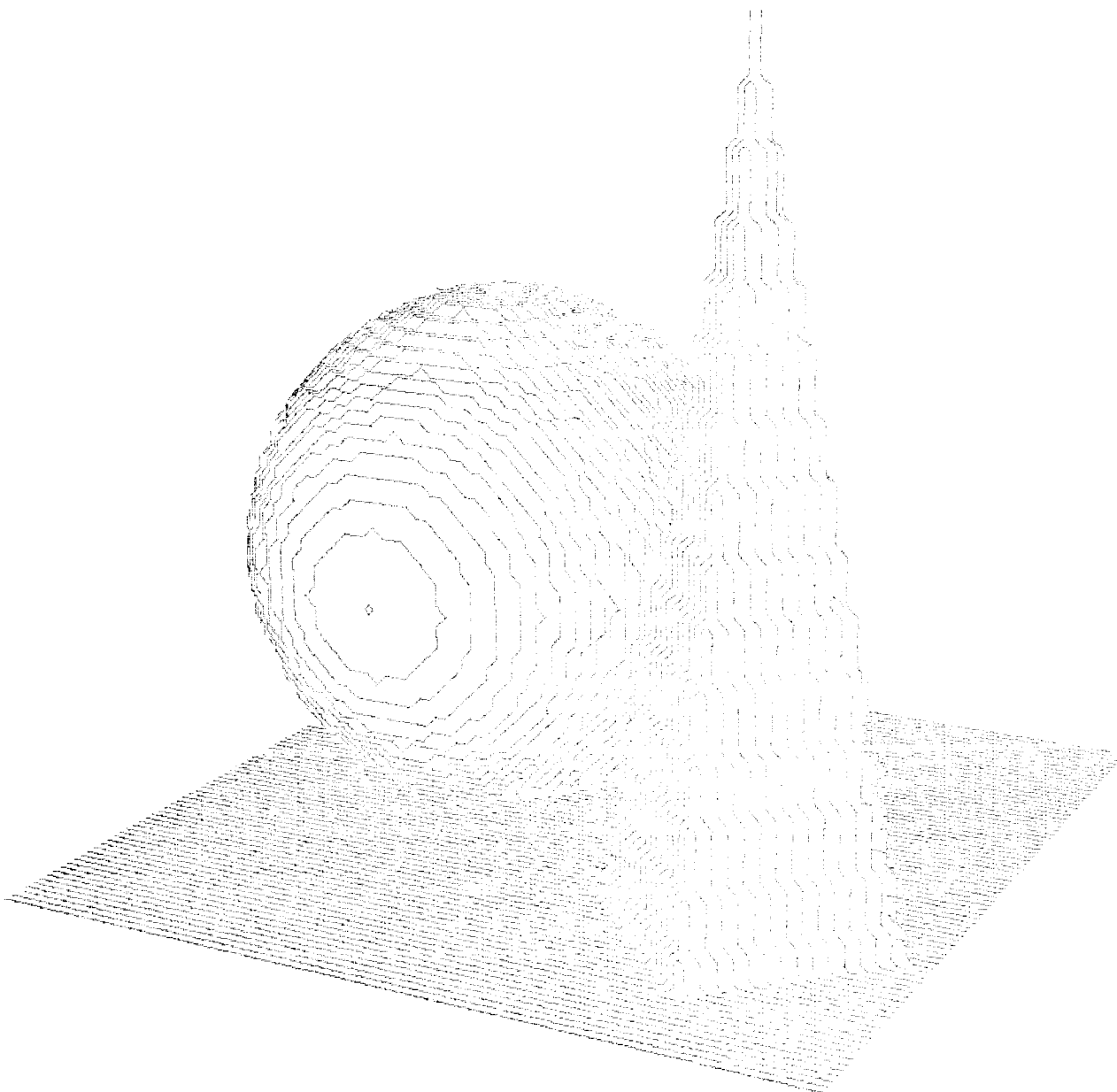
BEST PLOT CONTEST

This article is repeated from the April UCC Newsletter --

In order to encourage use of the Statos 31 plotter, UCC will hold a contest for the "plot of the month" for six months. The winner each month will be published in the UCC newsletter and a prize of \$5.00 will be awarded to the winner. The contest rules are:

- (1) The plot must be generated on the UCC Statos 31 on-line plotter system. It should be sent to Mike Frisch, 227 Experimental Engineering, University of Minnesota, Minneapolis, Mn 55455. Please include your name and address (with zip code).
- (2) You may enter as often as you wish during the six month period. The cut-off dates are: May 15, June 15, July 15, August 15, September 15, and October 15.
- (3) Winners will be selected by Mike Frisch whose decision is final.
- (4) The contest IS NOT OPEN to staff members of UCC.

An example plot from the Statos 31 is shown below.



INTERNATIONAL MATHEMATICAL AND STATISTICAL LIBRARY (IMSL)

--by M.J. Frisch

ATTENTION: IMSL users or prospective users -- especially those who do not have access to the manuals at our computer center. We are compiling a list of names and addresses to submit to the IMSL people of individuals who wish to receive the IMSL Newsletter, a publication that often has useful tips on numerical computing. Please return the attached mailer if you are interested. A list of the subjects covered by IMSL FORTRAN subroutines and functions follows:

Analysis of Experimental Design Data	Observation Structure
Basic Statistics	Canonical Analysis
Elementary Bayesian Statistical Inference	Cluster Analysis
Data Screening; Transgeneration	Discriminant Analysis
Elementary Classical Statistical Inference	Principal Components Analysis
Categorized Data Analysis	Regression Analysis
Differential Equations; Quadrature; Differentiation	Linear Models
Eigenanalysis	Special Non-Linear Models
Forecasting; Econometrics; Time Series	Sampling
Generation and Testing of Random Numbers; Goodness of Fit	Acceptance Sampling
Interpolation; Approximation; Smoothing	Preference Sampling
Linear Algebraic Equations	Survey Sampling
Mathematical and Statistical Special Functions	Utility Functions
Probability Distribution Functions	Error Detection
Special Functions of Mathematical Physics	Library Maintenance and Retrieval Programs
Non-Parametric Statistics	Special I/O Routines
Analyses of Variance	Library Test Programs
Binomial or Multi-nomial Bases	Vector, Matrix Arithmetic
Hyper (or Multi-hyper) Geometric Bases	Zeros and Extrema; Linear Programming
Kolmogorov-Smirnov Tests	
Other Bases	
Randomization Bases	

More information on using IMSL is available in the "Index to Cyber 74 User Software" which is available in 140 Experimental Engineering or from the Reference Librarian in 235a Experimental Engineering. (This article was adapted from one in the Lawrence Berkeley Laboratory Computer Center Newsletter.)

MECC/MERITSS CONVERSION

(This article is reprinted from the April, 1975 MECC/MERITSS Newsletter.)

CONVERSION: THE MECC CONVERSION IS A TWO PART OPERATION: 1) PROGRAM LIBRARIES AND 2) USER PROGRAMS. UNIVAC IS COMMITTED TO ASSIST MECC WITH BOTH PARTS OF THE CONVERSION.

THE PROGRAM LIBRARY CONVERSION HAS ALREADY BEGUN AND WILL PROCEED AS FOLLOWS: THE MANKATO STATE UJ106 TIMESHARING BASIC LIBRARY WILL BE CONVERTED FOLLOWED BY THE MECC LIBRARY ON THE HEWLETT-PACKARD EQUIPMENT. FINALLY THE MECC/MERITSS BASIC LIBRARY WILL BE CONVERTED. THE MANKATO STATE FORTRAN LIBRARY AND THEN THE MECC/MERITSS FORTRAN LIBRARY WILL BE CONVERTED AFTER COMPLETION OF THE BASIC CONVERSION.

USER PROGRAM CONVERSION WILL BE GIVEN PRIORITY SECOND TO PROGRAM LIBRARY CONVERSION. THIS IS NOT TO SAY THAT USER PROGRAM CONVERSION CAN'T BE CONCURRENT WITH PROGRAM LIBRARY CONVERSION. IT CAN AND PROBABLY WILL BE! THE USER PROGRAM CONVERSION PROCESS IS AS FOLLOWS. EACH MECC MEMBER SYSTEM HAS IDENTIFIED A CONVERSION COORDINATOR. MECC AND UNIVAC WILL PROVIDE A VARIETY OF DOCUMENTATION TO THE COORDINATOR: A LANGUAGE DIFFERENCES ANALYSIS DOCUMENT (E.G. RTB VS CDC BASIC), A GUIDE TO BASIC CONVERSION (E.G. CDC BASIC TO RTB), AND A LANGUAGE MANUAL (E.G. RTB). THE DOCUMENTATION AND ACCESS TO THE UJ106 SYSTEM WILL BE MADE AVAILABLE TO THE USERS THROUGH THE CONVERSION COORDINATORS. THE USERS MAY DECIDE TO CONVERT THEIR OWN PROGRAMS OR ENLIST THE AID OF MECC/UNIVAC.

THE CONVERSION TASK IS LARGE BUT IT IS BEING CAREFULLY PLANNED AND (MECC) HAS THE RESOURCES AVAILABLE TO CARRY OUT THE TASK IN AN ORDERLY AND SATISFACTORY MANNER.

The University conversion coordinator is Thea Hodge, 232 Experimental Engineering, 373-4599.

TO REMOTE TERMINAL USERS

--by R.T. Franta

Remote site users often ask the question "what happens to my non-printed output (that is, punch cards, microfilm, and Statos plots) when I run a job from a remote site location?" This type of output is placed on shelves by the operators according to the information supplied by the user on the BIN card of the job. For this reason, anyone who runs a job which produces punch cards, microfilm, or Statos plots MUST put a BIN card in his job. The form of the BIN card is:

BIN,ss,nnnn.

where ss is the site code of the terminal used and nnnn is the bin number at the terminal site. If no bins are available at the site, zero may be used. All non-printed output is placed on shelves provided for each site at either Lauderdale, Experimental Engineering, West Bank, or Coffey Hall. To find out where your site's shelf is, use the following control card in any job:

WRITEUP,SITEBIN.

COMPUTER OUTPUT MICROFILM PLOTTER SERVICES

--by M.J. Frisch

UCC has made an agreement for using an Information International FR-80 computer output microfilm (COM) plotter on a service bureau basis. The FR-80 is a fast high-resolution device that writes on 35mm unspocketed film or 105mm microfiche. A special version of the PLOTPAC plotting package is now available to make up magnetic tapes for the FR-80. The current charge to users (in addition to the Cyber 74 charges) is \$66 per hour which includes plotting, film, developing, and transportation. Turnaround is expected to be about 48 hours on weekdays since we will be getting service when the FR-80 is not busy. Further details on FR-80 usage are given in a writeup available in 140 Experimental Engineering or from the Reference Librarian, 235a Experimental Engineering, or call 612/373-7744.

COMPUTER DOWNTIME SUMMARY

This is a new feature of the newsletter which will be printed each month in the future. Both the March and April summaries are presented here.

MARCH 1975 DOWNTIME SUMMARY

Total possible scheduled uptime hours	528
Total downtime hours (schedule A)	22.1
Total uptime hours	505.9
Uptime percentage	95.8 %
Average downtime per occurrence	26.5 minutes
Mean time between failures	10.1 hours

Schedule A: breakdown of downtime hours

	number of <u>occurrences</u>	total hours <u>down</u>	average minutes <u>downtime</u>
1) Preventive maintenance over-runs	7	1.3	11.14
2) Software related problems	11	5.62	30.65
3) Hardware related problems	14	7.23	31.00
4) Indeterminate software/hardware problems	14	3.03	12.99
5) External problems ¹	<u>2</u>	<u>4.92</u>	147.5
	totals 48	22.10	

¹For example, air conditioning, power failures, etc.

NOTES:

There were two major problems that accounted for 46% of our downtime during March. We had an ECS problem which caused our scopes on the console to blank out. This happened when ECS was in heavy use. Scope blanking and the concomitant check out of the problem accounted for 21% of our total downtime. There were two power failures (March 24th and 27th) that accounted for 25% of the 22.1 hours of downtime. This, of course, we were unable to control.

R. Dykstra

APRIL 1975 DOWNTIME SUMMARY

Total possible scheduled uptime hours	484
Total downtime hours (schedule A)	15.45
Total uptime hours	468.55
Uptime percentage	96.81 %
Average downtime per occurrence	29.9 minutes
Mean time between failures	15.1 hours

Schedule A: breakdown of downtime hours

	number of <u>occurrences</u>	total hours <u>down</u>	average minutes <u>downtime</u>
1) Preventive maintenance over-runs	0	0	0
2) Software related problems	6	3.68	36.8
3) Hardware related problems	17	10.35	36.52
4) Indeterminate software/hardware problems	8	1.42	10.62
5) External problems	<u>0</u>	<u>0</u>	0
	totals 31	15.45	

NOTES:

Our major problem throughout the month was the ECS timing which caused the scopes to blank. This accounted for 41% of our total downtime. We also lost a large part of one day due to the floating-point add feature failing.

R. Dykstra

THE SUGGESTION BOX

[Unsigned cards 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 *Last Sunday I tried to run some programs from the 1004 in 38 ElectE. The 1004 was out of paper. There is paper in the cabinet but the cabinet was locked; the operators at ExpEng did not have keys or paper. This has happened one other weekend also. Wouldn't it be possible to leave extra paper at the 1004 site or leave extra paper with the ExpEng operators? The 1004's are very nice for running jobs quickly at odd times but it is most irritating to run out of paper. (April 11)*
- A We are sorry for the inconvenience this problem has caused. In the future, spare paper will be kept at ExpEng and will be available to the weekend operators as a backup supply. We are now in the process of hiring a person who will be checking all the terminal rooms at routine intervals to make sure that supplies are adequate and that things are working properly. This person should be making checks very soon and, hopefully, this problem will not occur again. (R. Franta)
- Q/S *It would be helpful if the writeups of the UofM subroutines, packages, etc., in the reference rack at Lauderdale could be kept as current as is practicable. New writeups should be added as they are updated and old ones removed. Further, it would be reassuring (if nothing else) if the status of the documentation were easily available; perhaps you could list the writeups by date or other identification and make this list available via a WRITEUP file. (March 7)*
- A We will prepare a list of UCC writeups with the date of last revision and make the list available at all the reference racks. We do announce revisions in the newsletter and will continue to do so. (A. Koepke)
- Q/S *Why is DISPOSE being limited so that CICS TELEX users cannot make use of it? If the number and size of DISPOSE jobs is the problem, would it be possible to set a limit on the size of the file to be disposed? (April 11)*
- A a) CICS students are the largest group of computer users at the University and probably the most ambitious. UCC and the CICS department felt that student mis-use of the DISPOSE facility could generate considerable costs for the CICS department and also completely clog handling of DISPOSED output.
b) Many permissions are already checked by TELEX. Checking for a file size limit is possible but would have to be carefully considered by UCC first. (R. Hotchkiss)
- Q/S *Errors in plotting routines when using PLOTPAC, especially exceeding the bounds of a plot, generate an error message that refers to the sequence number of the PLOTPAC initialization call in which the error was made and NOT to the sequence number of the FORTRAN statement that was in error. I suggest that the sequence number of the statement containing the error be output to the programmer rather than the initialization call itself. (April 15)*
- A This problem was previously brought to our attention via a Program Trouble Report (PTR) from another user. We are working on it and expect to have the problem fixed in the near future. (M. Frisch)
- Q/S *Check into the purchase of the GASP IV simulation language. GASP IV is a general purpose discrete and/or continuous simulation language defined in terms of a set of FORTRAN subroutines and functions. GASP IV features include easy to use time and state event processors, entity-attribute filing capability, automatic output of user controlled statistics, and queue information, and good user documentation in the form of a user's manual and a textbook describing the language and complete with several good examples. I have been using GASP IV for four months with excellent results. Compared to SIMSCRIPT, its advantages outweigh its disadvantages. The cost to our department for GASP IV was \$100 which included tape with source, user's manual, and listing. At this price we are now allowed to make this available outside of our department; however, I am sure any simulation users would benefit from having this available. Contact Alan Pritsken at Purdue University for information. (April 11)*
- A We feel that SIMULA, DARE, GPSS, and SPURT present sufficient simulation options to the user. However, we will investigate the cost of GASP IV and perhaps provide it on a low support basis. (R. Hotchkiss)

INSTRUCTIONAL USER NUMBERS

--by T.D. Hodge

In response to many reasonable requests from instructional departments, new MIRJE instructional user numbers will, by default, not have SUBMIT permission. This follows the current policy for Batch instructional numbers. Instructional user numbers on the Cyber 74 are those with 7 or 8 in the fourth position; for example, ABC7965 or ABC8123.

All instructional user numbers disappear at the end of June as we begin a new fiscal year. Only those user numbers for which Summer Session arrangements have been made will be kept active after June 30th.

NEWS FROM SYSTEM NOTES

April 9, 1975: Page 12 of the April UCC newsletter incorrectly told users to seek information on the current status of the operating system from the operator at the main site. Instead, we request users to contact the HELP line consultant at 376-5592. The telephone number in the article was wrong too!

April 9, 1975: The permanent file directives FDEFINE and FSAVE were so poorly implemented that they will be removed from the system before users become accustomed to them.

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/373-7802
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 F 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

REMEMBER THE HELP-LINE: 376-5592

KEYPUNCH LOCATIONS

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

Fast 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.

UCC SHORT COURSES

COBOL: May 19,21,23,28,30,June 2 (MWF), 3-5 PM in Room 221 MechE.

SYSTEM 2000: May 5,7,9,12,14,16 (MWF), 3-5 PM in Room 221 MechE

STATISTICAL PACKAGES:

Basic packages: May 13,15 (T,Th), 2:15 - 4 PM in Room 212 MechE

Advanced SPSS features: May 27,29 (T,Th), 2:15 - 4 PM in Room 212 MechE

[See the April UCC newsletter for descriptions of these courses.]

This new course has been added:

KRONOS CONTROL CARDS

A description of the KRONOS operating system and control cards.

DAYS : May 19,21,23,28,30 (MWF)

HOURS : 2 - 4 PM

ROOM : 495 Entomology (St. Paul)

INSTRUCTOR: R. Franta

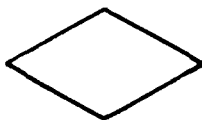
REFERENCES: Materials from instructor

OPEN SEMINAR ON TAPES

May 8 (Thursday)

2:15 - 4:00 PM

25 Architecture



OPEN USERS MEETING

May 22 (Thursday)

1:15 - 4:00 PM

25 Architecture

WOULD READERS LIKE TO CONTRIBUTE MATERIAL FOR THIS NEWSLETTER?

The pages of this newsletter are open to readers to announce meetings, publicize available programs, ask for information from the user community, or whatever. The editorial restrictions would be that the topic be of interest to the computer users of the University, that the article be one page or less in length, and that the writer permit judicious editing when necessary. Since this newsletter goes through a rather lengthy reviewal processing before being printed, we cannot guarantee any specific publication date. However, we will print (each month) the deadline for the next month's newsletter and any reader may submit materials up to that date for inclusion in the next newsletter. As a beginning, the deadline for the JUNE newsletter is MAY 22 (6 working days before the end of the month). Materials should be sent to the Newsletter Editor, 227 Experimental Engineering, and the name, address, and telephone number of the author should be included.

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 LIR
MINNEAPOLIS CAMPUS