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UNIVERSITY COMPUTER CENTER, UNIVERSITY OF MINNESOTA-TWIN CITIES, MINNEAPOLIS, MINNESOTA

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S P S S 6.5 documentation is now available.....

## BULLETINS

### > PUBLICATION AVAILABLE

A BASIC Language Workbook emphasizing elementary concepts using MERITSS BASIC has been developed by Dr. Lynda Ellis and Mr. Jeffrey Budd under a grant from the University of Minnesota Educational Development Program. It was designed for use by health science students with minimum math background, but instructors in other fields might find it a useful class supplement also. Copies of the introduction and table of contents can be obtained by writing to the authors at Box 511 Mayo Memorial Building or phoning 373-5613.

### \* SYSTEM 2000 CONSULTING HOURS

System 2000 telephone consulting hours for Spring Quarter will be from 10:00 - 11:00 AM and 1:00 - 2:00 PM Monday through Friday. These hours have been set aside so that users may be guaranteed of receiving assistance with System 2000 problems. Call 376-1761.

### ~ OPEN USERS MEETING

You are invited to join with the UCC staff in an open users meeting on May 19th. The meeting is in room 225 Aero from 2:25 to 5:00 PM. Bring your questions and complaints.

## UCC newsletter

VOLUME 11 NUMBER 4 APRIL, 1977

Director: Peter C. Patton

Editor : A. Koepke

Comments about the content of this newsletter, or suggestions for changes may be directed to the editor, 235a Experimental Engineering, 373-7744.

The University of Minnesota adheres to the principle that all persons shall have equal opportunity and access to facilities in any phase of University activity without regard to race, creed, color, sex, age, or national origin.

## hours

### CYBER 74 OPERATING HOURS

There have been some misunderstandings in the past about the hours of operation on the Cyber 74. The following schedule should clarify this:

Day	From	To	Last Lauderdale runs I/O	output
Sunday	1600	2400		
Monday	0000	0145	0130	0145
	0800	2400		
Tuesday	0000	0345	0330	0345
	0800	2400		
Wednesday	0000	0345	0330	0345
	0800	2400		
Thursday	0000	0345	0330	0345
	0800	2400		
Friday	0000	0345	0330	0345
	0800	2400		
Saturday	0000	1545	1530	1545

If there are any changes, we will try to notify you as soon as possible. A quick review of the current operating hours can be found by using WRITEUP, HOURS.

R. Dykstra, 373-4920

## P F users

### A NEW VERSION OF CATLSYS

A new version of CATLSYS is now available. To access it, use the following:

FUTURE(CATLSYS)  
CATLSYS.

A description of the new parameters is available on the file

WRITEUP(CATLSYS=FUTURE)

This FUTURE version has a slightly different output format and many new parameters.

The current version will be switched to PAST and the FUTURE to current in 1 or 2 months.

T. Hoffmann, 373-4131

## R J E users

### CHANGES TO AUTO DIVERT

Beginning on March 23, 1977, we will allow dual auto divert limits at all RJE terminals. Any terminal (open shop 1004 terminals in particular) will be able to use one limit during prime time hours (8 AM to 6 PM Monday through Friday) and another limit (probably higher) during all other normal production hours. Of course, no terminal now with an infinite limit (no divert) will be affected by this change.

The divert limits and pickup sites are displayed at each terminal where auto divert is enforced as well as in WRITEUP, SITEBIN.

G. Jensen, 373-5754

## support levels

### COBOL, SORT/MERGE, RECORD MANAGER

#### SUPPORT LEVELS

For Spring Quarter, the current versions of the following products will remain at PSR401, Level 10:

COBOL 4  
SORT/MERGE 4  
RECORD MANAGER (and utilities)

The FUTURE versions of these products will remain at PSR420, Level 12. During the quarter, newer versions of these products at PSR439, Level 13, will be tested and, if satisfactory, will be made available to users. Changes will be announced in future newsletters and in SYSNOTES.

H. Kurs, 376-1762

## T / S

### TERMINAL EQUIPMENT

We have information and sample requisitions for the following terminal equipments:

Teleray CRTs  
Decwriter teleprinters  
Multitech acoustic couplers

If your department is considering the purchase of such equipment, contact the UCC Reference Room for an information sheet or call Dan Whealdon, UCC System Engineering, 373-4877.

The Engineering group also provides maintenance and service for a wide variety of computer terminals. For more information and a rate schedule, call the UCC Reference Room (373-7744) or Dan Whealdon, at 373-4877.

## r u n

### Another Reminder to RUN Users

A while ago we ended support of RUN and its related routines because of our limited manpower and because CDC had ended its support. Also, we found that the code generated by RUN is slower than the code for MNF or FTN. Since RUN is slower and is taking valuable disk space, we have decided to drop it from the operating system. We plan to do this after the end of the second summer session in 1977 so you have plenty of time to convert any RUN programs you have to MNF or FTN.

We will be removing the RUN library routines; this means that relocatable binary decks from RUN will not be usable. While absolute overlays could be made from the relocatable binary, we do not recommend this. Start conversion now so that any problems that arise can be taken care of before it is too late.

L. Liddiard, 373-5239

## user libraries

### Library Changes and Additions

On March 29, the current version of the FTN 4 library (file FORTRAN) was updated. Routines affected were:

POLYGN New gray-area shading routine for the electrostatic plotter.

CNTOUR Plotter contour program; recompiled because of problem with OPT=2.

PLOT3D New 3-dimensional plotting routine.

SCALE Calcomp compatible scaling routine.

LINE Calcomp compatible line drawing routine.

NEWPEN Calcomp compatible routine (no action since our plotters do not have this feature).

FACTOR Calcomp compatible scale factor routine.

The last four (and a previous set of changes to some other PLOTPAC routines) mean that except for the PLOTS call, PLOTPAC is completely compatible with standard Calcomp software.

### Extended Calcomp Routines

We have recently made available four groups of routines purchased from Calcomp which are extensions to the standard routines. The areas covered are: general, drafting, scientific, and business. Writeups are available in the Reference Room, 235A ExpEng, 373-7744.

### EISPACK

The file EISINFO, which contained documentation for an earlier version of EISPACK, will be deleted on April 15, 1977.

Use the documentation available from WRITEUP, EISPACK; it describes the latest version and is indexed.

### IBM Scientific Subroutine Package

Users of IBM's Scientific Subroutine Package (SSP) should be aware of a resolution which was forwarded to IBM at the March 1975 SHARE (IBM Users Group) meeting recommending that the SSP package be formally retired. Quoting from the resolution: "The Scientific Subroutine Package (SSP) is no longer considered by IBM to be a viable programming package in the intent of its original purpose. As such, it is no longer supported by IBM. We wish to complete the retirement process for this package." The resolution goes on to say, "This package of programs is technologically obsolete in terms of programming approach. Second, the package has some known errors, which, due to its current lack of maintenance, are "rediscovered" independently by a

variety of users. This yields some corrected versions and many incorrect versions, as no updates are centrally distributed."

The Computer Center strongly suggests that anyone now using a routine from the SSP library consider finding a substitute in the IMSL package. (Reprinted: Brown University Newsletter, March, 1976)

As a result of this (and other) negative reports, we will remove the package from the system in mid-June. Source decks of the SSP routines will be made available to users upon request.

Brookhaven National Laboratories has published an SSP to IMSL conversion guide; we will be happy to make copies for users. Just see me in 235D ExpEng.

M. Fritsch, 376-1636

### dpdp!!!!

I WISH TO COMPLAIN ABOUT THE SOMETIMES POOR HANDLING AND ABUSE GIVEN MY PLOTTER OUTPUT. I KNOW THE LAUDERDALE SHUTTLE DRIVER DOES NOT STUFF THEM IN THE DRAFTY CRACKS OF HIS VEHICLE, BUT SOMETIMES IT SURE LOOKS THAT WAY. CAN'T YOU PROVIDE SOME SMALL LABELED BINS FOR PLOTS AT SITES AND PROVIDE THE DRIVER WITH SOMETHING BETTER DESIGNED FOR SAFE TRANSPORT?

A.S.:24NOV76

My observation is that damage occurs most often when the plots are placed under other items in the driver's 'grocery bin.' Drivers have been alerted to the fact that plots should be handled carefully. We will continue to watch for problems in this area. Please call me at 373-7538 if you have more problems like this.

J. Larson

MY TAPES WERE RETURNED ON THE DATE ON THE TEMPORARY STORAGE REQUEST SLIP, NOT AFTER (AS THE SLIP STATES). THIS CAUSED MUCH INCONVENIENCE.

D.E.:07MAR77

Operators have been alerted to the fact that tapes should be returned after the date specified on the TT temporary storage request slip.

J. Larson

THERE MUST BE SOME WAY TO HAVE THE COMPUTER INTERPRET A DECK WHICH HAS JUST BEEN PUNCHED. THE INTERPRETER IN EXPERIMENTAL ENGINEERING DOES NOT FUNCTION PROPERLY.

G.I.:24FEB77

There is no way for the computer to interpret tab cards. The interpreter in Experimental should function properly. If it does not, the problems should be noted and reported to the operations people in Room 131. They will see that the problem is corrected. We are considering the addition of a 2nd interpreter (high speed) in Experimental Engineering.

R. Fleagle

(continued on page 38)

Shaded Plots On The Electrostatic Plotter

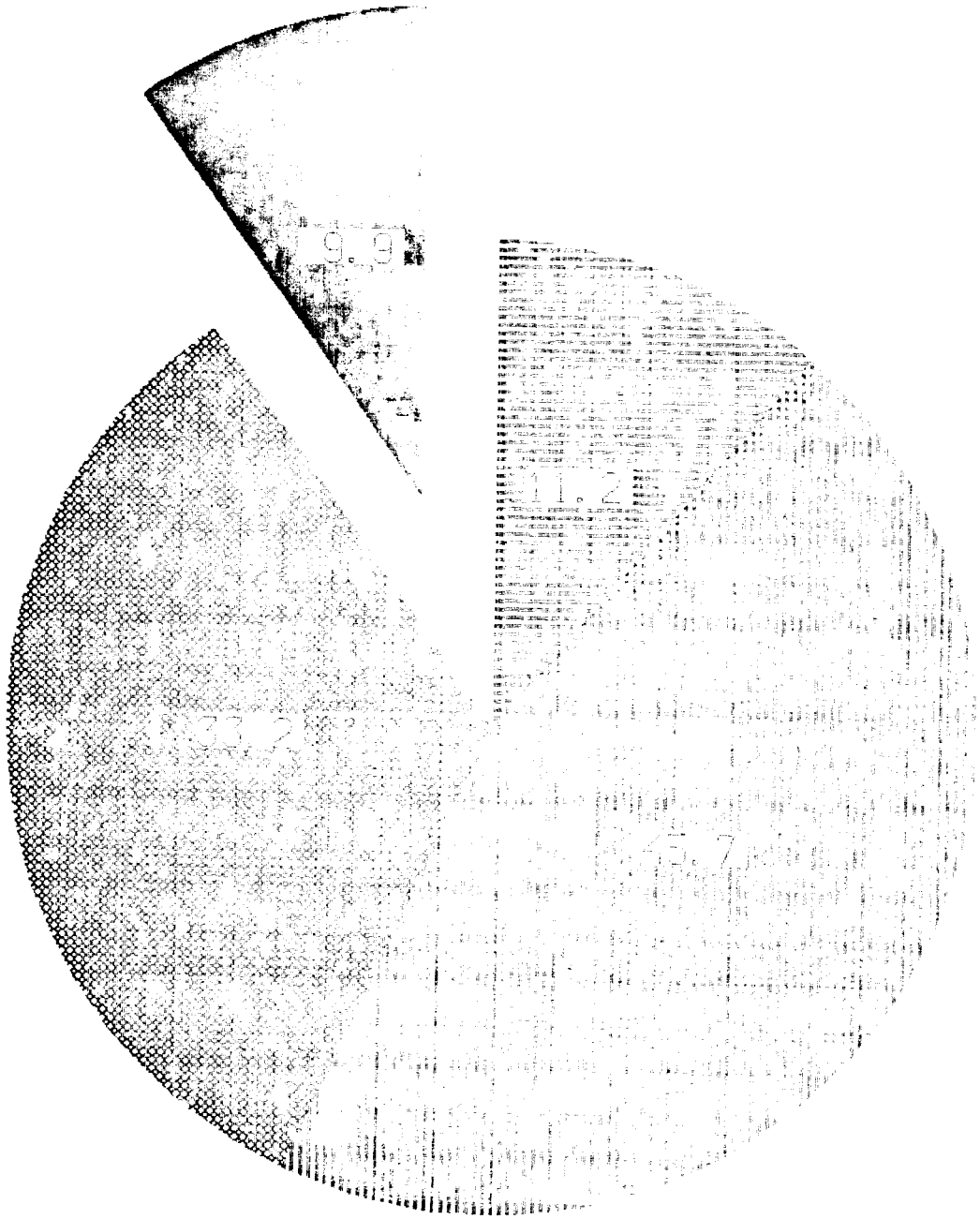
A new routine called POLYGN is now available. It allows the generation of shaded or textured areas, each defined by a closed polygon, to be plotted on the Varian Statos 31 electrostatic plotter. By combining many polygons, any arbitrary shaded pattern can be plotted by the plotter's contrast capability. The new electrostatic plotter post-processor, PLOT31, must be used to complete the generation of the shaded plot.

Writeups for POLYGN are available in 140 ExpEng and in the UCC Reference Room, 235A ExpEng, 373-7744.

The example to the right produced the plot shown on the next page.

M. Frisch, 376-1636

```
JOBNAME,CM55000.
USER,.....
MNF.
PLOT31.
7-8-9
PROGRAM PIE(INPUT,OUTPUT)
C*** THIS PROGRAM OUTPUTS A PIE CHART OF THE DATA SPECIFIED
C*** IN THE DATA STATEMENTS WITHIN.
DIMENSION IPAT(6,4),PERCNT(4)
DATA ((IPAT(I,J),I=1,6),J=1,4)/
1 07B,07B,07B,07B,07B,07B,
2 00B,77B,77B,77B,00B,00B,
3 63B,36B,14B,14B,36B,63B,
4 77B,77B,77B,77B,77B,77B/
DATA PERCNT/11.2, 45.7, 33.2, 9.9/
C*** INITIALIZE PLOT PAC SYSTEM
CALL PLOTS(1,1,11HPIC CHART ,20.0,3HPIC)
C*** OUTPUT THE SLICES OF THE PIE, ONE BY ONE.
P=0.0
DO 10 I=1,4
CALL SLICE(5.0,5.0,3.5,I/4,P,PERCNT(I),IPAT(1,I),6,6)
P=P+PERCNT(I)
10 CONTINUE
C*** TERMINATE PLOT
CALL PLOTS(-1)
END
SUBROUTINE SLICE(XC,YC,R,IF,P,PERCNT,IPAT,MH,MV)
C*** THIS SUBROUTINE PLOTS ONE SLICE OF A PIE CHART.
DIMENSION X(20),Y(20)
C*** COMPUTE STARTING AND ENDING ANGLES
A=P*3.1415927/50.0
B=A+(PERCNT*3.1415927/50.0)
DL=(B-A)/18.0
H=(A+B)/2.0
C*** COMPUTE VERTICES OF ARC.
OUT=0.0
IF (IF.NE.0) OUT=R/2.0
XCA=XC+OUT*SIN(H)
YCA=YC+OUT*COS(H)
DO 10 I=1,19
X(I)=XCA+R*SIN(A)
Y(I)=YCA+R*COS(A)
A=A+DL
10 CONTINUE
C*** SET LAST SEGMENT TO CENTER POINT
X(20)=XCA
Y(20)=YCA
C*** PLOT THE POLYGON
CALL POLYGN(X,Y,20,IPAT,MH,MV)
C*** PRINT PERCENTAGE.
X(1)=XCA+(R/2.0)*SIN(H)-.02
Y(1)=YCA+(R/2.0)*COS(H)-.02
X(2)=X(1)+4.0*.18+.04
Y(2)=Y(1)+.21+.04
CALL POLYGN(X,Y,2,0,1,1)
CALL NUMBER(X(1)+.02,Y(1)+.02,.21,PERCNT,0.0,4HF4.1)
RETURN
END
```



(continued from page 35)

ON THE REPORT FROM LIMITS, PRINT THE TIME LIMIT IN DECIMAL RATHER THAN OCTAL. THIS WOULD ELIMINATE SOME CONFUSION SINCE THE T PARAMETER ON THE JOB CARD IS IN DECIMAL.

S.E.:24FEB77

A fair request. We'll put it in the queue.

T. Lanzatella

WHEN AN OUTPUT FILE IS DIVERTED FROM A 1004 OR 2000 SITE, IT IS DIVERTED BEFORE A DISPOSE CARD CAN BE EXECUTED (I GUESS). THIS MEANS THAT YOU HAVE ROBBED ME OF MY DAYFILE AND I HAVE CURSED THIS THEFT SEVERAL TIMES. PLEASE IMPLEMENT A SOLUTION OR TELL ME WHAT I'M DOING WRONG.

D.K.:07MAR77

Auto divert takes place when you execute the DISPOSE control card. When you 'dispose' to your own site or any other site, if the output was diverted, you do get a page of output telling you where it is printing and where you should pick it up.

Auto divert also takes place when your job ends if the output file is longer than the limit for your site. When your job ends (if the file was too big and thus diverted), again you get a similar page of output.

I presume you are talking about the second situation. If this is true, your guess was wrong. If you dispose the big output before your job ends, then you would get a page of output for the 'disposed' output and also the normal output (the system creates one if there is no 'output' file) at the end of the job with the dayfile. This way you don't have to suffer "thefts of dayfile" any more.

N. Reddy

PLEASE LET PEOPLE KNOW HOW TO RUN THE COMPUTER IN THE SOCIAL SCIENCE BUILDING. TEACH THEM HOW IN THE INTRO CLASSES.

Do you mean the 1004 or the timesharing terminals? In either case, the answer to your question is the same. We have produced video tapes on the use and operation of the terminals. These tapes can be viewed at the Learning Resource Centers in Walter Library, Coffey Hall, Diehl Hall, and the Engineering Library.

R. Franta

IS THERE ANY WAY TO ELIMINATE THE LISTING OF A PROGRAM EACH TIME IT IS RUN? THIS WASTES PAPER AND TIME WHEN RE-RUNNING A PROGRAM WITH JUST A CHANGE OF DATA.

B.W.:01MAR77

MNF, FTN, and COMPASS all use L=0 to suppress the listing. PASCAL has a L- parameter to suppress this listing.

J. Mundstock

WHERE MAY I FIND DOCUMENTATION FOR THE LDC CONTROL CARD?

A.H.:17FEB77

The routine LDC is used exclusively by Telex to load the BASIC compiler. It has no useful purpose outside this and hence, is not documented in any CDC manual. We will eventually place an entry for LDC in the CONTROL writeup.

T. Lanzatella

AT 3:25 ON SATURDAY, I FOUND EVERY DOOR TO EXP ENG LOCKED. CAN'T YOU ARRANGE TO HAVE AT LEAST ONE DOOR UNLOCKED UNTIL THE CYBER 74 OPERATING HOURS ARE OVER?

D.B.:26JAN77

Our operations people will normally lock the doors only when shutting down at 4 PM on Saturdays. However, UCC does not have key control to the building; other departments occupy this building too. We would hope that this will not happen in future. If you find doors locked, please call 373-4596 and an operator will open the door for you.

R. Fleagle

THE CROSS REFERENCE LISTING GIVEN BY MNF DOES NOT INDICATE THE USE OF STATEMENT NUMBERS IN READ(END=SN,LU) STATEMENTS. WOULD IT BE POSSIBLE TO REFERENCE THE READ STATEMENT FOR SN?

G.B.

This deficiency (along with many others) has been corrected in the new version obtained by FETCH(MNF).

C. Schofield

PLEASE PROVIDE TIMESHARING TERMINALS FOR USERS AT LAUDERDALE. JUST FIX THE SYSTEM SO THAT WHEN THESE TERMINALS ARE LOGGED IN, THEY CHARGE USERS FOR RENTING THE TERMINALS AS WELL AS FOR CONNECT TIME. THESE TERMINALS SHOULD PAY FOR THEMSELVES. IT DOES NOT REQUIRE A COMMITTEE TO PUT A USER TERMINAL AT LAUDERDALE TO EARN A PROFIT TO HELP PAY THE OTHER EXPENSES OF RUNNING A STATE OWNED COMPUTER.

D.E.

This question has been answered before (September '76, August '76). We rent portable and free standing terminals to users. Please contact our Engineering Service Group (373-4877) if you need a terminal.

L. Liddard

YOU SHOULD HAVE MORE CONSULTANT HOURS ON SUNDAYS.

J.D.:07MAR77

We do increase consulting hours for periods of heavy activity. Sunday has always been light. If you feel that it is heavy, I would be glad to discuss this with you. See me in 232 ExpEng.

T. Hodge

MANY UNIVERSITY CENTERS OFFER A PERMANENT FILE FEATURE THAT I BELIEVE YOU SHOULD CONSIDER; A TYPE OF FILE THAT IS PURGED AUTOMATICALLY AT A PARTICULAR TIME, USUALLY AT THE END OF THE OPERATING DAY. THIS TYPE OF FILE IS USUALLY PROVIDED FREE TO ENCOURAGE ITS USE. USERS THEN MAINTAIN CURRENT COPIES OF THEIR FILES ON OTHER MEDIA AND BRING THEM ON LINE ONLY WHEN USED. IT DISCOURAGES THE ACCUMULATION OF LITTLE-USED AND NON-CURRENT COPIES. SOME LENGTH RESTRICTION MIGHT BE NEEDED AND YOU MAY WISH TO CONSIDER MAKING THESE SHORT TERM FILES THE DEFAULT TYPE FOR ALL PERMANENT FILE CREATION STATEMENTS.

J.L.:110CT76

Implementation of this 'one day' file is a rather large change within the system, the operations procedures and deadstart procedures. We feel that the disadvantages far outweigh the advantages and apparent need for this type of file. Therefore, we will not consider altering the system for this feature at the present time.

K. Matthews

YOUR USAGE STATISTICS ARE REALLY IMPRESSIVE. THE SEPTEMBER NEWSLETTER SHOWED APPROXIMATELY 65% OF ALL JOBS RUNNING ON SUPIO. I BELIEVE THERE ARE SOME 40 ODD 1004 SITES. DOES THIS MEAN THAT EACH 1004 READS IN 1.6% OF ALL JOBS? IT WOULD BE MORE MEANINGFUL IF THE LARGER 1004 SITES (PHYSICS, LAUDERDALE, ETC.) WERE BROKEN OUT SEPARATELY. IN THE CASE OF LAUDERDALE, IT WOULD CONCEIVABLY BE REALISTIC TO LUMP THE 1004 IN WITH THE LAUDERDALE CLASSIFICATION ALREADY IN USE. I REALIZE THAT THIS WOULD TOSS A MONKEY WRENCH INTO THE "EVICT USERS FROM LAUDERDALE" MOVEMENT. HOWEVER, IT WOULD MORE ACCURATELY REFLECT WHERE THE JOBS ARE COMING FROM. I AM ALSO CURIOUS ABOUT HOW YOU MEASURE MEAN TIME BETWEEN FAILURES. DOES THIS FIGURE REFLECT AVERAGE NUMBER OF RUNNING HOURS BETWEEN FAILURES OR THE AVERAGE TIME BETWEEN THE BEGINNING OF FAILURES. CLARIFYING THESE POINTS WOULD BE OF GREAT INTEREST TO ME.

P.N.:04JAN77

A breakdown of site by site SUPIO use is available in the system via WRITEUP. WRITEUP,RJDSTAT (yesterday), WRITEUP,RJMSTAT (any other day this month), WRITEUP,RJEMTOT (last month), or WRITEUP,RJE1976 (last year). These figures have been available for over a year and were announced in this publication.

R. Franta and R. Dykstra

KEYPUNCHES ARE HARD TO FIND AND ARE OFTEN BROKEN. IS ANYTHING BEING DONE TO ALLEVIATE THIS SITUATION?

D.F.:24FEB77

I HAVE STORAGE SPACE FOR CARDS IN EXP ENG AND HAVE JUST BEEN INFORMED THAT THE SHELVES WILL NOT BE AVAILABLE AFTER JUNE 1. I PREFER TO WORK AT EXP ENG AND NO LOCKERS ARE AVAILABLE AT THAT LOCATION. COULD YOU MAKE SPACE AVAILABLE OR MAKE RECOMMENDATIONS TO THOSE WHO NEED STORAGE SPACE THERE?

S.P.:15JAN77

These questions (plus many more) refer to the problem of space, or lack thereof, in ExpEng. We cannot "create" space. With so many conflicting needs, we have to make choices and have opted for using the space for user equipment. Thus, storage shelves for boxes of cards belonging to a few users have been replaced by keypunches used by many. More keypunches are needed on campus, especially in ExpEng. It will take some time to solve these problems. Meanwhile, we have observed that users will frequently not report faulty keypunches. Please report all the problems that you find to the I/O clerks for the ExpEng machines and Lauderdale machines, or to the site supervisors for the machines at the 1004 sites. Minor problems can be easily corrected; major problems will probably take a service call. With your cooperation, problems can be corrected faster.

R. Franta and T. Hodge

## S Y S notes

### PASCAL Users

On the 27 of March, current PASCAL became PAST, and FUTURE became current. The changes were described in the March issue of this newsletter. For a further explanation of the changes, get a copy of

WRITEUP(PASCAL=MEMORY)

The PASCAL document has been completely revised and all known inaccuracies have been corrected. This document has been converted to upper/lower case (for timesharing users) and is now an indexed WRITEUP. For a tables of contents, do

WRITEUP(PASCAL=CONTENT)

or, for the complete document, do a

WRITEUP(PASCAL=\*)

### Batch BASIC Users

As announced in the February newsletter, the batch BASIC compiler (UWM BASIC) was renamed BASICB. This change became effective on March 27. Current and FUTURE versions of BASICB are available. The current version is equivalent to the version previously accessed via FETCH.

### TYPESET Users

The latest version of TYPESET (version 5.0) was installed on March 15, replacing the previous version. See

WRITEUP(TYPENEW)

for a list of the differences.

PRODUCTION USAGE SUMMARIES

	<u>February, 1977</u>	<u>February, 1976</u>
<b>CDC Cyber 74</b>		
Number of jobs run plus MIRJE sessions	81,950 ( 95,171)	75,702 ( 86,533)
Central processor hours	148 ( 196)	120 ( 158)
Mass storage transfers (KPR)	165,192 (216,861)	141,078 (184,432)
Magnetic tape transfers (KPR)	4,868 ( 6,780)	4,318 ( 6,184)
Pages printed	744,419 (344,560)	771,346 (892,554)
Cards punched	335,563 (366,606)	546,267 (593,203)
Microfilm frames produced	43,513 (276,771)	35,071 (221,046)
Tapes mounted	8,161	7,433
Average file storage (1547M available)	802.6 million char	646.7 million char
Mean time between failures	35.6 hours	14.6 hours
Percentage available during scheduled hours	98.1 percent	97.1 percent
SUPIO availability during scheduled hours	95.2 percent	-
	(totals include staff development, accounting, and maintenance runs)	
<b>CDC 6400</b>		
Number of jobs run	164,199	206,714
Central processor hours	100	94
Terminal hours	22,190	24,273
Number of terminal sessions	42,895	50,155
Maximum number of simultaneous users	106	126
Average file storage	238.0 million char	181.1 million char
Mean time between failures	52.4 hours	38.4 hours
Percentage available during scheduled hours	99.1 percent	98.0 percent

CYBER 74 DOWNTIME SUMMARY : March, 1977

	<u>Monday-Friday</u> <u>0800-1800</u>	<u>other</u>	<u>total</u>
Total possible scheduled uptime hours	230.	314.	544.
Total downtime hours (see Schedule A)	5.3	5.9	11.2
Total uptime hours	224.7	308.1	532.8
Uptime percentage	97.7 percent	98.1 percent	97.9 percent
Average downtime per occurrence	31.8 minutes	27.1 minutes	29.1 minutes
Mean time between failures	22.5 hours	23.7 hours	23.2 hours
<b>Subsystem failures</b>			
SUPIO	53	19	72
TELEX	2	0	2
EXPORT	3	7	10

Schedule A: downtime hours

	<u>Number</u>	<u>Total hours</u>	<u>Average minutes</u>
(1) Preventive maintenance over-runs	0	0.0	0.0
(2) Software related problems	9	2.9	19.1
(3) Hardware related problems	8	7.8	58.4
(4) Indeterminate software/hardware problems	6	0.5	5.1
(5) External Problems	0	0.0	0.0

SUBMISSION SITE USAGE SUMMARY: TELEX EXCLUDED : March, 1977

submitted from	total jobs	%	pages printed	%	cards read	%
Lauderdale	3,514	5.4	358,179	27.8	1,692,187	13.7
ExpEng	7,583	11.6	254,860	19.7	2,992,224	24.3
West Bank	4,811	7.4	113,061	8.8	965,529	7.8
6400	1,550	2.4				
SUPIO	47,649	73.2	564,531	43.7	6,659,173	54.1
TOTALS	65,107		1,290,631		12,309,113	



MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
28 March (Winter Quarter begins)	29 March	30 March	31 March Introduction to UCC	1 April
4 April Beginning COMPASS	5 April Advanced FORTRAN	6 April Beginning COMPASS	7 April Advanced FORTRAN	8 April Beginning COMPASS
11 April Beginning COMPASS SNOBOL Introduction to S2000	12 April Advanced FORTRAN	13 April Beginning COMPASS SNOBOL Introduction to S2000	14 April Advanced FORTRAN	15 April Beginning COMPASS SNOBOL Introduction to S2000
18 April SNOBOL Introduction to S2000 KRONOS Control Cards COBOL	19 April Advanced FORTRAN  LISP	20 April SNOBOL Introduction to S2000 KRONOS Control Cards COBOL	21 April Advanced FORTRAN  LISP	22 April SNOBOL Introduction to S2000 KRONOS Control Cards COBOL
25 April KRONOS Control Cards COBOL	26 April Advanced FORTRAN  LISP	27 April KRONOS Control Cards COBOL	28 April Advanced FORTRAN  LISP	29 April KRONOS Control Cards COBOL
2 May KRONOS Control Cards COBOL	3 May LISP SPSS  Beginning FORTRAN (n)	4 May KRONOS Control Cards COBOL	5 May LISP SPSS  Beginning FORTRAN (n)	6 May KRONOS Control Cards COBOL
9 May S2000/PLI Intermediate COMPASS Programming Style	10 May SPSS  Beginning FORTRAN (n)	11 May S2000/PLI Intermediate COMPASS Programming Style	12 May   Beginning FORTRAN (n)	13 May S2000/PLI Intermediate COMPASS Programming Style
16 May Advanced S2000 Intermediate COMPASS	17 May Sort/Merge  Beginning FORTRAN (n)	18 May Advanced S2000 Intermediate COMPASS	19 May Sort/Merge ** USERS MEETING ** Beginning FORTRAN (n)	20 May Advanced S2000 Intermediate COMPASS
23 May Record Manager S2000/RW	24 May   Beginning FORTRAN (n)	25 May Record Manager S2000/RW	26 May   Beginning FORTRAN (n)	27 May Record Manager S2000/RW

Introduction to UCC : th, 2:15-4pm, 31 March, Mech. Eng. 18, RTF  
 Beginning COMPASS : mwf, 2:15-4pm, 4-15 April, Aero 215, JD  
 Advanced FORTRAN : tth, 2:15-4pm, 5-28 April, MinMet 104, RTF  
 Introduction to S2000 : mwf, 2:15-4pm, 11-22 April, ChEng 240, SPN  
 SNOBOL : mwf, 3:15-5pm, 11-22 April, Exp. Eng. 193, JPS  
 KRONOS Control Cards : mwf, 2:15-4pm, 18 Apr-6 May, Mech 18, RTF  
 COBOL : mwf, 2:15-4pm, 18 Apr-6 May, ChEng 154, JC  
 LISP : tth, 2:15-4pm, 19 Apr-5 May, VH 314, JH  
 SPSS : tth, 2:15-4pm, 3-10 May, Aero 321, SPY  
 Beginning FORTRAN : tth, 6-8pm, 3-26 May, Exp. Eng. 193, RTF  
 Programming Style : mwf, 2:15-4pm, 9-13 May, Aero 215, RTF  
 S2000/PLI : mwf, 2:15-4pm, 9-13 May, VH 314, JC  
 Intermediate COMPASS : mwf, 2:15-4pm, 9-20 May, Ford Hall 40, KCM  
 Advanced S2000 : mwf, 2:15-4pm, 16-20 May, Aero 321, SPN  
 Spring Users Meeting : th, 2:15-5pm, 19 May, Aero 225  
 Sort/Merge : tth, 2:15-4pm, 17-19 May, Lind H. 305, HK  
 Record Manager : mwf, 2:15-4pm, 23-27 May, MinNet 124, HK  
 S2000/RW : mwf, 2:15-4pm, 23-27 May, ChEng 50, JC

WRITEUP DOCUMENTS ( \* = new writeup)

26JAN77 ABCLIST Extended CATLIST utility.  
 26JAN77 AMEND Unit record manager.  
 26JAN77 APLUM APL interpreter.  
 28FEB77\*ARCHIVE PF dump/load utility.  
 26JAN77 BKP Breakpoint CP program.  
 26JAN77 BLANK Write initial label.  
 26JAN77 BLOCKER Write blocked stranger tapes.  
 26JAN77 CALLPFM FORTRAN permanent file routines.  
 26JAN77 CALLPRG Library search extension.  
 26JAN77 CATALOG Catalog a file.  
 26JAN77 CATLIST Catalog a permanent file.  
 26JAN77 CATLSYS Extended CATLIST utility (indexed)  
 26JAN77 CHANGER Extended CHANGE utility.  
 26JAN77 CIMSPL1 CIMS PL/1 user guide.  
 26JAN77 CKSPSS SPSS utility program.  
 08MAR77\*CONTROL Descriptions of control cards (indexed).  
 26JAN77 COPYL Cyber common utility; LIBEDIT.  
 26JAN77 COPYU Copy unit records.  
 22FEB77 COST Calculate job cost.  
 01FEB77 COUNTU Count unit records.  
 26JAN77 DELAY DELAY queue feature.  
 26JAN77 DISPOSE DISPOSE control card.  
 26JAN77 DIVERT Re-route large output files.  
 26JAN77 DMPCOR CM dump routine.  
 26JAN77 DMPECS Dump ECS.  
 26JAN77 DRESS Prepare source file for MODIFY and UPDATE.  
 26JAN77 DUMPPF Permanent file dump and load utility.  
 26JAN77 EISPACK Descriptions of EISPACK programs (indexed).  
 26JAN77 ERRMESS Dayfile error messages.  
 22FEB77 EXAMINE Determine magnetic tape contents.  
 26JAN77 FILES Manipulate local files.  
 26JAN77 FMT Text formatting program.  
 22FEB77 FOCAL FORTRAN calculator.  
 26JAN77 FORSUBS Description of FORTRAN sub-programs (indexed).  
 26JAN77 FUNPACK Description of FUNPACK programs (indexed).  
 26JAN77 GETSAVE PF utility.  
 26JAN77 HASH Change user index to job name and vice-versa.  
 26JAN77 ISIS Interactive statistics system.  
 26JAN77 ITEMIZE Cyber common utility; CATALOG.  
 26JAN77 KCL Control card processor.  
 26JAN77 LIBEDIT Library editing program.  
 26JAN77 LIBLIST Short descriptions of library files.  
 26JAN77 LIBRARY Description of library files (indexed).  
 01FEB77 LISP LISP information.  
 26JAN77 LIST30 LIST30 documentation.  
 26JAN77 L072 L072 documentation.  
 26JAN77 LPKODE LP/IP/MIP package.  
 26JAN77 MODIFY Source library editing program.  
 26JAN77 MODUP MODIFY to UPDATE conversion program.  
 04FEB77 MP Microplanner language.  
 26JAN77 PACKMS Pack random file.  
 27MAR77\*PASCAL PASCAL information file (indexed)  
 27MAR77\*PASCLIB PASCAL library information.  
 01FEB77 PFCOST Estimate PF costs.  
 26JAN77 PFGUIDE Permanent files user's guide.  
 26JAN77 PFILES Permanent files request processor.  
 26JAN77 POLISH Edit ANSI FORTRAN modules.  
 27JAN77 PROCPAC Reference for calling system routines.  
 19MAR77\*PSEUDO COMPASS pseudo-instructions.  
 26JAN77 PURGER Extended PURGE utility.  
 26JAN77 REBLOCK Converts "S" AND "L" tapes to internal.

26JAN77 REFORM Sequence/desequence T/S source lines.  
 27JAN77 RIGHTUP How to use WRITEUP.  
 26JAN77 RJECOM Remote job entry commands.  
 26JAN77 SEND Send files to the 6400.  
 26JAN77 SNOINFO CAL 6000 SNOBOL.  
 26JAN77 SNPSHOT Write/restore registers and dump.  
 23FEB77 SORTOPL MODIFY sorter.  
 26JAN77 SQUEEZ Squeeze COMPASS listings.  
 26JAN77 STRATEN Straighten COMPASS source lines.  
 09MAR77\*SUBMIT Submit job to input queue.  
 26JAN77 SYSLIB SYSLIB documentation.  
 26JAN77 TAPES Tape library manager.  
 22FEB77 TAPEUSE Tape user's guide.  
 26JAN77 TDUMP Dump a file.  
 26JAN77 TEKLIB Library for TEKTRONIX terminals.  
 26JAN77 TESTCR Card reader testing routine.  
 26JAN77 TESTLP Printer and line test program.  
 26JAN77 TIDY Tidy FORTRAN source lines.  
 15MAR77\*TYPENEW TYPESET changes.  
 15MAR77 TYPESET Text reformatting program.  
 26JAN77 UNPAGE Edit carriage control characters.  
 26JAN77 XEDIT Extended interactive text editor.  
 26JAN77 1004INT 1004 operating instructions.  
 26JAN77 1004SET 1004 character set conversion.

WRITEUP FILES WITH ROUTINELY CHANGING INFORMATION

AFmmyy Lists of archived files; mmm=month, yy=year.  
 CONSULT Consulting sites and hours.  
 DOCLIST List of documentation and publications sources.  
 HOURS Operating hours.  
 NOTE T/S system notes.  
 PREVIEW Preview display dump.  
 PTRFORT List of FORTRAN bugs.  
 PTRKR List of operating system bugs.  
 PTRMISC List of miscellaneous software bugs.  
 PTRSTAT List of statistics packages bugs.  
 PTRS2K List of System 2000 bugs.  
 RJDSTAT Daily SUPIO statistics.  
 RJEJTOT Monthly SUPIO statistics.  
 RJMSTAT Cumulative SUPIO statistics.  
 SITEBIN Output shelf locations.  
 SYSMODS Latest system changes.  
 TSTATS Tape mounting statistics.

UCC PUBLICATIONS.

BMDP: local modifications (1976)  
 CAL 6000 SNOBOL (1975)  
 FOR THE NEW USER: A Complete Guide (1976)  
 IMP - An OMNITAB Minitc (1976)  
 \*Index to Subprogram Libraries (1977)  
 Instructor's Guide to Batch Computing (1976)  
 Introduction to OMNITAB II (1974)  
 ISIS User's Manual (1976)  
 LISP at the University of Minnesota (1974)  
 MF501: a microfilm printing routine (1977)  
 MINN subprogram writeups (see "Index")  
 MIX at the University of Minnesota (1974)  
 MNF Reference Manual (1976)  
 PRNTPLT: a PASCAL plotting routine (1976)  
 SNOBOL4 at the University of Minnesota (1976)  
 \*SPSS 6.5: local implementation and extensions  
 SPSS/ONLINE (1976)  
 Student Guide to Batch Computing (1976)  
 System 2000 User Aids (1,2,3,4)  
 S2KIND (S2K procedure file) (1975)  
 Timesharing Guide to Computing (1975)  
 JCC Instant (1976)  
 JMTIMER (1975)  
 Univac 1004 Operating Instructions (1975)  
 UNPAGE (1975)  
 UVM BASIC at the University of Minnesota (1975)  
 VIEW: TEKTRONICS graphics (1976)  
 XEDIT 2.1.6: an extended text editor (1976)



## For Sale

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Health Computer Sciences has a Centronics Model 500 printer for sale. New; it has an EIA interface for phone-line connection. Prints a full 132 column page. Original purchase price was \$3300. For information, call Allen Moore, 373-0335.

### ANOTHER VIDEO TAPE:

A VIDEO TAPE TOUR OF THE LAUDERDALE FACILITY IS NOW AVAILABLE AT THE LEARNING RESOURCE CENTERS IN WALTER LIBRARY, DIEHL HALL, ENGINEERING LIBRARY, AND TEMPORARY SOUTH OF COFFEY.

## NEW SHORT COURSE

A short course in computer programming will be offered at the:

Upper Midwest American Indian Center  
1113 West Broadway Avenue  
Minneapolis, Minnesota

The course, covering the fundamentals of using a computer and the use of the BASIC programming language, will be taught by a UMIA Center staff person. Interested people should call Calvin Holuptzok at 522-4436. The schedule is to be arranged.

RETURN TO  
UNIVERSITY COMPUTER CENTER  
227 EXPERIMENTAL ENGINEERING  
UNIVERSITY OF MINNESOTA  
208 UNION STREET SE  
MINNEAPOLIS, MINNESOTA 55455