University Computer Center NEWSLETTER

Director: Peter C. Patton

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CONTENTS

DEADLINE FOR THE AUGUST NEWSLETTER IS JULY 24. READERS ARE WELCOME TO CONTRIBUTE ARTICLES.

MAGNETIC TAPE COSTS INCREASE:

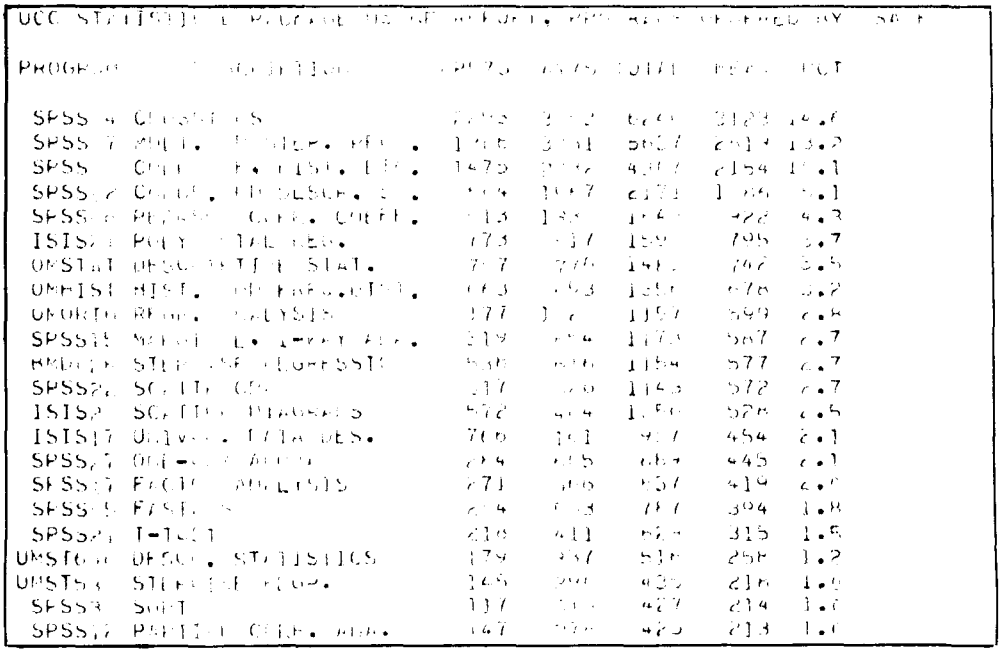
DUE TO INCREASED COSTS OF MAGNETIC TAPES, THE FOLLOWING PRICES WILL BE EFFECTIVE AS OF JULY 1, 1975:

600 FOOT TAPES	$10.00
1200 FOOT TAPES	$13.00
2400 FOOT TAPES	$16.00

STATISTICS PROGRAMS news

UCC STATISTICAL PACKAGE USAGE --*by R.L. Hotchkiss*

Users of statistical programs are perhaps the largest single identifiable UCC user group. Many of these people use the UCC-supported statistical systems SPSS, OMNITAB, and ISIS, or programs from the BMD and UMST packages. We collect data on the routines used so that the statisticians can know what routines are being used and, for ourselves, so that we may place highly used programs on the disk and lesser used programs on magnetic tape. For your information, we present here a list of program usages for April and May. Because the list is long, we show only the top 85% of the list. On the left is the name of the program or overlay used and an abbreviated description of the program.



SPSS VERSION 6.0 --*by S.P. Yen*

A new version of SPSS, Version 6.0, has been received and will be available in the near future. (The NONLINEAR REGRESSION routine in this version is not yet implemented.) The actual implementation date will be announced in SYSNOTES. To access this new version, use the following control cards:

```
FUTURE,SPSS.
SPSS.
```

The primary document for SPSS Version 6.0 is SPSS: Statistical Package for the Social Sciences (McGraw-Hill, 2nd edition, maroon cover). All differences between this standard manual and the UCC version are documented in a writeup available in 140 Experimental Engineering.

ARTHUR SUPPORT CHANGED --*by M.J. Frisch*

The support level of the pattern recognition program, ARTHUR, has moved to Level 3 (low usage and maintained by a group outside UCC). Professor Claus Liedtke of the Health Computer Science faculty is now responsible for the program. Questions should be directed to him in Room V371 VFW Cancer Research Center, or call 373-0327.

NEW VERSIONS

--*by H. Kurs*

COBOL 4.3 and SORT/MERGE 4.2 are now available for experimental use. These new products make use of Record Manager. Record Manager promotes file compatibility between these languages and makes a wide variety of record types, blocking factors, and access methods available to the user. COBOL 4.3, SORT MERGE 4.2, and Record Manager will remain experimental software until September 1, 1975. At that time, they will become the standard, supported versions.

For more information about these Version 4 products, see the May 1975 UCC Newsletter.

MNF ptr's

--by B. Stahl

With the change of MNF versions (FUTURE to current, current to PAST) at the end of spring quarter; these bugs are now fixed in the current version:

(1) A program containing many overlays may get a CPU error exit 1.
(2) A variable in an ASSIGN statement does not have storage allocated when it is not used in the program.
(3) When a FORTRAN program or subprogram is contained on one line, it is lost.
(4) The first card following a COMPASS subroutine is not printed on the listing.
(5) The C parameter in the OVERLAY statement is lost.
(6) Undefined variable values are not relocated.
(7) A subscript which is a dimensioned variable name causes a CPU error exit 1 at compilation time.
(8) More than 61 common blocks defined but not in the same subprogram gets a spurious error message.
(9) The program unit decimal length statistics at the end of the compilation output are sometimes inaccurate.
(10) A common block which requires too much core will get no message in the main program. In subroutines, a fatal error, COMMON BLOCK LENGTH EXTENSION ILLEGAL, occurs.
(11) The statement WRITE(+,1), when the unit number is non-numeric, gets compile-time errors.
(12) An unrecognizable FORTRAN statement embedded in a multiple statement card is not detected.
(13) Program execution will occur when there is a fatal error in a COMPASS subroutine.
(14) A subroutine called with more arguments than were used in a prior call will get a fatal error.

The latest information on current software bugs is available by using the control card WRITEUP,PTRLIST (135 character width) or WRITEUP,PTR (70 character width). Anyone finding bugs in the software should take the time to fill out a PTR Report (orange card) which is available from a consultant or from the I/O stations, so that the bugs can be reported to other users and corrected.

SPECIAL LANGUAGE PROCESSORS

--by A.B. Mickel

PASCAL PROJECT PERKING

This summer, UCC plans to make some minor improvements to the PASCAL compiler features (these do not include changes to the language). New versions of the compiler resulting from this project will be placed under FUTURE,PASCAL. The current version of PASCAL *will not* be changed during the summer.

This summer project, spurred by the Computer Science department's announced intention to use PASCAL in its curriculum, will try to accomplish these goals:

(1) Provide a compile-time error message summary at the bottom of the listing (as did the old compiler).
(2) Investigate reducing the compiler size (memory requirement).
(3) Create a MIRJE subsystem for PASCAL to make timesharing PASCAL more convenient.
(4) Investigate the possibilities of installing a value initialization facility such as that which existed in the old compiler.
(5) Make available the support programs PSCXREF and SPRUCE.
(6) Produce better local documentation.

At the present time a FUTURE,PASCAL exists which incorporates several recent updates from Wirth's group in Zurich. Among these changes are:

(1) Segmented files of text are now allowed.
(2) The procedures READ and WRITE are extended to handle files of any type, not just textfiles.

SNOBOL CHANGES PLANNED

During the summer, work will be done on Colorado Snobol to take advantage of hardware integer multiply and to dump the OUTPUT buffer on aborts.

The long awaited writeup "SNOBOL4 at the University of Minnesota" will also be produced during the summer.

NEW EQUIPMENT

--by L.A. Liddiard

Assuming that the delivery schedule holds up, we will receive more Cyber 74 memory on July 18. It will be installed that weekend, giving us a grand total of 131K memory. We are also scheduled for the 9-track tape units on July 25 and will use them initially for system and file dumping. A short writeup on the use of 9-track tapes will appear in the August UCC Newsletter. A complete document on the use of magnetic tapes is scheduled for publication this fall.

COMPUTER DOWNTIME SUMMARY

MAY 26 THROUGH JUNE 25, 1975

Total possible scheduled uptime hours	536	
Total downtime hours (schedule A)	36.12	
Total uptime hours	499.88	
Uptime percentage	93.26	%
Average downtime per occurrence	25.79	minutes
Mean time between failures	5.95	hours

Schedule A: breakdown of downtime hours

	number of occurrences	total hours down	average minutes downtime
1) Preventive maintenance over-runs	2	.3	9.
2) Software related problems	15	5.7	22.8
3) Hardware related problems	4	1.4	21.25
4) Indeterminate software/hardware problems	63	28.7	27.33
5) External problems	0	0.0	0.0

NOTES:

We have two indeterminate problems yet unsolved that are the cause of most of our downtime. We have not yet solved why the disk packs are being wiped out nor have we solved our new "SCOPES BLANKING" problem. The Customer Engineers and Systems people are working on these problems feverishly. The disk problem, although not solved, is under control and should not be a problem to users in the future.

(R. Dykstra)

DOCUMENTATION / PUBLICATIONS

The writeup for M2 MINN CHECK has been revised, printed, and is now available in 140 Experimental Engineering.

The writeup for J5 MINN PRNPLOT has been revised, printed, and will soon be available in 140 Experimental Engineering.

The writeup for J5 MINN PLOTPAC has been revised (it now includes information on using the FR-80 microfilm plotting facility), printed, and will soon be available in 140 Experimental Engineering.

The SPSS 5.8 update has been reprinted and is again available in 235a Experimental Engineering.

A preliminary document describing SPSS 6.0 variations from the reference manual has been printed and is now available in 140 Experimental Engineering.

A writeup describing the CTAB procedure (which has been incorporated into SPSS 5.8) has been printed and is now available in 140 Experimental Engineering.

The SORT/MERGE3 to SORT/MERGE4 Conversion Guide has been printed and will soon be available in 235a Experimental Engineering.

A writeup describing UNPAGE is now available in 140 Experimental Engineering. This is a one page abbreviation of the writeup available via WRITEUP,UNPAGE.

The Index to Cyber 74 User Software has been revised, printed, and will soon be available again in 140 Experimental Engineering.

A new version of the Control Card Index to Documentation has been produced (updated to July 1). To obtain a copy, use the control card WRITEUP,CCINDEX.

Copies of the above writeups may also be obtained by calling the UCC Reference Room, 373-7744.

RJE news

NEW INFORMATION WRITEUPS AVAILABLE --*by R.T. Franta*

Three new files have been added to the WRITEUP index which should be of interest to RJE users. These are TESTLP, RJECOM, and 1004SET. Copies can be obtained through the normal WRITEUP procedure.

(1) TESTLP describes a new program which is intended to serve as a test of any medium speed RJE terminal printer and telephone equipment.
(2) RJECOM is an updated description of the system commands which can be used from RJE sites. Of special interest is the new LENGTH command which can be used to determine the amount of output left to be printed for the job currently printing.
(3) The 1004SET writeup gives a complete description of the character code conversions enforced on the Univac 1004 terminals. Users should please note that this writeup supercedes all previously published documentation on code conversion.

Very shortly, another writeup called TESTCR will be added to the WRITEUP file index. This writeup will describe a new program designed to test RJE terminal card readers.

PAPER AND CARD RECYCLING --*by R. Fleagle*

Scrap cards and scrap computer output paper may be recycled as follows:

(1) Small amounts may be dropped in the barrels and boxes at the terminal sites. Please keep foreign matter (rubber bands, lunch bags, coffee cups, etc.) out of these recycling receptacles because the pick-up people *will discard everything* if they find garbage mixed in with the paper.
(2) Larger amounts may be brought to Lauderdale for pickup IF they are boxed correctly; that is, no rubber bands on the cards, paper packed neatly, paper and cards boxed separately.
(3) Large amounts may also be accumulated by individual departments and then Property Accounting (373-2118) may be called for pickup. Either Jim Kelly or Al Wagner at the above number will answer questions about guidelines for recycling pickups.

The University has a contract in effect for selling scrap materials. If a department has enough scrap paper and cards, it may benefit by selling its scrap. Again, call Property Accounting to see if this would be advisable.

UNIVAC 1004 CIRCUIT RIDER --*by R.T. Franta*

As 1004 users were promised in the past, a UCC technician is now making a weekly circuit of the Twin Cities campus 1004 sites. He will be checking the terminal operation, keypunch, supplies, updating documentation and posting signs at each location. If you have any comments or suggestions about improving this service, please call Richard Franta at 376-3963 or talk to the circuit rider, Greg Jensen, during his regular site visits.

UNIVAC 1004 PRINTING OPTION --*by R.T. Franta*

The PM printing option, which is presently in use at the CDC 200UT terminals, will be added to the Univac 1004 communications system on August 1, 1975. This "PM" option is used to facilitate the printing of special forms or labels on the terminal.

The 1004 PM option will work as follows:

(1) Whenever a print line containing the characters "PM" in columns one and two is encountered on output, all 1004 action (read and print) will stop.
(2) The line with the PM is printed and the paper is advanced 7 lines.
(3) At this point, the user may put in special paper, labels, or whatever.
(4) In order to have the job continue printing, turn off switches 1, 2, 3, and 4.
(5) Wait 15 - 20 seconds.
(6) Turn on switch 1 and printing will start again, OR turn on switch 2 to continue card read and then switch 1 to start to print.

Users of the open-shop 1004 sites will have no use for this option since special paper is not allowed at these sites. Therefore, open-shop 1004 users should be careful that accidental usage of the "PM" does not occur in their printouts.

CLASS INSTRUCTORS

If you would like to have a member of the UCC staff come to your classroom and give an "Introduction to the Computer" lecture (oriented specifically toward your usage), please call Richard Franta at 376-3963, or Thea Hodge at 373-4599, sometime before September 1, 1975.

THE SUGGESTION BOX

Q/S *I would like to suggest that UCC prepare documentation of PASCAL and LISP, since none is available now.* (5/19/75)

A Your are right! I have been guilty, perhaps from being too concerned about converting binaries when going to KRONOS last fall, and not concerned enough about documentation. I'd like to point out that a local document does exist for PASCAL. Use a WRITEUP,PASCAL. control card. Writeups for LISP and SNOBOL will be produced this summer. (A. *Mickel*)

Q/S *I think the STATOS 31 plot contest is a subversive plot to consume money! Seriously, is there going to be a cheap way to plot? Plots are important!* (5/30/75)

A Seriously, the purpose of the great STATOS plot contest is simply to encourage Statos plotting since, to some extent, 'cheap' plotting depends on the volume of plotting. Since 'cheap' plotting also depends on the software, we have improved that. See page 2 of the June UCC Newsletter.
(R. *Hotchkiss*)

Q/S *I want to congratulate the author of the DRESS writeup. Finally you have realized that a writeup for a program of this type must do more than give the values for the various parameters but also to educate the potential user in the philosophy and various ways that the program might be used. It seems to me that most users, if just presented with the 'bare bones' writeup would fail to grasp where and why to use DRESS. So, I am very happy to see this and I hope that this portends further efforts in this style.* (5/19/75)

A If this comment intrigues you, include the control card WRITEUP,DRESS. in your deck. You will get a copy of this literary masterpiece and find out who the author is -- "Who was that masked (bearded) man? I wanted to thank him." (R. *Hotchkiss*)

Q/S *Make computer cards available in Experimental Engineering's candy machine, much like at Lauderdale.* (5/19/75)

A We have contacted University Vending Services and they agreed to consider putting a vending machine in Experimental Engineering that will vend computer cards. (R. *Folden*)

Q/S *How about posting a listing of the multi-punch codes for the special characters at each keypunch location (Lauderdale especially). Try to have someone check these occasionally since posted notices tend to disappear readily or become damaged. Also, a listing of codes for program cards would be helpful for reference. SSRFC has some posted which are both complete and easy to understand.* (5/19/75)

A This will be done by the circuit rider who starts work on July 1. This circuit rider will be doing a thorough check on each site on a weekly basis. (R. *Franta*)

Q/S *The addition of two-character dummy parameters on the MNF (and other control cards perhaps as well) would be very useful to the user of procedure files. The TELEX user usually does not want a program listing and so would have a procedure file XYZ written thus:*

```
      :
      :
MNF,I=PGRM,B=SAM,LL=BOB.
      :
      :
```

and the normal calling sequence would be -XYZ, with MNF treating LL as a dummy parameter and giving L the usual default value. However, the call -XYZ(LL=L) would cause the procedure file to execute as

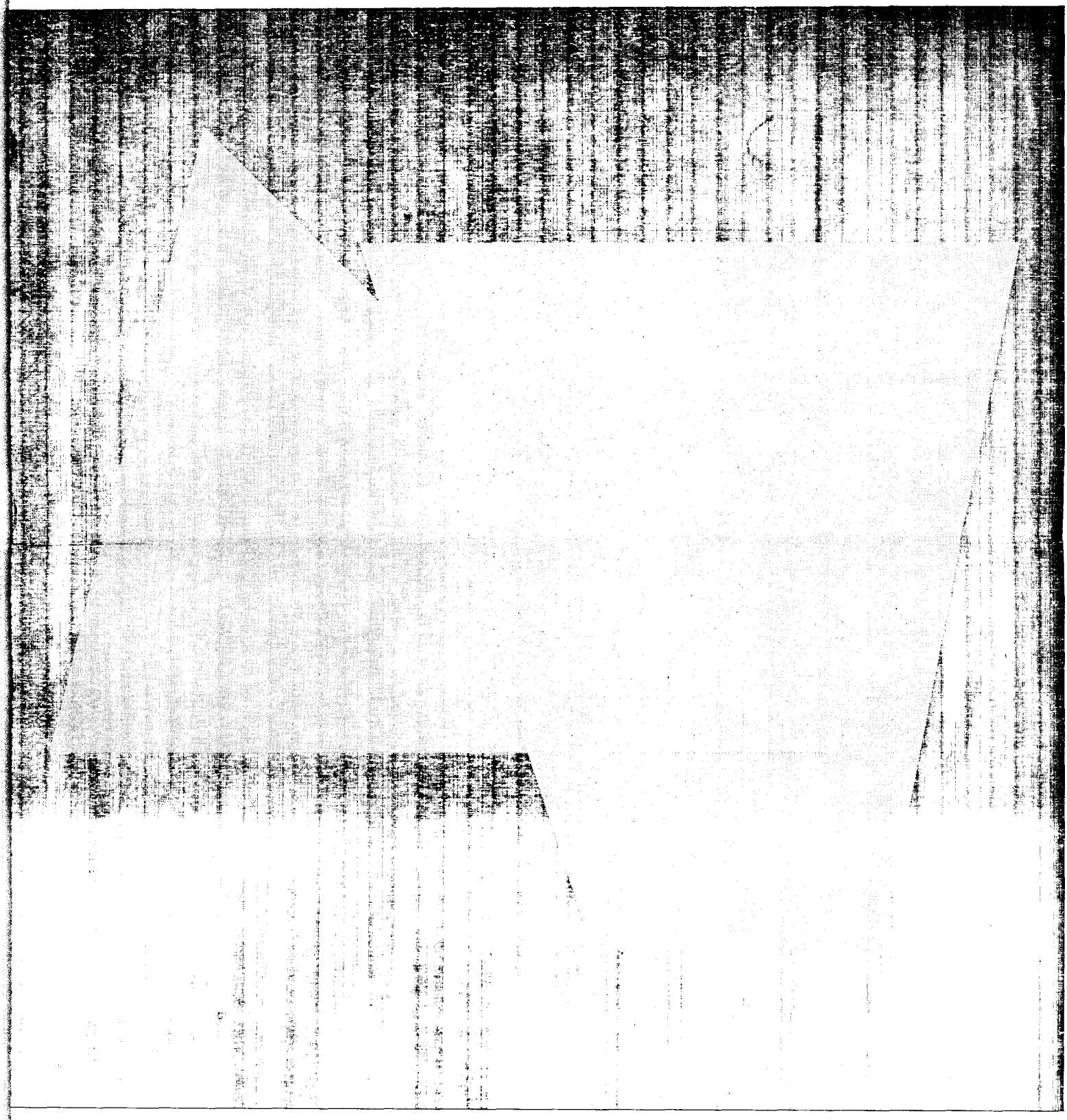
```
MNF,I=PGRM,B=SAM,L=LIST.
```

and cause a listing to be sent to file BOB.

This would be a considerable convenience, especially when debugging and testing programs. The TRACE parameter would be especially useful if it could be turned off by specifying TT on the card and then turning it back on as needed by the renaming feature of procedure files. (4/21/75)

A The KRONOS job control language is flexible enough to make dummy parameters unnecessary. You can check for origin types, change control cards, etc., by using KCL. (L. *Liddiard & B. Sackett*)

WINNER OF THIS MONTH'S PLOTTING CONTEST IS DAVE MESSER, I.T. UNDERGRADUATE, WHO USED A PASCAL PROGRAM TO GENERATE THE PLOT.



SHORT COURSES

ADVANCED FORTRAN: July 23,25,28,30, August 1,4 (2:30 - 4:25 PM in room 225 Aero)
SYSTEM 2000
REPORT WRITER : July 14,16,18 (2:30 - 4:25 PM in room 225 Aero)
*RECORD MANAGER : July 8,10,15,17,22,24,29,31 (2:30 - 4:00 PM in room 15 Architecture)
GRAPHICS : July 14,15,16,17,18 (1:25 - 2:15 PM in room 309 Aero)
**SPSS
(2nd session) : August 5,7 (2:30 - 4:25 PM in room 225 Aero)

*Room has been changed from original schedule.
**Days have been changed from original schedule.

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