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5-21-1976

# User Services External Report

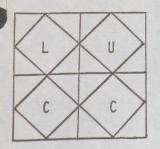
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User Services

ES **L**XTERNAL

REPORT

#### LEHIGH UNIVERSITY COMPUTING CENTER

CDC 6400 (CM65K, ECS125K, SCOPE 3.4.3), VARIAN 620/f

May 21, 1976

#### Packard Lab Renovations

Renovations to Packard Laboratory necessitate the following operational changes this summer:

- (1) Keypunches, including the Univac interpreting keypunch, will be relocated in Room 262 of Packard Laboratory.
- (2) The input and output windows will be closed and the input/output bins moved into the hallway opposite Room 104 Packard Laboratory. During the construction period, operations personnel will dispatch all input and output to and from the computer room.
- (3) Consulting services will be transferred from Packard Laboratory to Taylor Hall.
- (4) The hours of attended operations will be expanded at the Taylor Hall Remote Batch Site. Taylor Hall input/output limits will be raised for the summer months.

The construction this summer will permit major improvements to the users' area in the next few years. We urge our users to make maximum use of the Taylor facility and avoid Packard Laboratory whenever possible. We regret any inconveniences that our users may face, and we urge all users to refer frequently to CCNEWS for exact details on changing services in the coming months.

#### Undergraduate Computer Consultants Program

As part of its new Undergraduate Computer Consultants Program, the Computing Center plans to offer two minigrants for the advancement of instructional computer use. The grants are available for the Fall semester 1976. Instructors are urged to consider submitting proposals for these grants.

The intent of these grants is to assist those instructors who wish to explore new and varied applications of computing in their academic disciplines. These grants are aimed at instructors who: (1) desire to initially develop or further advance their knowledge of computing, and (2) wish to apply this knowledge to their course related work.

The grants themselves will be limited to a maximum of one hundred fifty dollars (\$150.00) for an academic semester. The grants will be awarded on a three to one matched dollar basis. An instructor seeking a one hundred fifty dollar grant would be required to obtain an additional fifty dollar financial backing from his or her academic department.

The Computing Center will assign an undergraduate consultant to each project that is approved for funding. The grant money will then be applied to payment of the consultant's time. The undergraduate consultant will work with the faculty member in developing courseware, automating laboratory data collection techniques, structuring computer-related assignments and projects, or other areas that are approved for funding.

Projects that are proposed for funding should be long-range in nature. The methods and materials that are developed with grant funds are expected to be applied to classroom and laboratory activities in the semesters following the period of funding.

Proposals submitted for funding will be reviewed by the Education Subcommittee of the Computing Center Advisory Committee. The proposals will be reviewed in light of their uniqueness and their overall contribution to the instructional process at Lehigh.

Instructors interested in this program should contact Hugh J. McFadden, Educational Coordinator, at extension 603.

#### FROM THE LIBRARIAN

Modified Programs

• REQMEM - Request Central Memory

An option has been added to REQMEM to permit the user to obtain the maximum field length available as defined by the authorization's current (prime, non-prime, off-hours) limits, or the job card CM parameter.

MPOS - Multi-Purpose Optimization System

MPOS has been updated to Version 2.2. This update reflects the following changes:

- 1. A Mode 1 error will no longer occur if the wrong sequence of characters is encountered as input.
- 2. A constant dangling at the end of a constraint line will now be flagged as an error.
- 3. Separating a coefficient from its variable name, in a term, is no longer flagged as a fatal error.
- 4. An absolute check against the tolerance has been added to the \*REGULAR\* SIMPLEX.
- 5. The efficiency of the \*REGULAR\* SIMPLEX has been improved.
- 6. The language processor which detects the occurance of a constraint appearing at the end of an objective function has been corrected.
- 7. The \*REVISED\* SIMPLEX has been corrected to compute a solution to problems that contain a variable which: (1) appears in the objective function, (2) has a finite bound, and (3) does not appear in any constraint.

IOSTAT - I/O Functions for RUN

Three functions have been added to the RUN (FORTRAN) object library to provide additional compatibility between the FTN and RUN compilers. These functions are EOF, IOCHECK and UNIT. The RUN \*IF-CHECKS\* may now be redefined as follows:

OLD FORM (RUN Compatible)	NEW FORM (RUN & FTN Compatible)
IF(EOF,IUNIT) n1,n2	IF(EOF(IUNIT).NE.0) GO TO n
IF(IOCHECK,IUNIT) n1,n2	IF(IOCHECK(IUNIT).NE.O) GO TO n
IF(UNIT,IUNIT) n1,n2,n3,n4	IF(UNIT(IUNIT)) n1,n2,n3

The alternative approach to the IF-END-OF-FILE check is acceptable to the FTN, RUN, RUNT and RUNW compilers. In the form: IF(EOF(IUNIT).NE.0) GO TO n, the EOF check returns a zero if the end-of-file has <u>not</u> been read, and a non-zero value if the end-of-file is encountered.

When the IF(EOF(IUNIT))n1,n2 or IF(IOCHECK(IUNIT))n1,n2 forms are used with the RUN, RUNT, and RUNW compilers the informative compiler diagnostic: WARNING - LOGICAL IF STATEMENT SHOULD CONTAIN A LOGICAL EXPRESSION, LOGICAL VARIABLE OR LOGICAL CONSTANT... is generated. This diagnostic can be ignored as it has no effect on program compilation or execution.

• LEAPS - Lehigh Amalgamated Package for Statistics

(G00011)

(J90045)

(060018)

(H10004)

(Z00010)

The ISIS random number generator has been installed in the URAND and NRAND tasks, correcting errors previously reported in these tasks.

The only change in the use of these tasks is in the specification of the START parameter. If a starting value is specified, it must now be given as a floating-point whole number greater than zero.

SENATOR - Interactive Text Editor

SENATOR is now available with full editing capabilities installed. Documentation on the edit features is available from User Services, Room 119, Packard Lab.

With the release of the latest cycle of SENATOR, SENPAST (SENATOR Version 1.) was dropped from the system.

Remember, SENATOR is scheduled to replace EDITOR, PREFOR, and PREBAS on July 1, 1976 as the Computing Center's only text editor.

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RANOVER/RANLOAD - Random Overlay Creation/Loading

(060019 - 20)

A new version of RANOVER and RANLOAD was made available on April 7, 1976. The changes to RANOVER and RANLOAD are not upward compatible. RANOVER and RANLOAD now dynamically allocate field length.

A new copy of RANLOAD may be obtained from the Data Processing Librarian, Room 119 Packard Lab.

#### Other Modifications and Changes

\*\* The SCOPE operating system has been modified such that abnormal terminations, with the exception of Mode errors, now cause the contents of the P-register and the field length (FL) at the time of the program stop to be dayfiled.

For example: PP CALL ERROR P=001406 FL=057500

\*\* The SEND, \*\*\* feature (SEND to all terminals) has been removed from the system.

\*\* An optional fourth parameter has been added to LOGIN to permit SIGN-ON procedures to be overridden. This parameter is the password specified on the SOP when created. If a password was not specified on SOPUP, the procedure can be overridden by placing double commas at the end of a suppressed LOGIN.

For example:

LOGIN, USERNAME, PASSWORD, , QQ

where: QQ is the password on the SOPUP

- or -

LOGIN, USERNAME, PASSWORD,, where: no password was specified on the SOPUP

\*\* COMPASS 2.0 has been dropped from the system, since FTN 3.0 has been modified to call COMPASS 3.0.

\*\* The SCOPE Index Sequential (Version 1) utilities (BUFDEFN, CREATE, DUMPC, DUMPR, DUMPS, ESTMATE, RELOADER, and SISTAT) no longer require the use of the LIBRARY(SYSMISC) control card. The names of the SCOPE Index Sequential (Version 2) utilities ESTMATE and SISTAT have been changed to ESTMAT2 and SISTAT2 to avoid conflicts with the more frequently used SIS Version 1 utilities.

- \*\* SORT/MERGE has been modified to:
- 1. Not request operator action for a non-existent output file.
- 2. UNLOAD its scratch files when completed.
- 3. Process end-of-line correctly.

#### Soon to be Available

- ... On July 1, 1976 a RUN and RUNT callable version of the IMSL subroutine library will be available on a permanent file named IMSLR.
- ... On July 1, 1976 the Control Data Corporation's FORTRAN (RUN 2.3) compiler will be dropped from the system. Thereafter the RUN control card will access the University of Washington's FORTRAN compiler - RUNW.
- ... On July 1, 1976 SENATOR will be available on-line. Users will no longer be required to ATTACH(SENATOR) before entering the utility.
- A new COBOL execution error handling procedure will be installed on July 1, 1976. With this new procedure, users will be able to specify the number of execution time errors that will be permitted before the run is aborted. This applies to those errors that currently require operator action; e.g., NON-NUMERIC IN FIELD TO BE EDITED. The number of errors permitted will be specified as an EE (error count) option on the execution control card; e.g., LGO,EE=5. where five execution time errors will be permitted. The default value for EE will be zero.

Existing relocatable COBOL object programs need not be recompiled to take advantage of this feature.

#### Soon to be Unavailable

- ... Effective June 1, 1976 the COPY29 utility will be dropped from the system. Users may select 029 punch format on the ROUTE control card, therefore COPY29 is no longer needed.
- ... 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's 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 Computing Center strongly suggests that anyone now using a routine from the SSP library consider finding a substitute in the IMSL package. You may contact User Services for assistance in this matter. (Reprinted from the Brown University Newsletter - March 15, 1976)

SSP users should note that effective July 1, 1976, the Lehigh Computing Center will drop the SSP package to Category 5 support. At Category 5, this package will not be supported; reported errors will be documented but <u>not</u> corrected.

Effective January 1, 1977, the SSP package will be dropped from the system. Source decks of the IBM SSP routines will be made available to users upon request.

#### POLICY AND PROCEDURAL MATTERS

#### Usage Statistics

	February	March	April
Total Batch Jobs Processed	46,399	45,553	45,045
Central Site	26,383	28,394	29,633
Student RJE (Taylor Hall)	15,989	12,171	8,836
Others	4,127	4,988	6,576
Interactive Terminal Sessions	11,818	10,373	12,811
Total C.P. Time Utilized (Hours)	174.92	200.03	208.08
C.P. Hours Batch	139.67	161.98	161.36
C.P. Hours Interactive	35.25	38.05	46.72

#### Technical Bulletin #6

The Computing Center has released its sixth technical bulletin: Guide for Magnetic Tape Interchange.

The intent of this document is to familiarize the user community with standards that should be followed when exchanging magnetic tapes with another installation.

Copies of LUCC Technical Bulletins may be obtained from User Services, Room 119 Packard Lab. A listing of available technical bulletins may be obtained using the SYSBUL\_,DOCMNTS control card/command.