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# User Services External Report

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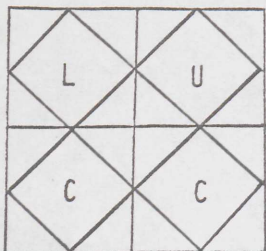
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# USER SERVICES EXTERNAL REPORT

LEHIGH UNIVERSITY COMPUTING CENTER

CDC 6400 (CM65K, ECS125K, SCOPE 3.4.1), VARIAN 6201f

August 1, 1975

## SCOPE 3.4.3 Installation

SCOPE 3.4.3 is scheduled for installation in August as the production operating system.

The following is a list of all known SCOPE 3.4.3 changes/modifications/features, some of which will not be available until early fall. (Some of the items have been published before.)

### A. General

1. In order for magnetic tapes to be written upon, the RING parameter must be specified on the REQUEST or LABEL control cards, or in the REQUEST macro. Any attempt to write on a tape without the RING parameter will cause the job to abort.
2. Users may request Prime, Non-prime, and Off-hours job processing by specifying an ST parameter on the job card. (see page 4)
3. The printing of the user's authorization number in the job's dayfile may be suppressed by using the B parameter on the job card. (see page 4)
4. Users may request that all batch jobs processed require an ACCOUNT card. (see page 4)
5. Remote batch terminals will now have long print and special forms queues. In order to print long print and special form jobs at an RJE terminal the printer must be designated with the proper forms code. (see CDC INTERCOM Reference Manual page III - 2 - 4)
6. Pre-dayfile messages such as, HOLL CHK/ SERIAL CHK/ etc. will appear in the dayfile. On the line printer, an † will appear instead of a blank for bad characters.
7. New versions of COPYL and ITEMIZE will be installed.
8. A common loader will be used for both relocatables and overlays. The loader map, similar to 3.4.1 relocatable maps, will be the same for both.
9. UPDATE output will be printed at 8 lines per inch.
10. The RUN, FTN, COBOL, and COMPASS compilers will, by default, print at 8 lines per inch.
11. When using the RUN compiler, OVERLAY cards can contain no blanks.
12. The end-of-line convention for I/O has been refined. While a zero byte (low order 12 bits in a word) has been employed in the past, SCOPE 3.4.3 defines end-of-lines as 12 to 66 (as required to fill a word) zero bits. This change may cause existing programs to fail; recompilation under SCOPE 3.4.3 may correct the problem.
13. The ROUTE control card will be available, offering the user many options not available with the DISPOSE card.

### B. INTERCOM

1. CTRL-X will not echo a carriage return and line feed.
2. CTRL-E has been replaced by %W cr.
3. ESC R has been replaced by %EOR cr.
4. %EOF cr has been added.



5. ESC A, ESC C, etc, have been replaced by %A cr, %C cr, etc.
6. ESC D processing will have the following allowable forms:
  - %Dnn cr - one timing character per every nn characters.  
(nn=00-99)  
If nn=00, reset to default value.
  - %Dn\* cr - constant n timing characters on each carriage return.  
(n=0-9)  
Note: %D\* cr will not be accepted.
7. For INTERCOM only, files with the "reserved names" OUTPUT, PUNCH, PUNCHB, P80C, and PLOT will no longer be automatically placed in the appropriate output queue upon a RETURN command or a LOGOUT. The DISPOSE, BATCH or ROUTE control cards may be used to send these files to the appropriate queues.
8. The VARIAN Extended Output features have been replaced by the new CDC 95 and 256 Extended Character set features. Any programs that currently use the VARIAN Extended Output feature must be modified.
9. FEWSPA is equivalent to FEWSPA,ON (FEWSPA,ON is no longer necessary).

### From the Librarian

#### New Programs

- SOPUP, SOPLIST and SOPRUN - INTERCOM Sign-On Procedures  
With this set of utilities the user can specify a set of control card commands which are executed upon LOGIN. It is necessary to modify your INTERCOM password to allow use of these routines. (J90038, J90039, J90040)
- MAP3D - 3-Dimensional Topographic Maps  
MAP3D is a plotting routine designed primarily for use with topographic land surveys with gradual contour changes, or similar surfaces which can be represented on a rectangular grid. (J50007)
- RETAIN - Retain Selected Files  
RETAIN allows the user to unload all files except those named in the command. Retain will not unload special files like INPUT, OUTPUT, PUNCH, and PLOT.  
Usage: RETAIN - unloads all files except special files.  
RETAIN(lfn1,lfn2) - unloads all files except lfn1, lfn2, and special files. (J90042)
- TEXT - Copy Text from Control Cards to a File  
TEXT is used to copy cards from a job's control card record to a user specified file. TEXT is most useful as a convenient means for putting data cards within a catalogued procedure record. (J90043)
- SQUEEZE - Compress COMPASS Listings  
SQUEEZE compresses COMPASS listings by combining two pages of listing into one printer page. A compressed page consists of the location counter, the first 44 columns of the COMPASS card, and the UPDATE identifier. SQUEEZE is useful when debugging large COMPASS programs as it saves paper. (J90044)
- SPSS - Statistical Package for the Social Sciences  
SPSS is an integrated system of statistical procedures and data-management facilities that has been designed to automate the routine tasks of data processing and statistical analysis. SPSS provides the user with a batch, utility system that will perform recoding, data transformation, file editing and other routine housekeeping chores essential in social science data analysis. An SPSS user's manual is available at the central site Inquiry Desk. (G00006)

#### Modified Programs

- SUMMARY - Control Card/INTERCOM Command  
The SUMMARY command now reports the maximum central memory used by a job up to the point that the control card is encountered in the job's control card record, or until the command is entered through INTERCOM. An automatic call to SUMMARY is made at the end of every batch job, and the maximum central memory used by that job is printed in the dayfile.

- **ISIS - Interactive Statistical Instructional System**

A new version of the TRADAT routine is now available. This version permits the user to lag any defined variable, and to perform moving averages. The LAGVAR routine is therefore obsolete, and has been deleted from the ISIS package. Documentation for the new TRADAT is available from User Services, Room 119 Packard Lab. (G00060)

- **QIKPLT - Quick Function Plotting / AUTPLT Replacement**

A new feature has been added to the QIKPLT utility which allows the user to plot multiple functions with a single call to QIKPLT. It is no longer necessary for the user to make calls to QIKPLT, PLOT and QLINE to obtain multiple lines on a single set of axes. The subroutine AUTPLT, which currently plots multiple functions, will eventually be removed from the system since the revised QIKPLT now performs this task.

### SCOPE 3.4.3 Library Changes

With the installation of the SCOPE 3.4.3 operating system, certain changes in program availability will be made.

Due to lack of use, the following routines will be removed from the on-line library. Copies of these routines will be available in deck form only. Copies may be obtained by submitting a "User Program Library Request" (LUCC Form #35) to User Services.

- CPTIME (Q00001) - Central Processor Time of Execution.
- PLTCHK (J50035) - Printer and CALCOMP Plots Using QIKPLT.
- FTNLINK(Q60001) - Permits RUN to call FTN Subroutines.
- RUNLINK(Q60002) - Permits FTN to call RUN Subroutines.

Because of minimal use, and for ease of maintenance, certain routines are being removed from the on-line system library. They still reside on on-line storage, and may be accessed as follows: LIB,LIB,program-name.

The programs are:

BEHRENS	FDUMP	SUBMIT
BOYD	FILEDMP	TIDY
CONTENT	GLOBE	TRANSP
COPYATD	INTSIMP	TTYQUT
COPYDTA	LINPRO	TTYTEST
COPYRF	MATRIX	URBAN
COPY29	POLYPAK	WORLD
CRDUTIL	POLYRG	ZEROSUM
DOCSTAN	SIMPLEX	

### Policies and Procedures

#### Batch Authorization Control Limits

As users may be aware, the capacity of the CDC 6400 system is being reached during some portions of the operating day. In order to provide the greatest number of users with service in a given time period, the Computing Center has obtained the approval of the Computing Center Advisory Committee and its Users' Subcommittee to restrict instructional and university sponsored (unsponsored) research jobs which require large levels of resources to non-prime and off-hours processing.

Effective August 1, 1975, the Computing Center will implement the new batch authorization system which will control access by time of day. Users are urged to refer to the Center's 1975-76 Operating Schedule for a full description of these time definitions. Schedules are posted at the central site and at Taylor Hall. Operating schedules and rate schedules are also available from User Services, Room 119 Packard Lab. Existing authorization and password limits will have to be revised in some cases. User Services will contact the requestors involved.

#### Instructional Computer Access

As previously announced, the Computing Center provides an instructional batch authorization number (A1234) which can be used by Lehigh students and faculty without any special arrangements. The purpose of this authorization is to reduce paper work for instructors, and to provide computer access for students not registered in



courses with computer authorizations. Instructors requiring computing resources in excess of the A1234 limits should still request a specific authorization for their courses. Procedures for acquiring a computer authorization have not changed.

The authorization limits for A1234 have been changed with the introduction of prime, non-prime, and off-hours processing limits. The resources available are:

	<u>Prime</u>	<u>Non-Prime</u>	<u>Off-Hours</u>
System Seconds	4	10	50
Central Memory Words	40000 <sub>8</sub>	60000 <sub>8</sub>	70000 <sub>8</sub>
Printed Pages	6	6	6
Plotter Function Units	40000	40000	40000
Punched Cards	200	200	200
Punched Paper Tape Frames	1500	1500	1500

#### Batch Security Feature

Soon after the installation of the SCOPE 3.4.3 Operating System, users will be provided with two new security features. First a B parameter preceding the authorization number on the job card, instead of the A parameter, will suppress the printing of the authorization number in the dayfile.

Second, the user may specify in an authorization request that an ACCOUNT card be required for each job submitted. The ACCOUNT card will provide batch password protection. A utility program will permit the user to change passwords as often as desired.

These features will be installed sometime later this fall; watch CCNEWS for details.

#### Deferred Batch Processing

Under SCOPE 3.4.3, users may indicate on the job card the earliest time that they wish a job to be processed. Using the ST parameter, the user may request prime, non-prime, or off-hours processing. The ST designations are: STPRI (prime); STNON(non-prime); and STOFF (off-hours). These categories are inclusive; i.e. OFF ≤ NON ≤ PRI. STPRI is the default parameter.

The importance of this feature is twofold. The user can control the time when jobs will be executed to coincide with authorization limits. For example, authorization 1234 permits 50 system seconds during off-hours. A job submitted during prime hours with the STOFF parameter will be held until off-hours and then executed. Without the STOFF parameter, execution might be attempted during prime hours resulting in an aborted job due to insufficient authorization limits (for that period).

Secondly, a user may submit a job requesting off-hours processing simply to take advantage of the reduced rates.

#### Category Support for LUCC Library Software

In an effort to encourage user contribution of software, the Computing Center offers several levels of software support. Levels of support vary widely, ranging from support by a vendor, such as CDC, to user or user department support.

There are many advantages to contributing to the LUCC software library. All programs that are accepted, regardless of support level, are guaranteed the following. Adequate storage of all programs will be provided. Program availability, changes, and modifications will be announced in LUCC publications. Programs will be listed in the library index and documentation will be available at the inquiry desk. A formal reporting of problems with the programs will be transmitted to those responsible for program support, via the Software Comment form.

Users interested in contributing to the LUCC program library should contact the Data Processing Librarian, Room 119 Packard Lab, for details on submission procedures.