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# User Services External Report

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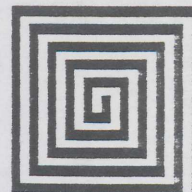


# LUCC

Lehigh University Computing Center

## User Services External Report

# USER



LEHIGH UNIVERSITY COMPUTING CENTER  
 CDC CYBER 170 MODEL 730 (CM 256KW, NOS V2.2)  
 DECSYSTEM-2065 (2048KW MEMORY, TOPS-20 V5)  
 IBM 4361 (DOS/VSE, RELEASE 3.5)  
 Vol. XII, No. 5  
 March 1, 1985

### COMPUTING CENTER DIRECTORY

#### Information About Policies and Plans

Office of the Director  
 Director 861-3830  
 Dr. J. Gary Lutz  
 Associate Director 861-3984  
 William R. Harris  
 User Services  
 Manager 861-3990  
 Timothy J. Foley  
 Operations  
 Manager 861-3989  
 Carol D. Rauch

#### Information About Bills Received

Administrative Associate 861-3825  
 Joseph P. Holzer  
 Annette L. Ruhe

#### User Consultants

Blair R. Bernhardt 861-3994  
 Bob Kendi 861-3992  
 Monica A. Newman 861-3995  
 Kevin R. Weiner 861-3991

#### Information About Programs in the Computer Libraries

Software Librarian 861-3993  
 Judy K. Allio

#### Systems Status, Technical Information

On-duty Consultant 861-4141

#### General User Information

User Services Secretary 861-3990  
 Florence E. Gabriel

#### Information About Tapes and Supplies

D. P. Tape Librarian 861-4140  
 Monica M. Morganello

#### On-Campus Computer Access

CYBER 730 (110/300 Baud) Ext. 4000  
 (1200 Baud) Ext. 4660  
 DEC 20 (110/300 Baud) Ext. 4020  
 (1200 Baud) Ext. 4661

#### Off-Campus Computer Access

CYBER 730 (110/300 Baud) 691-5800  
 (1200 Baud) 691-5806  
 DEC 20 (110/300 Baud) 868-2250  
 (1200 Baud) 691-0506

#### FROM THE DIRECTOR

by J. Gary Lutz

By now, I presume that all of our users are aware that the Computing Center is located in the new E.W. Fairchild-Martindale Library and Computing Center. Given the complexity of such a move, I am pleased to report that all went quite smoothly, and that the systems were completely back in service earlier than expected. This successful venture was due in no small part to the efforts of Operations Manager Carol Rauch, who served as project leader for the move. Everyone within LUCC, however, played some role in the project, and I would like to publicly commend the entire staff for a job well done.

The most significant action on the horizon at the moment involves the acquisition of a CYBER 850 to replace the dual 730 this summer. As our CYBER users are well aware, the two most serious limitations of the current system are the absence of a virtual memory operating system and the restriction of real memory to a maximum of 256 KW. The 850 not only will initially support 4 MW of real memory, but also will run NOS and NOS/VE in a dual state. (NOS/VE is CDC's virtual memory operating system. It will be available on an experimental basis until it is fully integrated into LUCC's regular services.)

As most of you are probably aware, the University has undergone an administrative reorganization that affects LUCC as well as other groups within Lehigh. Previously, the Computing Center and the University Libraries reported to Doug Abbott, Vice Provost for Computing and Information Services, who in turn reported to the Provost. Under the new structure, the Computing Center, the Administrative Systems Office (Roy Gruver, Director), and the Office of Telecommunications (Janet Smith, Director) all report to Doug Abbott, Director of Computing and Communications Services, who in turn reports to Eric Ottervik, Vice President for Academic Services (previously, Vice President for Planning and Administration). The administrative consolidation of academic computing, administrative computing, and telecommunications is a very positive step for the University, one which will help provide the necessary coordination that must exist amongst these activities. We are looking forward to working within this new environment.

STAFF CHANGES

The position title of the following staff members was recently changed to more adequately reflect current responsibilities: Florence Gabriel - to "Data Processing Assistant", and Annette Ruhe - to "Accounting Assistant".

CYBER PRINTER CHANGES

One of the central site CDC 512 printers (which print at 1200 lines per minute) has been replaced with a faster, CDC 580 printer (which prints at 2000 lines per minute). The new printer uses a 63-character subset of ASCII, instead of the CDC scientific character set previously used on the 512. The changes users will see are as follows:

Old Character	New Character
equivalence	#
not equal	"
right arrow	-
logical or	!
logical and	&
up arrow	'
down arrow	?
less or equal	@
greater or equal	\
logical not	^

The print train on the remaining 512 printer has been changed to the ASCII-95 character set (which includes lower case); this had previously been available on a CYBER printer on a limited basis. All output will be sent to the new 580 printer by default; to print upper/lower case files on the 512 printer, use the following command:

ROUTE,file,DC=PR,EC=A9.

For special forms (such as unlined paper) on either printer, use the "FC" parameter on the "ROUTE" control statement as described in the NOS User's Guide for the CYBER 730.

NEW PLOTTER FOR THE CYBER

LUCS has installed a Hewlett-Packard 7586B 8-color plotter, which will produce high quality plots up to 34.5 inches wide. This plotter is available in addition to the current CalComp 1012 plotter, which will remain the default plotter.

The following pen types are available on the HP plotter:

- Ball point - 0.30 mm in black, blue, green, and red
- Porous point - 0.30 mm in black, turquoise, lime green, red, violet, gold, burnt orange, and brown
- Liquid ink - 0.50 mm and 0.35 mm in black

(Note that pen types may not be mixed.)

The standard medium for all plots is 11-inch chart paper. Also available are 36-inch chart paper, 11-inch vellum and 36-inch vellum. Note that vellum may only be used with liquid ink. Due to high cost, vellum should only be selected when publication requirements warrant its use.

Ball and porous point plots will be run daily. Liquid ink plots will be run Tuesday and Friday mornings at 8 AM until the queue is empty. Liquid ink plotting is not available to instructional accounts (user names prefixed with a C or X).

To use the HP plotter from an interactive job, use the "PL" command after you have run a program which produces a plot file. PL will prompt you for the information it needs (e.g., pen type). If you are unsure about what type of response PL is expecting, type a question mark to get an explanation.

In a batch job use the command "PLHP" to send your plot file to the HP plotter, as follows:

PLHP, <plotfile>, <pen>, <media>, <width> .

where

<plotfile> is the name of your plot output file, usually "PLOT"

<pen> is one of the following pen types:

- "B" for ball point (4-color)
- "P" for porous point (8-color)
- "L" for 0.50 mm liquid ink
- "L1" for 0.35 mm liquid ink
- "L2" for both 0.50 and 0.35 mm liquid ink

<media> is either "C" for chart or "V" for vellum

<width> is either 11 or 36

Examples:

PLHP,PLOT,P,C,36. (porous point, 36-inch chart)

PLHP.

(selects defaults:  
file name "plot"  
pen type ball point  
media type chart  
11 in. paper)

Before the PLHP command is issued, remember to issue a PLOTS command if your plot needs more than 4000 plotter function units. ("PL" prompts for this information.)

#### HP Programming Notes

- The maximum Y coordinate is 10.4 inches when using 11-inch paper and 34.5 inches when using 36-inch paper.
- To generate a plot for 36-inch paper, you must call LIMPLOT to extend the maximum Y coordinate (up to 34.5). Example: CALL LIMPLOT(40.0, 34.5)
- Pens are numbered from 1, in the color order listed above, for ball and porous point.
- When using 0.50 and 0.35 mm liquid ink pens for the same plot, the 0.50 mm pen is pen 1 and the 0.35 mm pen is pen 2. When used alone, each is in pen position 1.
- Avoid doing 11-inch-wide plots longer than 15.8 inches, or 36-inch-wide plots longer than 46.8 inches. These are maximum hardware frame sizes. Plots longer than the frame size are retransmitted to obtain successive frames. This will result in undesired registration marks and possible misalignment.

#### CalComp User Notes

- For compatibility with the HP plotter, the maximum Y coordinate has been reduced to 10.4 inches. Users whose plots currently extend to 11 inches should include "CALL FACTOR(0.94)" in their programs.
- The CalComp nylon tip service has been eliminated; use HP porous point service instead.
- The command "PL" (but not "PLHP") may also be used to send plot files to the CalComp plotter. ("B" and "ROUTE" may still be used for this purpose.)

Finally, TEMPLATE users should note that the HP plotter is supported by version 4.0 - see the announcement of this version later in this issue.

#### POSSIBLE TERMINATION OF DEC 20 PLOTTING SERVICE

The Computing Center is considering discontinuing plotting service on the DEC 20, effective

July 1, 1985. Please contact Kevin Weiner at ext. 3991 if such action would present a problem for you.

#### CARD PUNCH TO BE REMOVED FROM SERVICE

LUCC is going ahead with plans to remove the CYBER card punch from service. This decision was based on dwindling usage, and response to a questionnaire sent to CYBER users in January. The last day of service will be June 14, 1985. Note that there are no plans to eliminate keypunch and card reader services in the immediate future. Current card punch users should contact User Services for assistance in developing alternate procedures and back-up methods.

#### LUCC'S MICROCOMPUTER LAB

LUCC's microcomputer lab, which had temporarily been located on the fourth floor of the Fairchild-Martindale building, is now permanently located in room 292 of that building (one floor above the central site users' area). The lab currently houses 14 Zenith Z-150's - 12 of which have a hard disk and 1 floppy disk drive, the other 2 of which have 2 floppy disk drives but no hard disk. An IBM PC Printer (dot matrix) is also available in the lab.

The following software is stored on the 12 machines with hard disks: FORTRAN, TURBO Pascal, GW-BASIC, WordStar, Lotus 1-2-3, and dBase III. To use Lotus 1-2-3 or dBase III, the system disk for the software must first be inserted into the floppy (A) drive (to load the program into memory). These system disks are available from the lab's student consultant when one is on duty there (see the schedule on the next page); at other times, they may be obtained from the consultant on duty in the central site users' area downstairs. Instructions for accessing and running the software on these machines are posted in the lab.

Software available for the 2 micros with dual floppy drives includes GW-BASIC and TURBO Pascal. This software is available from the lab's student consultant when one is on duty; at other times, it may be obtained from the consultant on duty in the central site users' area. The consultant in the central site users' area has other software which may be used on these (as well as the hard disk) machines - see the article entitled "Software Available for the IBM PC and Zenith Z-100 Microcomputers" in this issue.

Manuals for the software mentioned above are available from the consultant in the lab, from the consultant in the central site users' area, from the Librarian in LUCC's library (room 185), and (on one-day reserve) at the Fairchild-Martindale campus library.

Note the following schedule for the micro lab:

	Open	Consultant Available
Monday - Thursday	8AM - 5PM 7PM - 10PM	1PM - 4PM 7PM - 10PM
Friday	8AM - 5PM	1PM - 4PM
Saturday	1PM - 4PM	1PM - 4PM
Sunday	2PM - 5PM	2PM - 5PM

Use of the lab may be reserved, through User Services at ext. 3990. When the lab is reserved for a class or a seminar, the times involved will be posted in advance there.

#### SOFTWARE AVAILABLE FOR THE IBM PC AND ZENITH Z-100 MICROCOMPUTERS

For some time now, an IBM PC and a Zenith Z-100 microcomputer, each with two disk drives and a NEC Spinwriter 2030 letter quality printer, have been available in the central site users' area. These micros have 256K RAM and 192K RAM, respectively.

The software that LUCC has available for these machines is listed below. The diskettes containing this software reside at the consultant's office in the users' area. With the exception of BASICA, the software for the IBM PC may also be used with the Zenith Z-150's in LUCC's micro lab (room 292).

The following software is available for the IBM PC at the central site: PC-DOS Version 2.1, BASICA, GW-BASIC, TURBO Pascal, MS-FORTRAN, UCSD p-System with Pascal and FORTRAN, DisplayWrite II, WordStar with MailMerge, CorrectStar and StarIndex, ReportStar, DataStar, PeachText 5000, EasyWriter, VisiCalc, MultiPlan, Lotus 1-2-3, PC-PLOT, KERMIT, PC-TALK, and CROSSTALK. Note that the MS-Pascal listed under Z-100 software will also run on the IBM PC.

The following software is available for the Z-100 at the central site: Z-DOS Version 1.25, Z-BASIC, MS-FORTRAN, MS-COBOL, MS-Pascal, WordStar with MailMerge, PeachText 5000, MultiPlan, Lotus 1-2-3, CP/M-85, MBASIC, and KERMIT.

Manuals describing the use of GW-BASIC, TURBO Pascal, WordStar, Lotus 1-2-3 and dBase III are available from the consultant in the central site users' area, from the Librarian in LUCC's library, and (on one-day reserve) at the Fairchild-Martindale campus library. (These manuals are also available from the consultant in the micro lab, but they cannot be removed from the lab.) Manuals for the other software listed for the IBM PC and Z-100 can be found in LUCC's library.

#### REMINDER: PLATO LESSONS AVAILABLE

Four CDC 110 microcomputers are available at the central site, for the purpose of running PLATO lessons. Three of these machines reside in the users' area, the remaining machine resides in the

special equipment room next to the consultant's office. PLATO is a system of computer-based education software from CDC. LUCC has the following PLATO lessons:

- Structured Programming with FORTRAN 77
- Physics 1
- Chemistry 1

PLATO lessons are available from CDC for a wide range of topics. Faculty interested in having lessons available for their disciplines should contact Judy Allio of User Services at ext. 3993.

The PLATO software and documentation are kept in the consultant's office in the central site users' area. Brief instructions regarding how to run the PLATO software on the micros can be found on the top of the terminals.

#### LUCC'S NEW LIBRARY

LUCC's library is located in room 185 of the new Fairchild-Martindale building. Available in this library is the master copy of all documentation in the central site users' area, manuals for microcomputer software, a number of books, and periodicals.

Among the periodicals held are: PC World, Data Communications, InfoWorld, Computer Industry Update, Small Business Computers, BYTE, Computer Technology Review, Macworld, Sextant, Datapro reports on DATA COMMUNICATIONS, Datapro 70 - the EDP buyer's bible, and DATA SOURCES. Also held are newsletters from the computing centers of a variety of universities and colleges, such as Carnegie-Mellon University, Cornell University, Stanford University, the University of California at Berkeley, and Lafayette College.

Note that, after consulting the Librarian, users are permitted to remove manuals for microcomputer software from the library for use in the central site users' area or LUCC's microcomputer lab. None of the other types of holdings may be removed from the room. An index which lists all holdings is available in the library.

#### LUCC'S ON-LINE LIBRARY SYSTEM

An on-line library system has just been implemented by LUCC, on the DEC 20. The system may be accessed from any DEC 20 directory. Eventually, the system will contain four data bases: software, reference, periodical and book. Currently, only the software data base has been implemented; searching by category of software, a user can determine what programs are available at LUCC. The data base contains entries for microcomputer as well as mainframe software. Documentation is available on-line for some of the software; it may be read and/or printed through the library system.

Before using the library system in a terminal session, the user must declare his or her terminal

type (via the TOPS-20 "TERMINAL" command). The terminal types supported by the library system are listed in a system help file entitled "LIB" (accessed by typing "HELP LIB" at TOPS-20 command level). The library system itself is accessed by typing "LIB" at TOPS-20 command level. Use of the library system is described in an on-line tutorial; the option to view the tutorial is presented immediately after accessing LIB.

The software data base has a hierarchical (tree) structure. The user begins by selecting a general category of software, each of which is divided into sub-categories, and so on. The user makes a selection at each screen; when what is selected is the name of a program, a summary screen for the program is presented. Among other things, the summary screen contains information about where documentation for the program can be found - under item 9 (DOCUMENT TYPE). See the following two paragraphs for an explanation of the entries for item 9. The user may request that a copy of the summary screen be printed on the central site line printer; where documentation is available on-line through the library system, both the summary page and documentation will be printed. A binder containing a copy of the summary screen for each item of software is available in the central site users' area, and the Christmas-Saucon, Drown and Grace sites. These binders are labeled "SOFTWARE INDEX".

Documentation for software whose document types are listed as being "On-line", "Typewritten", "DOCSTA", "SCRIBE", and "LISTLIB" can be found in the shorter of the two racks on top of the gray cabinets in the central site users' area. CYBER documentation is located on the left side of this rack, DEC 20 documentation on the right. Within a mainframe section, the documentation appears in alphabetical order by program name.

Documentation for document types "Looseleaf", "paperback" and "Hardbound" is either in the longer of the two racks or in one of the gray cabinets, by the title listed under Item 10 of the summary screen. (The left side of this rack contains CYBER software manuals, the right side DEC 20 software manuals.) Some manuals are available at the Fairchild-Martindale campus library (on one-day reserve); some are additionally available at one or more of the following sites: Christmas-Saucon, Drown, Grace. A system help file entitled "DOCMENTS" lists where copies of specific manuals can be found.

#### CYBER USERS!! NEW PERMANENT FILE COMMANDS: "STORE" AND "FETCH"

Two new commands, STORE and FETCH, are now available to simplify permanent file usage. These commands were written at LUCC. STORE is used in place of SAVE, REPLACE and DEFINE. It will make a file permanent regardless of file size. Previously, it was necessary to know a file's size ahead of time to determine whether it should be direct or indirect. If a local file is up to 192 PRUs long, STORE will make it an indirect permanent file, otherwise it will be made direct. STORE will replace a permanent file if it already exists. FETCH is used in place of GET and ATTACH. It will make a permanent file local regardless of whether it

is direct or indirect. Both STORE and FETCH will accept all parameters available on the original permanent file commands. Use of STORE and FETCH is recommended in all cases except where an application specifically requires direct permanent files.

#### PROGRAM ACCESS CHANGES

The following CYBER 730 programs can now be accessed as well as run by simply typing their names:

INTSIMP	MAC80
KYST	MATRIX
LISP	SUPREM

You must no longer first issue the "ATTACH" command to access the files. So, for example, instead of having to type these two statements:

```
ATTACH,MAC80/UN=LIB.  
MAC80.
```

you must only type the following:

```
MAC80.
```

#### NEW AND MODIFIED MAINFRAME SOFTWARE

##### CYBER 730 - NEW SOFTWARE

##### ADINA-PLOT - Display Program for ADINA

ADINA-PLOT can be used for graphical and alphanumeric display of input to and output from the ADINA program. Both ADINA-PLOT and ADINA are components of the ADINA computer program system, which was designed for effective finite element analysis of structural, heat transfer and field problems.

ADINA-PLOT can be accessed and run by using the following control statements:

```
FETCH,ADPLOT/UN=LIB.  
ADPLOT.
```

Use of ADINA-PLOT is described in the ADINA-PLOT User's Manual, available at the central site users' area and, on one-day reserve, at the Fairchild-Martindale campus library.

##### PACK SYSTEM - Time Series Analysis Package

The PACK SYSTEM is a set of programs used for statistical analysis of time series data using the Box-Jenkins procedure. Written around David

J. Pack's "Computer Program for the Analysis of Time Series Models Using the Box-Jenkins Philosophy", the PACK SYSTEM was designed to be a complete modeling package. The PACK SYSTEM is divided into four sections:

1. The basic PACK programs - MAINID, the main identification program, and MAINFE, the main estimation/forecasting program. To access and run either of these programs, which are stored on a library file called PACKLIB, the following control statements must be issued:

```
USE,PACKLIB.
MAINID.
```

or

```
MAINFE.
```

2. The Interactive Prompt program, IPROMPT, which allows a user to interactively set up the information needed to run the basic PACK programs. Output is written to a local file called PACKIN. IPROMPT is also stored on PACKLIB; to access and run IPROMPT, the following control statements must be issued:

```
USE,PACKLIB.
IPROMPT.
```

3. The auxiliary options, which consist of eight sets of subroutines that may be used with the basic PACK programs for additional computational ability. The options are as follows:

- 1 - Preliminary Estimates. This exists as a stand-alone executable. To access and use this program, the following control statements must be used:

```
USE,PACKLIB.
OPT1.
```

(The procedure for using the following options is described below.)

- 2 - Univariate Conversion
- 3 - Aggregate Forecast Variance
- 4 - Transfer Function Conversion
- 5 - Improved Transfer Function Identification
- 6 - Automatic Model Stepdown
- 7 - Automatic rsb Identification
- 8 - Extended Autocorrelation Function

The relocatables for these options are stored on PACKLIB. To use options 2 through 8, modifications must be made to the basic PACK program. Source code for the PACK SYSTEM is available in UPDATE format, by program name, on a file accessed as follows:

```
FETCH,OLDPL=PACKPL/UN=LIB.
```

The PACK SYSTEM User's Guide describes the modifications needed. Once the changes are made, the program, as well as any subroutines which may have had to be modified to use the particular option, must be compiled. (Note that, sometime before the compilation, a "USE,PACKLIB." statement must be issued during the job.) After the compilation, the following step(s) would be taken:

```
LOAD,xxx.      where "xxx" is the relo-
                catable binary for a
                modified subroutine. A
                LOAD statement would
                only be used if a sub-
                routine had to be modi-
                fied for the option
                desired.
```

```
yyy.           where "yyy" is the relo-
                catable binary for the
                modified main program
                (MAINID or MAINFE).
```

4. The Simulator, which is a program used to generate time series according to a user-specified model. This simulator program is stored on PACKLIB, as BSSSIM. To access and run BSSSIM, the following control statements must be issued:

```
USE,PACKLIB.
LDSET,PRESET=0. (zero)
BSSSIM.
```

The simulator may be modified to accept larger quantities of data; page 167 of the user's guide describes the necessary changes. Source code for BSSSIM is also stored on PACKPL.

Use of the PACK SYSTEM is described in the PACK SYSTEM User's Guide, available at the central site users' area and, on one-day reserve, at the Fairchild-Martindale campus library. Copies may be ordered through the University Bookstore. Note that a copy of this announcement is attached to the manuals at the Computing Center and campus library.

## CYBER 730 - MODIFIED SOFTWARE

### PASCAL-6000 - Programming Language

A new version of the Pascal-6000 compiler, Version 4.0, has been installed on the system. V4.0 is now the version accessed in Senator's system Pascal, and in response to the "PASCAL." control statement. The prior version of the compiler, V3.0, will remain on the system through June 30, 1985; until that time it can be accessed as follows:

```
FETCH,PASCLIB=PAS3LIB/UN=LIB.  
FETCH,PASCAL3/UN=LIB.  
PASCAL3,parameters.
```

V4.0 incorporates substantial changes, the intention being to have it conform to the ISO standard. All changes are described in the "Pascal-6000 Release 4 Upgrade Guide", which is appended to the back of the Pascal-6000 Version 4 manual. Use of pascal V4.0 is described in the following manuals:

```
Pascal-6000 Version 4  
Pascal-6000 Version 4 Library Information  
Pascal Utilities Guide
```

The above documentation can be found at the central site users' area, the Christmas-Saucon, Drown and Grace sites, the Fairchild-Martindale campus library (on one-day reserve), and the University Bookstore.

Note that the manner in which parameters are specified on the Pascal control statement differs for the two versions of the compiler; be sure to consult the upgrade guide before using V4.0.

### TEMPLATE - Graphics Subroutine Package

TEMPLATE has been upgraded on the system from Version 3.0 to Version 4.0. V4.0 contains some new features and enhancements; these are described in the "TEMPLATE 4.0 Release Notes", which can be found at the front of the TEMPLATE V4.0 Reference Manual, available at the central site users' area, the Christmas-Saucon site, and the Fairchild-Martindale campus library (on one-day reserve). TEMPLATE V4.0 supports LUCS's HP plotter, via the special driver "HPC". This driver generates a CalComp-type plot file - just like the "CAL" driver - but supports 8 colors and 36-inch wide paper. The color index is as follows:

0 black	4 turquoise
1 red	5 violet
2 lime green	6 burnt orange
3 gold	7 brown

V4.0 fully supports a Seiko D-Scan 1104 driver; its device name may be entered as "SEI" or "SKO". The list of devices for which TEMPLATE support is currently available on the system can be determined

by issuing the "SYSBULL,TEMPLT." command at NOS command level.

Copies of the TEMPLATE V4.0 Reference Manual may be ordered through the University Bookstore. Note that the reference manual for V3.0 is still usable, since most of the new features involve facilities not available at our installation. The old Introduction to TEMPLATE and TEMPLATE Example Set manuals still apply. Those two manuals are available at the University Bookstore as well as at the locations named just above.

The NOS control statements to access and run TEMPLATE are described in LUCS's "Technical Bulletin 17 - Running Template on the CYBER", available free of charge from User Services.

## DEC 20 - MODIFIED SOFTWARE

### COBOL - Programming Language

A new version of COBOL-74, Version 13, was recently installed on the system and placed on directory NEW:. This new version will become the default version of COBOL-74 on March 4, 1985 when Version 12B of COBOL-74 will be moved to directory OLD:. NOTE also that, on March 4, all programs with a .CBL extension will by default use the COBOL-74 (V13) compiler, not COBOL-68 - the current default COBOL compiler.

The major differences between V12B and V13 of COBOL-74 are described in the system help file entitled "COBOL13" (accessed by typing "HELP COBOL13").

To use V12B of COBOL-74 beginning March 4, the following command must first be issued in the terminal session:

```
DEFINE SYS: OLD:,SYS:  
  
and then  
  
COMPILE program.CBL/74-COBOL  
  
or  
  
COMPILE program.C74
```

To use the COBOL-68 compiler beginning March 4, the following command must first be issued in the terminal session:

```
DEFINE SYS: OLD:,SYS:  
  
and then  
  
COMPILE program.CBL/68-COBOL  
  
or  
  
COMPILE program.C68
```



Use of COBOL-74 V13 is described in the TOPS-20 COBOL Language Manual, available at the central site users' area and, on one-day reserve, at the Fairchild-Martindale campus library. Copies may also be ordered through the Bookstore.

#### NPCALC - Spreadsheet Calculator

The default version of NCP Calc on the system has been upgraded from Version 2.1 to Version 2.2. V2.2 includes the following new features:

- Format overflow commands, which permit a label in a cell to overflow into blank cells to the immediate right.
- Enhanced print directives, which allow one to produce "prettier" output and reports.
- Additional options for specifying a range.
- The ability to have quoted strings in equations.
- Improved operations for VT100 and similar terminals.

These new features are described in a document entitled "Addendum to NCP Calc Reference Manual - for Version 2.2". This addendum can be found at the front of the binder containing the NCP Calc Reference Manual, available at the central site users' area, the Christmas-Saucon and Drown sites, the Fairchild-Martindale campus library (on one-day reserve), and the University Bookstore.

NCP Calc is run by typing "NPCALC" at TOPS-20 command level. Note that V2.1 is no longer available on the system. The version residing on directory OLD: is still V1.67 - the version first installed at LUCC.

#### PASFMT - Pascal Formatter

The default version of PASFMT has recently been upgraded on the system from version 1.5 to 1.6. Version 1.6 contains the following enhancements:

- PASFMT now preserves (by copying unchanged) the rest of the file after any kind of error is detected in the program. Any text following the final period is even copied to the .PAF file being written. The error message is reproduced at or near the appropriate point in the .PAF file, and must be deleted before the file can be used.
- After formatting a program, PASFMT now automatically returns control to the TOPS-20 Monitor - an "EXIT" command is no longer required.
- Unnecessary and extra semicolons are now formatted more reasonably.

- Delimiters for PASFMT-generated comments now appear as: (\* comment \*)

- Comments which happen to include new-page marks, such as those generated by EDIT's "M" command, are now reproduced in full. In previous versions, one line of the comment was lost.

These enhancements were provided courtesy of Dr. Jerry Rayna of the Computer Science division of the Computer Science and Electrical Engineering department.

A system help file is available for PASFMT, and is accessed by typing "HELP PASFMT" at TOPS-20 command level. This help file contains a list of all PASFMT commands and options. Documentation for PASFMT can be found in the shorter of the two documentation racks at the central site users' area.

PASFMT itself is accessed by typing "PASFMT" at TOPS-20 command level.

#### SORT - Sort Utility

Version 5 of SORT was recently installed on the system and placed on directory NEW:. V5 will become the default version of SORT on the system on March 4, 1985, when the prior version - 4C - will be moved to directory OLD:. SORT V5 is strictly a maintenance release; it includes no additional features, and use is the same as for V4C. A system help file entitled "SORT" contains information on how to use that program.

To use SORT V4C beginning March 4, the following command must first be issued in the terminal session:

```
DEFINE SYS: OLD:;SYS:
```

Use of SORT V5 is described in the TOPS-20 SORT/MERGE User's Guide. This document is available at the central site users' area and, on one-day reserve, at the Fairchild-Martindale campus library. Copies may also be ordered through the Bookstore.

#### CONSULTANT'S CORNER

The answers to some questions recently asked of the consultants follow.

Q: Recently, I wanted to use in the micro lab a software package which was not loaded on the fixed disks of the lab's micros. When I asked for the software from the consultant downstairs in the users' area, I was told that it was already signed out. Why wasn't this software simply stored on all of the fixed disks in the lab?

A: Each software package comes with a licensing agreement which usually states that the package

may only be used on a single machine at any given time. When we only have a single license for a program, there will only be one copy to loan. Any software which is stored on the hard drives in the lab was obtained with a license for each of the micros. As the notice on the front of each micro states, it is illegal to copy copyrighted software without a license to do so. We would like to remind you here that you have access to the software with the stipulation that you agree not to copy it; you will be held legally responsible for failure to comply.

Q: How do I read tape files which contain variable-length ASCII lines onto the DEC 20?

A: The DEC 20 has notoriously bad tape handling facilities. In many cases it is necessary to write a program to read or write a tape (COBOL and Pascal are best). If you have a tape file with variable-length ASCII lines - any number of characters followed by CR (carriage return) and LF (line feed) - you can use the following Pascal program to read it:

```
PROGRAM RTAPE(OUTPUT);
VAR
  INP: TEXT;
  CH: CHAR;
BEGIN
  RESET(INP, 'T:', '/B:8/E');
  WHILE NOT EOF(INP) DO
    BEGIN
      OUTPUT^ := INP^;
      PUT(OUTPUT);
      GET(INP);
    END;
  END.
```

If you don't know Pascal, don't worry - just type the program into a file called RTAPE.PAS. Mount your tape as is shown below. (See LUC's DECSYSTEM-20 User's Guide for more information on mounting tapes.)

```
MOUNT TAPE T:/VOLID:vsn
SET TAPE FORMAT INDUSTRY-COMPATIBLE
```

Then execute the program:

```
EXECUTE RTAPE.PAS
```

Your program will prompt you for an output file name, and then copy one file from the tape into that file on disk. The program can be run more than once for multiple tape files.

You can use a similar program to write such a tape:

```
PROGRAM WTAPE(INPUT);
VAR
  OUT: TEXT;
  CH: CHAR;
BEGIN
  REWRITE(OUT, 'T:', '/B:8');
  RESET(INPUT, ',', '/E');
  WHILE NOT EOF(INPUT) DO
    BEGIN
      OUT^ := INPUT^;
      PUT(OUT);
      GET(INPUT);
    END;
  END.
```

When writing the tape, don't forget to include the "/WRITE-ENABLE" switch on the "MOUNT" command, and to set the tape format to "INDUSTRY-COMPATIBLE".

Eventually, we hope to have a better, generalized tape utility. For now, the more adventurous may wish to try the above procedures.

MINUTES OF THE COMPUTING CENTER ADVISORY COMMITTEE MEETING OF 2/1/85

Present: T.J. Delph, T.J. Foley, J.A. Hall, J.E. Hansz, B.R. Hargreaves, W.R. Harris, S.P. Kantner, E.J. Kay, C.N. Kostem, J.G. Lutz, E.S. Shapiro, J. Singh, T.J. Smull

Minutes of Previous Meeting:

Bruce Hargreaves noted that he had been misquoted in the previous minutes. He had said that the Media Center was investigating AutoCad, not that it had acquired it. Otherwise, the minutes were approved as distributed.

Organization:

Gary Lutz outlined the features relevant to LUC of the new organizational structure recently announced by the President. This included the fact that the Administrative Systems Office and the Office of Telecommunications would join LUC in reporting to Doug Abbott, Director of Computing and Communication Services, under Vice President for Academic Services, Eric Ottervik.

Networking Update:

No report was given in the area of networking.

New Services:

Tim Foley reported that the HP plotter was only waiting for some specialized supply issues to be resolved. Celal Kostem inquired as to whether "normal" services

could not be started immediately. Tim Foley will pursue this. Bill Harris reported that the Talaris laser printer was in-house and that LUCC was currently in a learning mode regarding its operation. As this was seen to be a potentially expensive service, the CCAC discussed various approaches to controlling its use. A policy recommendation is forthcoming from User Services. In the meantime, the CCAC encouraged the subcommittee on usage policies to reconvene and add this issue to its agenda. Gary Lutz will recall the subcommittee.

**CYBER 8xx:**

Gary Lutz reported that the President's Council had endorsed the proposal resulting from December negotiations with CDC for the acquisition of a CYBER 8xx running NOS-NOS/VE in dual state. Although the original negotiations involved a CYBER 845, the recently announced CYBER 850 may present yet a further opportunity. Installation is targeted for July, 1985. The final details should be available for the next CCAC meeting.

**Microcomputer Evaluation:**

Tim Foley reported on the progress in the microcomputer evaluation. The objective of this project is to provide guidelines regarding which vendors would be appropriate to pursue as "primary vendors" for the Lehigh campus. Tim reported that the evaluation portion of the project is virtually completed.

**Software Requests:**

Jim Hall represented a request for LIMDEP, a statistical package for microcomputers, but suggested that we defer a final recommendation pending LUCC's evaluation of the product. Celal Kostem recommended that LUCC acquire TK SOLVER for evaluation. He and Tim Foley will obtain a demo disk. Tim Foley moved that the CCAC approve \$2000 to acquire WordMARC (micro MUSE) for the LUCC microcomputer classroom. The Committee tabled the motion pending the demonstration scheduled for later in the meeting.

**Financial Report:**

Gary Lutz distributed the financial report for December, 1984, pointing out that although Educational use was essentially on target as a whole, its two components, Instructional and University Sponsored, were dramatically below and above budget, respectively. Some discussion followed as to why this might be the case. No firm conclusions were drawn.

**Usage Policy Statement:**

Tim Foley formally requested that the subcommittee on usage policy report its findings by the next meeting.

**WordMARC Demo:**

Bob Kendi demonstrated the features of WordMARC. The motion to acquire it for the LUCC microcomputer classroom was untabled and unanimously passed.

OPERATIONAL STATISTICS

CYBER 730

	<u>12/84</u>	<u>1/85</u>
Time System Available		
During Scheduled Hours		
(Percentage)		
Batch	99.9	99.9
Interactive	99.9	99.9
Mean Time Between		
Interruptions (Hours)		
Batch	144.1	362.9
Interactive	96.0	181.4

DECSYSTEM-20

	<u>12/84</u>	<u>1/85</u>
Time System Available		
During Scheduled Hours		
(Percentage)	96.4	95.8
Mean Time Between		
Interruptions (Hours)	54.6	57.1

USAGE STATISTICS

CYBER 730

	<u>12/84</u>	<u>1/85</u>
BATCH -		
Jobs Processed	9,011	9,592
INTERACTIVE -		
Terminal Sessions	15,161	13,341
Terminal Connect Hours	7,786	7,179
CPU Hours - Batch	120.9	146.6
- Interactive	121.4	69.4

DECSYSTEM-20

	<u>12/84</u>	<u>1/85</u>
Terminal Sessions	16,857	12,488
Terminal Connect Hours	8,730	5,642
CPU Hours - All Jobs	189.2	129.9

