Computing Center Newsletter   LTS Publications

10-22-1980

User Services External Report
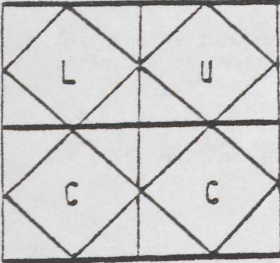
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MWE

USer SErvices EXternal Report

COMPUTING CENTER DIRECTORY

Information About Policies and Plans
Office of the Director
    Director   861-3830
        Dr. Ben L. Wechsler
    Associate Director   861-3990
        William R. Harris

Information About Bills Received
Administrative Assistant   861-3825
    Joseph P. Holzer
    Annette L. Rune

User Consultants
    Timothy J. Foley   861-3994
    Emilie S. Melvin   861-3992
    Robert A. Pfenning   861-3991

Information About Programs in the Computer Libraries
Data Processing Librarian   861-3993
    Margaret W. East

Systems Status. Technical Information
On-duty Consultant   861-4141

General User Information
User Services Secretary   861-3990
    Judy K. Allio

Information about Operational Policies
Operations Manager   861-3989
    Carol D. Rauch

Information About Tapes and Supplies
Operations Admin. Assist.   861-3986
    Kathy M. Horwath

On-Campus Computer Access (110/300 Baud)
    CDC 6400   Ext. 4000
    DEC 20   Ext. 4020
    PDP 11/34   Ext. 4011

Off-Campus Computer Access
    CDC 6400 (110/300 Baud)   691-5600
             (1200 Baud)   691-5806
    DEC 20   (110/300 Baud)   868-2250
    PDP 11/34 (110/300 Baud)   868-9350

On-campus users who wish to continue to receive future issues of USER must either return the subscription form from the last USER, or complete the subscription form at the end of this issue. If neither form is received from the user, his or her name will be deleted from the mailing list. Please be sure you continue to receive USER!

STAFF CHANGES

Unfortunately, from time to time, the departure of a staff member must be announced. Ned Deily, Senior Systems Programmer, has accepted a position with Control Data Corporation in Arden Hills, Minnesota. He will be part of the NOS/BE operating system software development group. Ned, a graduate of Lehigh, has been with the Computing Center as a full-time employee for five years, most recently being the person in charge of the accounting systems on the CDC 6400 and the DEC 20, and the TOPS 20 operating system on the DEC 20. Ned's expertise will be missed. We wish Ned happiness and good luck in his new position.

We would like to introduce the Computing Center's users to five new staff members. Linda Hanner, a recent graduate of Saucon Valley Senior High School, joined the Administrative Services group as a secretary. Last year Linda worked for the Computing Center as a secretarial assistant under a Co-op program. Susan Rohrbach became a full-time member of the Operations group, serving as a Junior Computer Operator. Sue worked for the Computing Center last year as an Operations Assistant under a Co-op program with the Bethlehem Area Vocational-Technical School. Sue is a recent graduate of Northampton High School. Replacing Sue as Operations Assistant is another Co-op student, Charmaine Kucsan from Bethlehem Area Vo-Tech and Saucon Valley Senior High School. Assisting the User Services group as a part-time clerical assistant is Matilda Petruno. Her prior work experience includes Lehigh's Admissions Office and the First National Bank of Allentown (Saucon Valley Branch). Arriving from Pennsylvania State University after graduating with a Bachelor of Science Degree in Computer Science, Wayne Mery

joins the Programming group as a Systems Programmer. Welcome aboard to all of the new employees.

DIRECTOR'S DISCOURSE

by Dr. Ben L. Wechsler

There are only two major items to be reported on following the comprehensive review of LUCC activities as described in the August 15 issue of USER. The first is a progress report on the CDC 6400 replacement actions; the second is the new LUCC Five-Year Plan. Unfortunately, this issue goes to press before the Board of Trustees meeting later this month and, therefore, final approval of the replacement action has not yet been obtained. Nevertheless, LUCC must continue planning and implementing activities if the replacement schedule is to be met once Board approval is received.

Progress on the CDC 6400 replacement:

- Training of selected personnel in LUCC on the IBM 4331 system has been started. This will be an ongoing activity through the rest of this year.

- Renovation and expansion of the machine room is under way. Renovations are scheduled for completion by November 30. Relocation of existing equipment is scheduled for completion early in December prior to installation of the IBM 4331. The latter is scheduled for completion by January 5, 1981.

- The establishment of the reference library for the IBM 4331 has been started, and the basic reference material should be in place prior to installation of the system.

- The communication network for the IBM 4331 is well into the detail layout stage, and it will be in place prior to system installation. This plan includes the installation of four terminals to the 4331 in the Christmas-Saucon terminal site, two in each 80-81 and 81-82.

- Work has started on bringing the NOS/BE operating system and the new compilers up on the CDC 6400. Our current plans are to bring this software up on the CDC 6400 prior to the installation of the CYBER 720. We are planning to conduct seminars for the campus on this operating system should any be necessary prior to bringing it up. Additionally, the preliminary investigation of the alternatives for the new plotter has been completed. A report on this investigation will be rendered to the CCAC in the near future, and we are shooting for a decision on the plotter replacement from the CCAC prior to December.

The LUCC Five-Year Plan:

The LUCC Five-Year Plan for 1980-81 to 1984-85 has been completed. While the question of the

CDC 6400 replacement is still subject to approval of the Board of Trustees, the plan provides for the following major actions:

(1) **First Priority** - The CYBER 720 and IBM 4331 Systems:

80-81 1. The IBM system

2. Added Systems Programmer and Operator for the IBM 4331

3. New Plotter

4. 12 Public Terminals

5. 10 Administrative Terminals

6. Renovations (Machine Room, Faculty Work Space, Customer Engineers, Christmas-Saucon)

81-82 1. The CYBER 720 System

2. Added Technical Consulting Services

3. Interactive Site Grace Hall (31 Public Terminals - Total Added)

4. 7 Administrative Terminals

5. Education and Research Software Acquisition

82-83 1. Interactive Site Taylor Hall (10 Public Terminals)

2. 7 Administrative Terminals

83-84 1. 15 Public Terminals

2. 7 Administrative Terminals

84-85 1. Dual CYBER 720

2. 15 Public Terminals

Budget Cost, First Priority : $1,259,000

(2) **Second Priority** - Incremental upgrades to the DEC 2060 System:

81-82 8 ports, 1 disk drive

82-83 8 ports, 1 tape drive

83-84 512K main memory, 1 disk drive

84-85 8 ports

Budget Cost, Second Priority : $144,000

(3) **Third Priority** - Terminal replacements:

83-84   5 terminals   10 modems

- 2 -

84-85 10 terminals   20 modems

Budget Cost, Third Priority : $15,000

(4) Fourth Priority - Public graphics site:

83-84 2-4 low cost graphics
       terminals, 1 digitizer

84-85 1 plotter, 1 color
       graphics terminal

Budget Cost, Fourth Priority : $34,000

(5) Fifth Priority - Electronic communi-
    cations network:

82-83 Install the LUCC electronics
       communication network

Budget Cost, Fifth Priority : $56,000

(6) Sixth Priority - PDP 11/34 upgrade:

82-83 Tape drive for the PDP 11/34

Budget Cost, Sixth Priority : $14,000

(7) Seventh Priority - Air conditioning:

82-83 Air condition User Work Area,
       Packard Lab

Budget Cost, Seventh Priority: $24,000

Administrative Systems

by P. W. Sire

The Information Associates, Inc. (IAI) Billing
Receivables System (BRS) is an integrated set of
computer programs which encompass both the billing
and accounts receivable functions in a college or
university environment.   At Lehigh, BRS will
provide all the required support for student
billing; the system will also be used to bill other
individuals and organizations, both internal and
external to the University.

Automatic links from this system into other
related systems, such as Financial Accounting (FAS)
and student academic and demographic records (SRS),
minimize data handling and redundant auxiliary
storage.

The BRS Project is to begin November, 1980 and
is targeted to be operational in time to accomplish
Fall '81 billing in July. The Project Team and
supporting committees are staffed as follows:

Team

Contract
  Administrator   J. Woltjen   V.P.-Treasurer
Project Manager   J. Petronio   Bursar
Functional
  Specialist   D. Krause   Bursar
Librarian   N. Dwyer   Accounting Clerk
Technical   W. Hoffman   Senior Systems
  Specialist   Analyst

Implementation Committee

* J. Petronio   Bursar
  C. Biser   Associate
                 Registrar
  W. Stanford   Director,
                 Undergraduate
                 Financial Aid
  R. Jones   Director,
                 Fraternity
                 Mgt.
                 Association
  T. Hill   Controller
  B. Kreppel   Assistant Director
                 Director,
                 Residence Halls
  B. Richards   Director,
                 Libraries
  R. Bell   Director,
                 Bookstore
  S. Missimer   Director of
                 Admissions
  M. Heaps   Director, Food
                 Services
  C. Christian   Manager, Trans-
                 portation
                 Services

Technical Committee

* W. Hoffman   Senior Systems
                Analyst
  G. Fullman   Manager, Control
                Group
  P. Sire   Director, Admini-
                strative
                Systems
  R. Gruver   Senior Systems
                Analyst

* Indicates Chairman

Additional Seminars This Fall

In response to the demand for more
introductory training in text formatting these
three additional seminars have been scheduled:

Introduction to the DEC 20
    November 4 and 5   4:10 PM - 5 PM
    Room 208, Packard Lab

Introduction to EDIT on the DEC 20
    November 11 and 13   4:10 PM - 5 PM
    Room 208, Drown Hall

Text Formatting Using SCRIBE
    November 18, 20, and 25   4:10 PM - 5 PM
    Room 208, Drown Hall

Note that these seminars form a series with each seminar serving as a prerequisite for the next one unless the user is already familiar with the material. Enrollment in the Introduction to EDIT and SCRIBE seminars is limited and advanced registration is required. Contact User Services, Room 117, Packard Lab.

Computing Center Consultants

User Services provides consulting services to the Lehigh community. Consultants are located in Packard Lab and at Grace and Taylor Remote Batch Facilities. (Refer to the monthly operating schedule for availability.) Consultants will:

- answer questions about opening a computer account and distribute the appropriate forms

- handle inquiries about the current system status

- interpret error messages and explain programming problems

- aid in using the library index and the selection of documentation

- follow up on questions that cannot be answered immediately

- facilitate the use of the Diablo terminal and Techtran Tape Unit in Packard Lab

- assist in the operation of the remote site facilities

Consultants should not be expected to:

- debug logic

- write programs

- interpret course assignments

Consulting on the Hotline (X4141) can be difficult and frustrating for the consultant and the user. To alleviate some problems, users should indicate:

- which system they are using (DEC 20, PDP 11/34, CDC 6400)

- the type of terminal (FOX, DECwriter)

- the site (Drown, Williams, etc.)

- the language used (FORTRAN, PASCAL, BASIC)

- the current mode (input, edit, command)

Problems must be described very accurately so the consultant can visualize what is happening. In some cases it will be impossible for the consultant to determine a solution over the phone. If this occurs, please cooperate with the consultant and bring a listing of your problem to Packard Lab.

RUN, RUNT, and FTN3 Users

The Computing Center is considering the phasing out of the RUN, RUNT, and FTN3 compilers with the installation of the CYBER 720 this summer. We are currently in the process of installing a new FORTRAN compiler, M77, and are planning on installing FTN5 on the CYBER 720.

RUN and RUNT users should note that there is a CDC utility program called SIFT which converts RUN and RUNT programs to FTN4. Documentation for this program is available in the Packard Lab Reference Area. FTN3 users should note that programs and subprograms compiled with FTN3 cannot be used with those compiled with FTN4. Also, data files written with unformatted write statements in FTN3 cannot be read with an unformatted read statement in FTN4 and vice versa.

Users who anticipate significant problems in converting RUN, RUNT, or FTN3 programs to FTN4 should contact Tim Foley at User Services (X3994).

Policy Changes for Tape Users

As has been announced in past issues of USER, tape storage space within the computer room is at a premium. LUCC would like to thank the individuals who voluntarily removed tapes from the computer room. Unfortunately, not enough tapes were removed necessitating the generation of the following policies approved by the Users' Subcommittee:

1. Users storing tapes in the computer room after October 1, 1980 have the following limitations:

	Max. # Tapes Held	Release Date (Retention)
Graduate/Under-graduate Students	3	2 years
Faculty	6	indefinite
Lehigh Staff	3	indefinite
Other	6	indefinite

Users storing more tapes than the above guidelines will be contacted individually by LUCC during the next year.

2. Tapes that have not been used for six months or have reached the release date will be removed from the computer room to an expired holding area, and a notice will be sent to the owner requesting the tapes be picked up. If the tapes are not picked up within three months, they will be tagged with the address of the user and mailed through the campus mail. (If the volume of unclaimed tapes is excessive, a second notice will be sent to the owner. If the tapes remain unclaimed, they will be discarded rather than mailed.) When mailed, tapes will not be boxed or any protective wrapper placed on them. LUCC does not recommend this method of retrieving your tapes as extensive damage may occur. Since the expired holding area will not be in the computer room, jobs requesting an expired tape will be dropped. If you

find yourself in this situation, contact Kathy Horwath, between 10 AM - Noon and 1 PM - 3 PM Monday through Friday (X3986) to retrieve your tape or extend your release date.

3. Effective October 20, 1980, yellow submission cards are no longer required for batch jobs which utilize magnetic tape. If a user wishes to require continued use of a submission card for reading and writing tapes (to provide a redundant check), arrangements must be made with Kathy Horwath to place a red sticker on each reel of tape involved. Tapes with these red stickers will not be mounted unless a yellow submission card accompanies the batch job. If cards are submitted for tapes without the red sticker, the cards will be ignored, i.e., tapes will be mounted based upon the information contained in the job's REQUEST or LABEL cards.

In addition to the above policies, the following procedures are being established:

1. The tape volume serial number (VSN) assigned to user tapes will be six characters AAANNN where: AAA are the user's initials; NNN are numbers uniquely assigned within the series AAA. Users that already have VSN's other than described above will be permitted to continue using their present VSNs until the tapes are removed from the computer room.

2. For temporary storage, users may save an LUCC tape for seven calendar days. These tapes may only be used via a submission card request.

Operations Observations

CDC 6400

In light of the increased demand for off-hours processing, the long hours schedule has been revised so that off-hours jobs now start at 9 PM on Monday through Thursday evenings. This represents four additional hours for off-hours work. Remember that operator support is extended also to 1 AM on Tuesday through Friday mornings under the new long hours schedule.

DEC 20

As part of the renovation of the machine room in preparation for the arrival of the IBM 4331 system, the DEC 20 mainframe must be moved. This move is scheduled for the three day period from Monday, December 15 through Wednesday, December 17. DEC 20 service will be unavailable during that time period.

Changes in Access Policies

All Systems

In July, the Computing Center Advisory Committee issued a policy statement regarding classification of the use of Computing Center facilities. President Lewis approved the policy statement. All users are urged to comply with the provisions of this statement. Copies were sent to all faculty and staff members. They may be obtained also from User Services. The policy will be incorporated in the Account Executive Guides for the different systems as they are revised or issued.

CDC 6400

To improve the flexibility of the public instructional authorization, 1234, the prime processing hours central memory limit has been increased to 50000 octal words. This permits use of the PASCAL and M77 compilers.

DEC 20

The directory LEHIGH proved to be of little value (no disk space was authorized since files thereon could be deleted by any LEHIGH user). Thus, the directory was eliminated with the approval of the Users' Subcommittee.

Documentation Doings

Since the last issue of USER, two new Technical Bulletins have been published, and one has been significantly revised.

Technical Bulletin Number 11, Small Permanent File Manager, was written by Matthew K. Wilson to serve as a user's guide to the small permanent file software PFMGR (J90049) and PFMCCP (J90050) on the CDC 6400. This software permits users to easily store files in the minimum total amount of disk space.

Technical Bulletin Number 16, Guidelines for Preparing Master's Thesis on the DECSYSTEM-20, was written by Gary C. Fisher and revised by Emilie S. Melvin. This Technical Bulletin describes how users may utilize the SCRIBE text formatting software on the DEC 20 to prepare a thesis on the line printer in a format acceptable to Lehigh's Graduate School.

As a result of the recent policy clarification regarding the classification of computer usage (see article elsewhere in USER), Technical Bulletin Number 12, the CDC 6400 Account Executive's Guide, has been revised.

Users are reminded that all Technical Bulletins are available without charge in the User Services' office, Room 117, Packard Laboratory. An on-line listing of Technical Bulletins is available via the SYSBULL,DOCMNTS. command on the CDC 6400.

From the Librarian

CDC 6400 - Modified Programs

SPSS - Statistical Package (G00006)

Version 8 of SPSS has been installed. There is no SPSSMAX under Version 8; rather the one program now handles the maximum number of variables. The following is a brief summary of changes and additions:

Changes
General

Alphabetic Values	Now limited to 8 characters
Transformation Errors	Results different from Version 7
Abbreviated Output	80 column output for terminals

Tasks

CODEBOOK	No longer available
DISCRIMINANT	Completely rewritten
NPAR TESTS	Probability computed differently
OSIRIS VARS	Dictionary required for edit run
RELIABILITY	Space saver solution now default
ANOVA	Subcell means now obtained
CROSSTABS	Output options added
DO IF, ELSE, ELSE IF, END IF	Conditional execution implemented
FREQUENCIES	Values can be printed in various order
N OF CASES	Not always required
PLOT	New statistic available
SAMPLE, *SAMPLE	Now allows random sample selection
SUMMARY TABLES	New option suppresses grid lines
VALUE LABELS	Limited redefinition possible

Additions
Tasks

REPORT	Report writer feature

COPYRM - Record Manager Copy (J90023)

The copy utility which uses CDC's record manager routines, COPYRM, has been modified to correct problems caused by unequal input and output record lengths and by record lengths which are not a multiple of 10 characters.

IMSL - Mathematics Library

The IMSL library is now directly available to all FORTRAN programs. It is no longer necessary to ATTACH the library file and use an LDSET(LIB=) control card. These cards should be removed from existing job card records. This change avoids the confusion arising from the necessity to use the library compiled with the same FORTRAN compiler being utilized in the user's job.

CDC 6400 - Note to LEAPS Users

The capability of utilizing user-supplied subroutines in a LEAPS job requires the use of the FTN3 compiler. Thus, LEAPS(MYOWN) jobs now must contain an OLD(FTN) control card before the LEAPS(MYOWN) control card. (See article elsewhere in this issue of USER regarding the future availability of FTN3.)

DEC 20 - New Programs

IQL - Interactive Query Language (L20020)

Version 3A of IQL (Interactive Query Language) has been installed. This software is an information retrieval and report-writing system that processes one or more input files according to an English-like formatted QUERY request. This system is designed to extract, summarize, reorganize, report, and/or copy information from sequential, ISAM, or DBMS data files. There are three IQL HELP files available on-line. Enter HELP IQL? to obtain their names. Copies of Introduction to IQL and the IQL User's Guide are available in the Packard Laboratory Reference Area.

APLSF - A Programming Language (L20018)

APLSF, an enhanced version of APL, is an interactive programming language developed by K. E. Iverson and originally implemented on IBM equipment. It handles both numeric and character data, in scalar, vector, or matrix format. The language is rich in various mathematical and manipulating functions. It has a unique character set, but it can be used on standard terminals. Documentation is available in the Packard Lab Reference Area.

SCRIBE - Text Formatter (Z00016)

SCRIBE is a document preparation software package obtained from Carnegie-Mellon University. It is a more powerful and flexible text formatter than RUNOFF. It is designed for the preparation of academic and technical manuscripts.

As a service to those users preparing a Master's thesis, a document type has been established which creates line printer output that satisfies Graduate School requirements. Technical Bulletin Number 16 describing this feature is being prepared. This TB should be published by the end of October and will be available without charge from User Services, Room 117 Packard Lab.

A manual documenting SCRIBE is available in the Packard Lab Reference Area. By entering HELP SCRIBE the user will receive instructions for running SCRIBE and a list of switches which may be used.

NOTE: SCRIBE has been installed as a category 5 software product, which means that it is unsupported. Reported problems with the software will probably not be fixed. Also, some of the options described in the manual are not available in the installed version of SCRIBE.

MORGAG - Mortgage Analysis (T50014)

A new category 5 (unsupported) program, MORGAG, has been added to the system. This is a mortgage analysis program. Documentation is available in the Packard Laboratory Users' Area.

DEC 20 - Modified Programs

COBOL 68, SORT, DBMS

Three major software packages have been updated to correct reported problems. They are:

COBOL 68	Version 12A
SORT	Version 4B
DBMS	Version 5A

The prior versions of these packages will remain in OLD: until November 1.

PDP 11/34 - New Program

APL - A Programming Language (L20019)

APL on the PDP 11/34 is similar to APLSF on the DEC 20 (see article above), but does not include some special functions. Documentation is available in the Packard Lab Reference Area.

OPERATIONAL STATISTICS

CDC 6400

	8/80	9/80
Time System Available During Scheduled Hours (Percentage)		
Batch	99.3	99.7
INTERCOM	98.5	99.3
Mean Time Between Interruptions (Hours)		
Batch	82.6	82.1
INTERCOM	10.9	15.8

DECSYSTEM-20

	8/80	9/80
Time System Available During Scheduled Hours (Percentage)	99.9	99.9
Mean Time Between Interruptions (Hours)	162.0	198.2

PDP 11/34

	8/80	9/80
Time System Available During Scheduled Hours (Percentage)	78.6	99.5
Mean Time Between Interruptions (Hours)	28.7	56.6

USAGE STATISTICS

CDC 6400

	8/80	9/80
BATCH -		
Jobs Processed	16,169	45,402
Central Site	11,047	24,685
INTERCOM -		
Terminal Sessions	4,395	6,232
Connect Hours	2,104	2,387
CPU Hours - Batch	277.1	253.9
- INTERCOM	21.4	14.6

DECSYSTEM-20

	8/80	9/80
Terminal Sessions	5,441	15,239
Connect Hours	2,134	5,188
CPU Hours - All Jobs	63.3	81.9

PDP 11/34

	8/80	9/80
Connect Hours	1,957	2,694
CPU Hours	233.1	185.0