OREGON STATE UNIVERSITY
COMPUTER CENTER NEWSLETTER

TABLE OF CONTENTS

NEW BUILDING HOURS
    I/O counter service, user keypunch room and terminal room will
    be open continuously from 7:30 a.m. Monday through 2:00 a.m.
    Saturday.

JANUARY/FEBRUARY NEWSLETTER
    No, you did not miss the January/February Newsletter, it was
    not printed. This is the first issue of 1976.

MANAGER OPERATING SYSTEMS DEVELOPMENT RESIGNS

Jeff Ballance, manager of systems software has resigned effective February 29, 1976.

Jeff has been an asset to the Center and the many users he has so willingly helped. The best of luck throughout your career, Jeff.

FREE CONSULTING SERVICE

The Computer Center provides consulting for users in Room 211 of the Computer Center Monday through Friday from 10:30 a.m. until 4:30 p.m. The consulting staff includes professional programmers and graduate assistants who can assist users with a variety of questions. The consultants cover such areas as - SIPS, SPSS, Graphics, and job control for the 3300 and CYBER, all common programming languages.

Users requiring assistance should be prepared with specific questions. The consultants cannot provide programming services in the sense of writing programs for users, nor can they become involved in extensive program debugging for users.

Problems that are outside the scope of the Center's free consulting service will be referred to the application programming groups or the appropriate consulting group which offers programming and analysis services.

SOME INFORMATION ABOUT INSTRUCTIONAL COMPUTER TIME

Forms for requesting instructional computer time for Spring Term are in the hands of department coordinators.

A coordinator is appointed for each school or department and is responsible for collecting requests for instructional computing time from each faculty member in his unit. Computer time is distributed by a campus-wide Computer Committee appointed by the Dean of Administration. Adjustments or new requests are accepted if changes in enrollment occur during the term.

SEARCH FOR DIRECTOR CONTINUES

The Computer Center Director Search Committee under the chairmanship of Dr. Lyle Calvin, Statistics Department, has been active for the past several months. At this time the search is still in progress.

COMPUTER CENTER DIRECTORY

GENERAL INFORMATION 2494
CUSTOMER SERVICES (Job numbers, etc.) 3483
TERMINAL CONNECTION 2033
TAB MACHINE ROOM 2126
TELETYPE MAINTENANCE 2455, 2494
COMPUTER SERVICES ACCOUNTING 2638
PUBLICATIONS DISTRIBUTION 1183
MAGNETIC TAPE LIBRARIAN 3584
OPSCAN/TEST SCORING 2494
DIGITIZING 1156
I/O ROOM 3584
OPERATIONS 2494
PROGRAMMING SERVICE 2494
ACADEMIC SERVICES AND CONDUIT 2161

TIME SHARING SERVICES

CYBER 73	300 Baud		754-3781
	110 Baud		754-3761
	2400 Baud		752-9828
3300	300 Baud	754-3651	754-3536
	110 Baud		754-1111

ADMINISTRATIVE PERSONNEL

ACTING DIRECTOR, Ron Davis
SYSTEMS SOFTWARE,
OPERATIONS AND PROGRAMMING, Ron Davis
HARDWARE AND COMMUNICATIONS, Jim Fryklund
ADMINISTRATIVE SYSTEMS, Tony White
INSTRUCTIONAL SYSTEMS, JoAnn Baughman
BUSINESS MANAGER, Mike McQueen

REQUESTS FOR COMPUTER TIME FOR UNSPONSORED RESEARCH

The Computer Center has a limited amount of funds available for
unsponsored research computing in order to support faculty and
graduate research activities which are not supported by other
sources.

Application forms for unsponsored research are available in
room 217 (Main Office) of the Computer Center.

CONVERSION PROJECT

CONDUIT/Oregon staff at the Computer Center is involved in two
projects directly affecting Center users. They are:

1) Assessment of the impact of CDC 3300 on the users.

2) Coordination of the programmer support to assist OSU
   faculty in converting programs from the 3300 to the CYBER.

If you have any questions or would like more information, call
Conversion Project at 2161.

── **SOFTWARE**

DYNAMO II

Dynamo is a compiler for translating and running continous models
(any models described by a set of differential equations) for
the simulation of dynamic feedback models of business economics
and social systems.

The Cyber supports Dynamo II_F which is a FORTRAN based version.
For information call x1650.

QUEUEING CHANGES

In addition to the rates and hour changes the following queueing
changes were implemented for OS-3 March 1, 1976; the "NITE" queue
runs only during the 3rd shift (11:00 p.m. - 4:00 a.m.) on weekdays
and no longer runs on weekends. A new queue called "LOW" is
available, and runs from 5:00 p.m. to 4:00 a.m. on weekdays and on
weekends. Example of job cards for each queue:

$^7_8$JOB,NITE,<Job #>,<User ID>,<Name>   (Job will run during 3rd
                                            shift.)

              or

$^7_8$JOB,LOW,<Job #>,<User ID>,<Name>   (Job will run during 2nd
                                           shift.)

4

BMD AVAILABLE ON CYBER

The Biomedical Computer Programs (BMD) 1973 version are available
for public use (BMD07R, 11-14S and 08-10V are not yet operational).
These programs were developed at UCLA to perform extensive
statistical analysis of large data sets.

The BMD manual must be ordered from the University of California
Press at Berkeley. To use BMDxxx:

    GET,BMDxxx/UN=LIBRARY.
    BMDxxx.

HOW TO USE THE GERBER 1022 PLOTTING SYSTEM

The general characteristics of the Gerber 1022 system are:
1) 48 inch x 58 inch rubber platen plotting area with vacuum
   hold down of the paper.

2) Maximum plotting speed of 600 inches per minute.

3) Positional accuracy of $\pm.005$ inches and repeatability of
   1.003 inches.

Users wishing to create plot tapes for the GERBER flatbed plotter
on either the 3300 or CYBER systems must use the following
routines for supplying required labeling information. Without
this information plots can not be run on the plotter because of
insufficient operator information.

The sequence on OS-3 is:

    $_8^7$EQUIP,<lun>=MT 1 at 556, W GERBER PLOT TAPE

    $_8^7$*GLABEL,I=<info-lun>,O=<plot type lun>

On KRONOS the sequence is:

    REQUEST,<lfn>,F-S,D=556,PO=W, GERBER PLOT TAPE

    GET,GLABEL/UN=LIBRARY

    GLABEL,<lfn>,<lfn for info>.

The <info file> must contain:
1. Users name, address, phone, job number (validity code is
   not needed).
2. Number of plots and number of copies of each.
3. Paper used for plots will be 'translucent'. Other plotting
   material will have to be special ordered or supplied by the
   user.

5

4. Pen type. Specify either 'ball point' or "wet ink". If "wet ink", specify pen size:

      0.2 mm for an EXTRA FINE LINE

      0.4 mm for a FINE LINE

      0.5 mm for a MEDIUM LINE

      0.6 mm for a MEDIUM BROAD LINE

      1.0 mm for an EXTRA BROAD LINE

The 1.0 millimeter line is the largest width line provided on the plotter.

5. Shipping Instructions:

    a. Hold at Computer Center for pick-up.

    b. 1st Class Mail (Give address and zip. Postage will be billed at cost plus shipping tube.)

    c. Send via Shuttle (give address).

    d. Send via UPS (give address. Billed at cost of service plus shipping tube.)

6. Special Instructions: Any special comments.

Note: Max file size is 20 lines at 80 characters per line.

To put multiple plots on tape:

1. Do not rewind the tape.

2. Call "PLOTEND" in "COMPLOT".

3. Execute the next plot.

4. Note that multiple plots must be created within the same job.

Costs:

Plotter time will be billed at $10.00 per hour of wall clock time. Materials will be charged at cost unless supplied by the user. Reruns due to tape, machine or operator problems will not be charged.

Turnaround:

The amount of time it takes for any job to be completed is determined by the quantity and complexity of job to be run. Normally, jobs are run on a first come, first served basis.

NEW VERSION OF OS-3

A new version of OS-3 is due to be released in the near future.
A few new features have been incorporated.

1) MESSAGE - Users currently can send messages to the operator
   with a control mode statement of the form:

   MESSAGE, OPR, <message>

   The message will be displayed on the operator console and the
   user is stopped until the operator responds. If the operator
   does not reply within two minutes, the message:

   TIME OUT - TRY AGAIN LATER

   will be given to the user and he will be restarted.

   To send messages to other users, a statement of the form:

   MESSAGE,<terminal number>, <message>

   will send a message to the user logged on to logical terminal
   <terminal>. A message can be sent to any other logged on
   user. Once a user receives a message, he is blocked from
   receiving any other messages until he sends one himself or
   types:

   MESSAGE, ON.

   Users may disable the message receiving capability by typing
   MESSAGE, OFF. Users wishing to have their job numbers
   permanently blocked from receiving messages can do so by
   contacting Gayle in MCC 140, x3483. For more information, type
   HELP, MESSAGE.

2) TAPE ACCOUNTING - OS-3 will begin recording all tape equips,
   much as forms requests are now recorded. At the end of each
   month, users will receive a log of all tape equips during the
   month, including date and time, read/write status and job
   number and terminal equipped from.

3) ACCOUNT VALUE - When logging on to OS-3, users will now
   receive the dollar value of their OS-3 account along with the
   date and terminal number.

4) $GRIPE - Users can send in complaints, suggestions, or questions
   with the program $GRIPE. Responses will be made to gripes
   submitted, either personally or in the newsletter.

PROPOSED OS-3 PLOT LIBRARY CHANGE

Due to the increased popularity of the COMPLOT plotting package, we are considering placing it on the system library (*LIB). To do this, we would be required to remove the plotting routines currently on *LIB. Users with calls to TEKPLOT routines as well as to Fortran plot routines will be required to load special libraries in order to use their programs, and users now using *COMPLOT would no longer need to load the COMPLOT library. We anticipate making this switch about July 1 of this year. User response to this proposed change is welcome. Please direct any comments, suggestions, or questions to Guy Lauterbach, x2494.

KRONOS 2.1.2 RELEASE

The new release of KRONOS (CYBER) due June, 1976, is labeled KRONOS 2.1.2 and will contain several desirable features for users. These will include elimination of redundancy among 029 punch character tables, TEXT EDITOR support for editing the full 128 character set, and an improved output listing format for TTY users of FTN. This improvement in capabilities will be accompanied by an initial period of changes for CYBER users. The areas of greatest change will be:

1) A character set change and consolidation (63- or 64-character set).

2) Loader changes.

3) 029 punch character set change.

4) Various new control cards (USER, ENQUIRE, CONVERT, etc.).

5) Some new parameters on existing control cards.

6) More accurate accounting.

7) Interactive FORTRAN replaced by FTNTS.

8) New TTY output formats for FTNTS.

9) BASIC language changes (including full ASCII support).

10) TEXT EDITOR changes.

A survey of existing CYBER software local to OSU is currently being made to determine if any user changes will be required in these packages.

To insure an orderly changeover, the Computer Center is currently working out a schedule that will include considerable testing before release, together with a period of concentrated systems support immediately following release. This systems support will be coordinated with the CYBER consultants to provide a maximum

of user help during the changeover. This changeover schedule
will be released in the future when it has been finalized, but
the switch will not occur before the end of Spring Term.

A detailed analysis of the changes, together with examples, will
be written up and released for the benefit of users' planning.
Following this document, users with unusual or difficult conversion
will be urged to contact the Center for additional information
and assistance.

USER OPERATIONS & SERVICES

PRODUCTION JOBS

In order to facilitate the users' scheduling of jobs, the
following production schedule of large Computer Center jobs is
being presented. Whenever possible the jobs will be run 2nd or
3rd shift.

RUN DATE	DESCRIPTION	TIMES
3/22	Grade Processing	8 hrs.
	Grade Mailers	1 hr.
3/23	Grade Labels	1 hr.
3/24	Student Billing	5 hrs.
	4H	1 hr.
3/24-3/26	Student Schedules	6 hrs.
3/25-3/27	Official Registration Lists	16 hrs.
3/26-3/27	Grade Reports	4 hrs.
3/27	Student Schedule	5 hrs.
3/31	4-H	2 hrs.
4/2	4-H	1 hr.
4/9	4-H	2 hrs.
4/16	4-H	1 hr.
4/20	4-H	4 1/2 hrs.
4/23	4-H	1 hr.
4/30	4-H	2 hrs.

ATTENTION OSU TELETYPE USERS

The Computer Center has implemented a new front-end computer communications system. The communications system is being extended so that the user will be able to access either OS-3 or KRONOS without manual patching. Currently, the system runs during the normal operating hours and provides communication with OS-3 only. However, if your teletype is running open (chattering) or no response, then please call x2033 and ask to be patched into the desired system (KRONOS or OS-3). This condition may occur during the checkout of the aforementioned extensions which will normally be before 9:00 a.m.

EDUCATIONAL ACTIVITIES

VIDEOTAPE INSTRUCTION SCHEDULED

The videotapes on Introduction to OS-3 and Introduction to FORTRAN will be shown on Cable TV beginning April 19. Details of time and channel will be announced in the OSU Staff Newsletter.

SPRING SERIES OF SHORTCOURSES SCHEDULED

The Computer Center will offer a Spring series of shortcourses which are designed for the relatively inexperienced computer user. The sessions will begin April 5 and will be ordered so that information required in the later sessions is presented in earlier sessions.

There is no fee, but advanced registration is required. Enrollment will be limited to the first twenty applicants. The last page of this issue is a registration blank. Additional registration forms are available in the Computer Center office.

All classes will be held from 3:00-4:30 p.m. on the dates listed below. The Center will furnish computer job numbers for the applicants when required for the training session. User numbers will be distributed at the first meeting of the course and remain active until seven days following the last meeting. Users will purchase the necessary manuals for the courses.

Shortcourses will be canceled if less than six participants enroll. If you have any questions, call Joanne Hayes x2494 or JoAnn Baughman at x2161.

SCHEDULE OF SHORTCOURSES

The Cyber Shortcourses will all be held in Rm 223 of the Computer Center, except as noted below.

K-1. Introduction to KRONOS 2.1   April 6

       Job Numbers - Validation and Control
       Manuals
       Languages and Systems Available
       Batch Processing
          Control Card Format

K-2. FORTRAN Under KRONOS 2.1   April 8

       Parameters and Options Available
       Creating Files
       Reading and Writing Files

K-3. Magnetic Tape Usage Under KRONOS 2.1   April 13
      (2 sessions)   April 15

       Tape Formats
       Reading and Writing Tapes
       Tapes from 3300 to Cyber
       Tapes from Cyber to 3300

K-4. Interactive Computing Under KRONOS 2.1   April 20
      (2 sessions)   April 22

       Text Editor
       Editor
       FORTRAN

K-5. Libraries Under KRONOS 2.1   K292B   April 27

       Creating Binary Files
       Loader
       System Libraries
       User Libraries
       Program Libraries

K-6. Modify and Debug Under KRONOS 2.1   K292B   April 29

       Maintaining and Debugging Programs
       Procedures

K-7. Introduction to SPSS Version 6.0   April 27
      (3 sessions)   April 28
                                   April 29
       The Statistical Package for the Social
       Sciences is a self-contained problem-
       oriented language for the analysis of
       statistical samples. The control cards
       for using SPSS, local differences and
       various kinds of analysis available
       through SPSS will be discussed.

OS-3 Shortcourses

O-1.   Introduction to Interactive Computing   April 5
       (2 sessions)   MCC 223   April 7

> The session will contain information which can enable you to make full use of the OS-3 system. It will include information related to equipping logical units, file definition, remote batch, use of mag tapes, manipulating files, keeping the file directory, your use of end-of-file in status, program library, purging files, overlay, etc.
>
> All new or novice users of OS-3 should take this session.

O-2.   SIPS (Beginning)   K 292B   April 13
       (2 sessions)   April 15

> This course includes two hours of instruction for computer novices or participants with limited statistical background. Running programs on OS-3 is a prerequisite.

O-3.   SIPS (Advanced)   K 292B   April 20
       (2 sessions)   April 22

> These sessions assume a working knowledge of OS-3 and some statistical background or previous use of SIPS. Attendance of the beginner sessions will qualify participants.

SIPS

The Statistical Interactive Programming System (SIPS) has been developed to provide interactive program library support for statistics instruction and for elementary data anlysis. It may be used from any teletype or CRT display connected with the CDC 3300 and the OS-3 operating system.

SIPS is an interactive command processing system. The user issues brief statements (called commands) to SIPS, and SIPS responds with statistical or other information, then awaits another command. This form of use is conceptually somewhat different from calling for the use of computer library programs; it is more similar to the issuing of directions to an attentive reliable assistant who responds only to a certain finite number of simple verbal stimuli. The user has control over the computer-- he is using it and telling it what to do rather than responding to it.

12

Additional Sessions

If your department is interested in sessions in other areas, please return the registration form on the last page of this newsletter. If six or more requests for a topic are received, we will schedule a shortcourse in that area.

HOW TO USE THE 3300

Six self-instructional lessons are now available on teletype usage on the CDC 3300. These lessons involve direct use of a teletype. Material covered includes logging on, use of the OS-3 EDITOR, the COPY and LABEL statements and many other useful instructions of OS-3 control mode. A job number with 1 to 2 minutes of time should be adequate. The material can be satisfactorily covered in 5 to 6 hours and give good introduction to use of the teletype under OS-3. The lessons were developed by the Computer Science Department and are available on a checkout basis in the Mathematical Sciences Learning Center, K108H. A similar series is planned for CYBER.

CONDUIT NEWS

Conduit Pipeline: we have a few copies of the December issue of the Pipeline available. This newsletter contains information about the availability of Reviewed and Tested Curriculum Materials and Membership. OSU is a charter member of Conduit representing all users of the OSU systems.

It is our intent to continue this membership and place all the Reviewed and Tested Materials on the 3300 or Cyber by Fall of 1976. If you have any questions about these materials or Conduit matter in general, please contact the Conduit/Oregon staff, JoAnn Baughman or Dave Fuhrer at x2161.

OPERATING STATISTICS

The operating statistics for this newsletter are unavailable at this time.

OPERATING HOURS

On the following pages are graphs that show the operating hours for both the Cyber and 3300 as well as the discount hours of each. You should find these convenient as well as saving your time and ours.
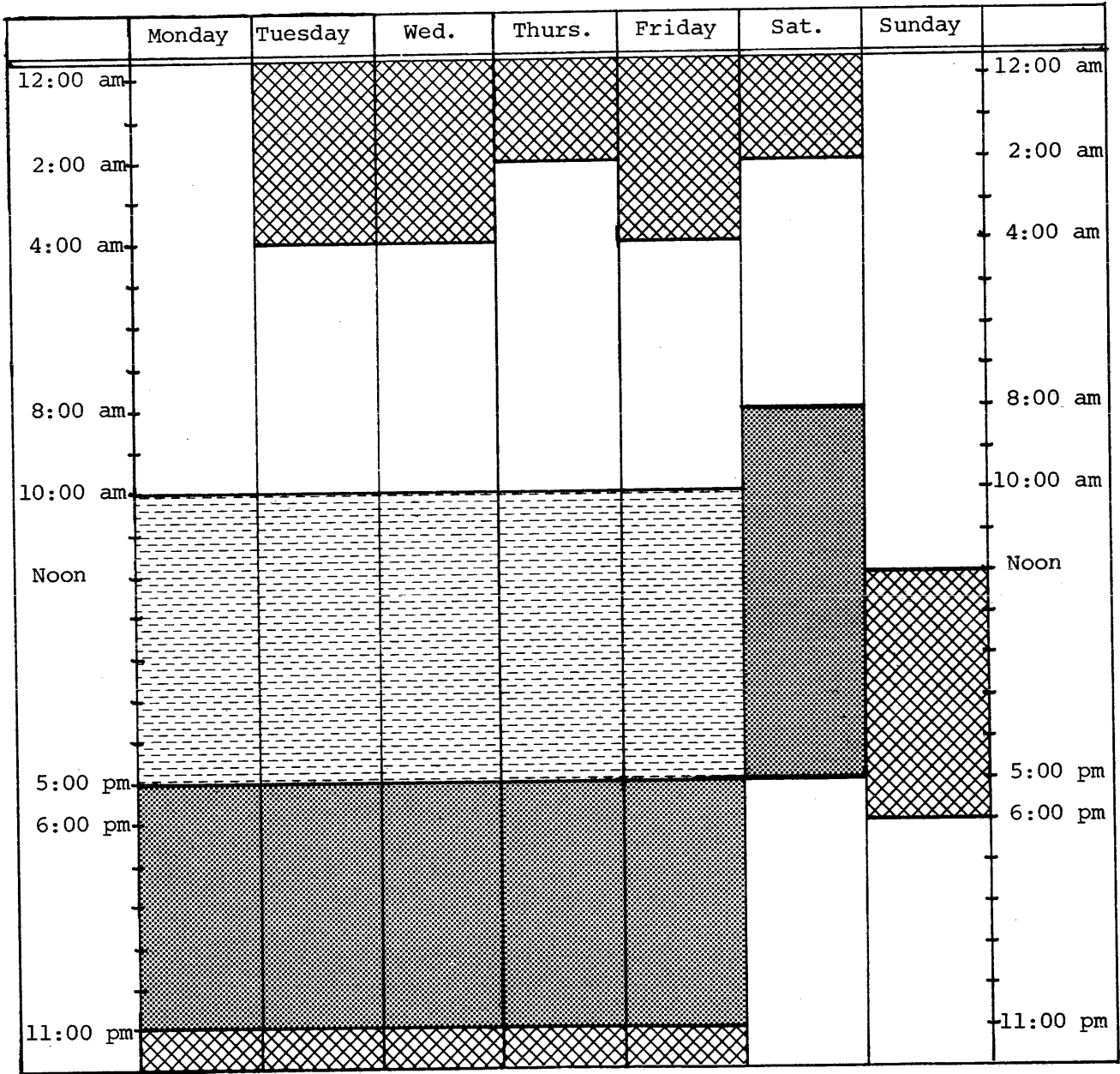
OS-3 OPERATING HOURS AND SHIFT SCHEDULE
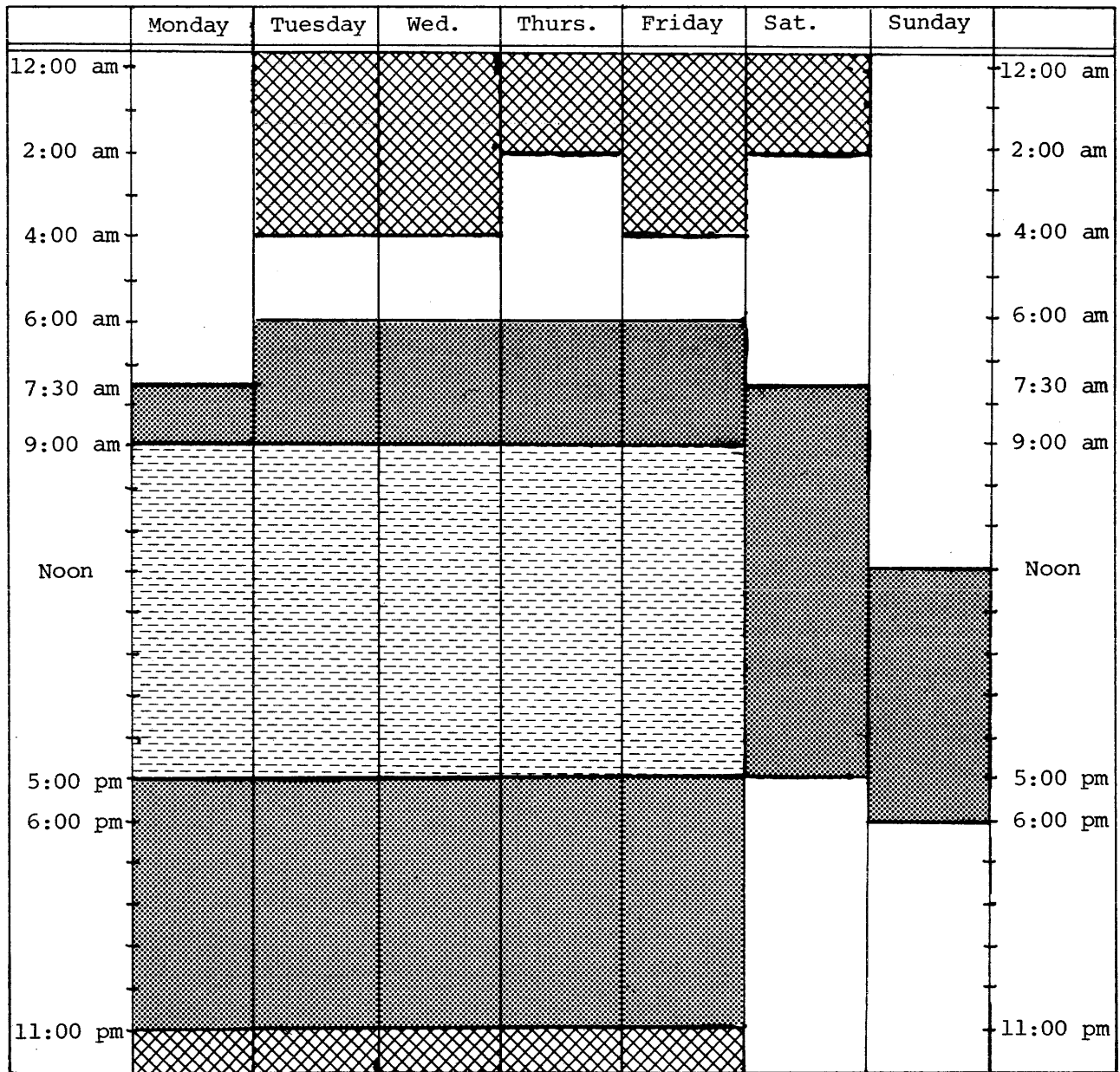
	Monday	Tuesday	Wed.	Thurs.	Friday	Sat.	Sunday	

The chart displays a weekly schedule grid with time running vertically from 12:00 am at top to 11:00 pm at bottom, with horizontal gridlines at 12:00 am, 2:00 am, 4:00 am, 6:00 am, 7:30 am, 9:00 am, Noon, 5:00 pm, 6:00 pm, and 11:00 pm, labeled on both left and right sides.

LEGEND:

☐	Systems Maintenance and Development
▤	Prime Shift - No discount
▨	2nd Shift - 37.5% discount
▧	3rd Shift - 62.5% discount for CPU and terminal connect time — 37.5% discount for all other computer charges.

CYBER OPERATING HOURS AND SHIFT SCHEDULE

	Monday	Tuesday	Wed.	Thurs.	Friday	Sat.	Sunday	

(Schedule chart showing operating hours from 12:00 am through 11:00 pm for each day of the week)

LEGEND:

- ☐ Systems Maintenance and Development
- ▦ Prime Shift – No Discount
- ▓ 2nd Shift – 33.3% discount
- ▨ 3rd Shift – 66.7% discount for CPU and terminal connect time – 33.3% discount for all other computer charges.

Note: Sunday is Batch only. No Telex. Jobs run on "time available" basis only.
       Turnaround time not guaranteed.

17

Computer Center

1976

Spring Term Shortcourses

Please check the courses that you wish to attend. These are limited to the first 20 applicants per session. There are no charges or registration fee for these shortcourses.

Name:_____

Address:_____

Please check your experience level and the courses that you want to attend. All classes are from 3:00 p.m. to 4:30 p.m.

/__/ Beginner   /__/ Intermediate   /__/ Advanced

KRONOS

/__/ 1. Introduction to KRONOS 2.1   April 6

/__/ 2. FORTRAN Under KRONOS 2.1   April 8

/__/ 3. Magnetic Tape Usage Under KRONOS 2.1   April 13, 15

/__/ 4. Interactive Computing Under KRONOS 2.1   April 20, 22
           (2 sessions)

/__/ 5. Libraries Under KRONOS 2.1   April 27

/__/ 6. Modify and Debug Under KRONOS 2.1   April 29

/__/ 7. Introduction to SPSS   Version 6.0   April 27, 28, 29
           (3 sessions)

OS-3

/__/ 1. Introduction to Interactive Computing   April 5, 7
           (2 sessions)

/__/ 2. SIPS (Beginning)   (2 sessions)   April 13, 15

/__/ 3. SIPS (Advanced)   (2 sessions)   April 20, 22

Please return to: JoAnn Baughman
                       Computer Center
                       Oregon State University
                       Corvallis, OR   97331

Oregon State University
Computer Center
Corvallis, OR   97331

ADDRESS CORRECTION REQUESTED

OREGON STATE UNIVERSITY
COMPUTER CENTER NEWSLETTER

TABLE OF CONTENTS

DIRECTOR OF COMPUTER CENTER NAMED

Thomas L. Yates has accepted the position of OSU Computer Center Director effective July 1st of this year. Tom Yates is a familiar figure to the staff and many users, having been associated with the Center and the Computer Science Department since 1962. His classes in Systems Analysis have yielded several systems currently in use at the University, and he was instrumental in the design and implementation of the current OSU student information system.

For the past year, Tom has been on sabbatical leave from the University at the Western Australian Institute of Technology. He has completed the design of a computer-based student records system for WAIT, and has been involved in research into improved programming technologies.

Ron Davis has been Acting Director since Larry C. Hunter's resignation on January 1, 1976. As Acting Director, Ron Davis has done a commendable job. We are looking forward to the added managerial and administrative experience that Tom Yates can bring to the Computer Center.

BILL HUNTEMAN NAMED AS SYSTEMS SOFTWARE MANAGER

Mr. Bill Hunteman assumed the position of Systems Software Manager for the Computer Center on May 10, 1976. Mr. Hunteman was previously employed by Los Alamos Scientific Lab of the University of California in Los Alamos, New Mexico, as a project leader. His experience includes design, implementation and maintenance of time-sharing operating systems and vendor operating system support for many hardware configurations. Some of these include 6600, 7600, 6500 and 6400 CDC machines, 360, 7040, 7044, 7094, 1401 and 704 IBM machines and the CRAY-1.

HOLIDAY HOURS

The Computer Center will be closed Sunday, July 4, and be open from 7:30 a.m. to 5:00 p.m. on Monday July 5. The Computer Center will operate on a normal schedule during the Memorial Day weekend.

DIAL UP LINES

The telephone company is changing all Computer Center 1XXX telephone numbers to 4XXX. For example, the 100 baud dial-up number which was 1111 is now 4111. Both numbers will be in effect for a short time.

FIELD LENGTH MAXIMUM ON THE CYBER

On May 10, 1976, the Computer Center imposed maximum field lengths on each job in an attempt to improve batch turnaround and terminal response time. To allow larger jobs to run during the evening hours, Export/Import will not be constantly available. A table of central memory and Export/Import availability follows (all field lengths given in octal).

Weekdays	Telex Jobs	Batch Jobs
10:00 a.m. - 5:30 p.m.	60,000	110,000
* 5:30 p.m. - 7:30 p.m.	120,000	130,000
7:30 p.m. - 9:30 p.m.	120,000	120,000
* 9:30 p.m. - 11:00 p.m.	120,000	130,000
11:00 p.m. - 12 Midnight	120,000	120,000
*12 Midnight-End of shift	131,000	131,000
Saturday		
* 8:00 a.m. - 2:00 p.m.	120,000	130,000
2:00 p.m. - 5:00 p.m.	120,000	120,000
Sunday		
*12 Noon - 6:00 p.m.	Maximum possible - approximately 153,000	

*Times when Export/Import not available.

To insure that a job does not start executing during a time when it cannot complete, it is essential that users put the maximum field length for the job on the job card. Jobs that request more field length than available after they are partially processed will be dropped.

If the computer system load is unusually low, large jobs may be run early. Therefore, the user cannot expect the system to schedule a job to be run during a particular time period.

Jobs larger than 131K should be scheduled with Dan Berg, Operations Supervisor x2736.

CONSULTING SERVICE

Faculty Consultants:

The consultants for faculty and graduate students will be in Room 122 of the Computer Center from 10:00 a.m. to 12:00 noon and

1:00 p.m. to 4:00 p.m. Monday through Friday. The phone number for this service is 3474.

All consultants can answer questions related to FORTRAN, KRONOS and OS-3.

Student Consulting:

The consulting for students will remain in Room 211 of the Computer Center from 10:30 a.m. to 4:30 p.m. Monday through Friday. There will be no student consulting during dead week or finals week.


COMPUTER TIME FOR UNDERGRADUATE STUDENTS

At the March meeting of the OSU Computer Committee a plan was approved whereby undergraduate students engaged in independent study may apply for limited computer time. Requests are to be made by faculty members on behalf of students. Forms for requesting "Instructional Use of Computer Time for Independent Study" are available in the Main Office of the Computer Center.
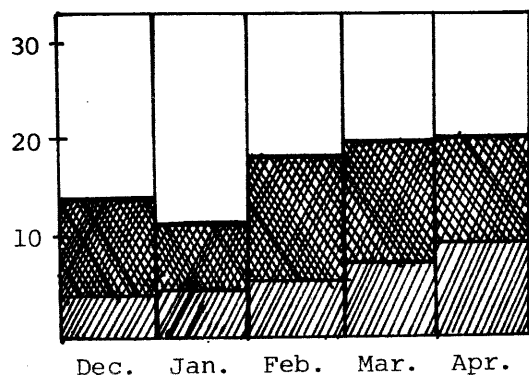

OPERATING STATISTICS

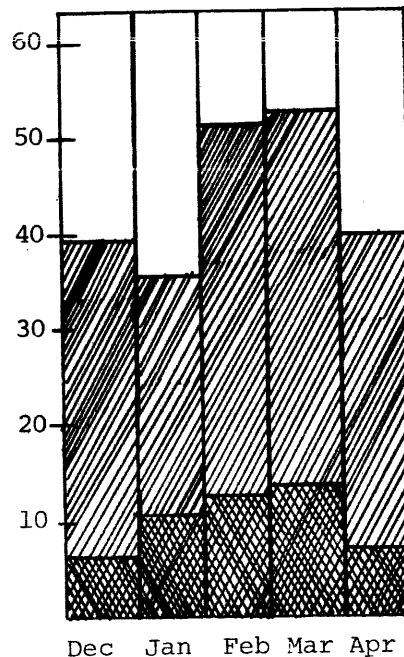Total Logons from December through March.

Legend:

Terminal Logons:

Batch Logons:
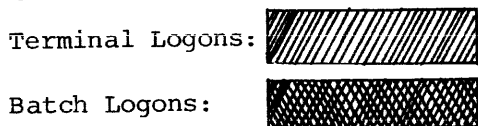
Logons in
1,000's

CYBER

OS-3

NEW CYBER HOW TO'S

The new "CYBER How To's" are available through the Computer Center for 50¢. In addition to examples of the copy commands, compiling and running Fortran jobs and terminal use, there is also valuable information on magnetic tape usage.

KRONOS REFERENCE MANUAL VOLUME 2

Volume 2 of the KRONOS Reference Manual has arrived. It is available at the Computer Center for $7.20.

INSTANT MANUALS

Modify Instant, Sort/Merge Instant and Fortran Extended Version 4 Instant Manuals are now available in Room 142. The prices are $1.92, $1.62 and $1.62 respectively.

REVISIONS

Revisions J for both Sort/Merge and Record Manager Reference Manuals are available. Bring in the cover of your Sort/Merge and Record Reference Manuals with the Computer Center stamps on them and the revisions are yours free. If you purchased your Manuals elsewhere, but wish to have a Revision J, there will be a charge.

Revision "F" of the COMPASS Volume 3 Reference Manual (60360900) is now available at the Computer Center. If you bring in the cover from your COMPASS manual with a Computer Center stamp on it as proof of purchase at the Computer Center, the revision will be given to you free. Otherwise there is a charge of $1.10 for the revision.

NEW FRONT END PROCESSOR (FEP) SYSTEM

This bulletin is to explain the operation of the new software. The terminals connected to the 'A' multiplexer (terminal numbers ending with 'A') will respond to entries even when not logged in. The prompt character '-' is used to identify this mode.

The possible commands in this mode are:

```
P          - Print port number (terminal number)
HELP       - Print hosts available and characters used to access
             them.
CTRL-A     - Select CDC-3300 as host computer.
CTRL-B     - Select CYBER-73 as host computer.
CTRL-H     - Select HIS 66/40 as host computer.  (This computer
             currently unavailable on this network.)
```

For example: If you walked up to a random terminal and typed a
carriage return, and it responded with a carriage return, line
feed, and the '-' prompt character, then you are using a terminal
connected to the new FEP. At this point, you may type any of the
above commands. (CTRL-<char> means type the character by pressing
the CTRL key and then pressing the character specified by <char>).
If the user is requesting OS-3, the response will be as normally
expected: <carriage return>, <line feed> and #. If the user
is selecting KRONOS, the response will be in two steps: First,
a line containing two octal numbers will be printed in the form:

    FFFF TO TTTT

Where FFFF is the users terminal number and TTTT is the port
number that has been selected as the KRONOS input port. Within
a few seconds KRONOS will initiate the standard logon header and
request the users user number and password.

Currently, there are only a few ports available connected to the
Cyber (KRONOS) system. These will be assigned by the FEP on a
first-come-first-serve basis when a user requests connection to
KRONOS. Only terminals operating at 110 or 150 baud will be able
to access these ports since they are connected directly to the
Cyber multiplexer at the mentioned speeds. Eventually, the access
to KRONOS will be virtually identical to that of OS-3, since a
direct channel between the FEP and the Cyber 73/KRONOS will be
established. This will allow higher speeds (like 2400 baud) to
be used.

Since there are few ports to KRONOS, you will probably see the
message 'NO PORT' which means there are no free input ports to
the computer you selected. In the case of a 'NO PORT' message
in response to a 'CTRL-B', you may call 2033 and ask to be
manually patched into KRONOS. You will receive another prompt
and be right where you were before.

Another possible message is 'HOST DOWN'. If you get this message
and are sure the system you requested should be available at
that time, call 2033 to report the problem to the operator.

Please help us. If you experience any problems, please call
2033 and give the operator all the information you have (see
NEWS,PROBLEMS) so we can speed a solution to that problem.

BYENOW: A PAPER SAVING FORTRAN ROUTINE

When OS-3 finishes executing a Fortran program it normally tells
standard output unit 61 to jump to a new page and emphatically
announces, 'End of Fortran Execution'. That's fine for teletype
users and occasional batch programs, but for frequently-run
batch programs, that extra page eject can result in stacks of
(shudder) wasted paper. If your office is knee deep in half-
empty printouts, try substituting 'CALL BYENOW' for 'CALL EXIT'
in your most popular programs. This handy system library
routine suppresses the page eject and the 'END OF FORTRAN
EXECUTION' statement. Trees like it.   (BYENOW won't work with
*COMPLOT and a few other special libraries. But XOUT in *APLIB
will, and it does the same thing.)

CORRECTIONS ON HOW TO USE THE GERBER 1022 PLOTTING SYSTEM

The general characteristics of the Gerber 1022 system are:

1) 48 inch x 58 inch rubber platen plotting area with vacuum
   hold down of the paper.

2) Maximum plotting speed of 600 inches per minute.

3) Positional accuracy of $\pm$.005 inches and repeatability of
   $\pm$.003 inches.

Users wishing to create plot tapes for the GERBER flatbed plotter
on either the 3300 or CYBER systems must use the following
routines for supplying required labeling information. Without
this information plots can not be run on the plotter because of
insufficient operator information.

The sequence on OS-3 is:

$^7_8$EQUIP,<lun>=MT 1 at 556,W GERBER PLOT TAPE

$^7_8$*GLABEL,I=<info-lun>,O=<plot type lun>

On KRONOS the sequence is:

REQUEST,<lfn>,F-S,D=556,PO=W. GERBER PLOT TAPE

GET,GLABEL/UN=LIBRARY.

GLABEL,<lfn>,<lfn for info>.

The <info file> must contain:

1. Users name, address, phone, job number (validity code is
   not needed).
2. Number of plots and number of copies of each.
3. Paper used for plots will be 'translucent'. Other plotting
   material will have to be special ordered or supplied by the
   user.

SPICE

SPICE 2 is now available to Cyber users. The manual can be purchased at the bookstore for 75¢. This system is a general purpose circuit simulation program for nonlinear dc, nonlinear transient, and linear ac analyses. Circuits may contain resistors, capacitors, inductors, mutual inductors, independent voltage and current sources, four types of dependent sources, and the four most common semiconductor devices: BJIS, DIODES, JFETS, and MOSFETS.

SPICE has built-in models for the semiconductor devices and the user need specify only the pertinent model parameter values. The model for the BJT is based on the integral charge model of Gummel and Poon: however, if the Gummel-Poon parameters are not specified, the model reduces to the simpler Ebers-Moll model. In either case, charge storage effects, OHMIC resistances, and a current-dependent output conductance are included. The diode model can be used for either junction diodes or Schottky Barrier diodes. The JFET and Mosfet models are both based on the FET model of Shichman and Hodges.

To run SPICE 2 on the CYBER;

JOB,CM40000,T10.

ACCOUNT,   ,

ATTACH,SPICE/UN=50001

SPICE.

$^7 8_9$

-DATA-

$^6 7_8 {}_9$

$LIBRARY

The program $LIBRARY allows the 3300 user to request the following information from the Computer Center Program Library Tape:
1. Source deck listing
2. Source deck punched
3. Source deck saved on a file
4. Sample problem listed
5. Write-up
6. Flowchart

Before calling the program, the user must know the identification for the sub-program for which he wants the information. This

8

can be found in the Computer Center Program Library Catalog (CCM70-21) in the upper righthand corner of each abstract sheet. The identification does not need to be entered in the order it is presented in the catalog, the program will do it automatically. For any questions, contact Les Richey x2494.

IMSL AVAILABLE ON CYBER

The IMSL Library 3 is available for public use. It is a large collection of Fortran subroutines in the areas of mathematics and statistics. Documentation may be found at the faculty consulting desk. These manuals will soon be available for purchase in Room 142 of the Computer Center. To compile and execute a Fortran program which calls any of these subroutines:

    ATTACH,IMSL/UN=LIBRARY.

    FIN,I=<user source program>.

    LINK,P=IMSL,B=<name>.

    <name>.

SMIS74

SMIS74 (Structures and Matrix Interpretative System) is now available on the Cyber. It was written at the University of Texas, Austin, to be used in elementary courses in matrix structural analysis and structural dynamics. It is a Fortran coded executive program which reads a file of commands and data prepared by the user covering such categories as matrix manipulation (ADD, MULT, INVERT, etc.), matrix structural analysis (BEAMEL, ADDSTF, FORCE, EIGEN, etc.), and line printer graphics (PLOT, etc).

For information on how to access the program contact Ted Hopkins, x2953.

FORTRAN PROGRAMMING NOTES--DO LOOP PITFALLS

The DO loop is the most powerful control structure in Fortran and perhaps the most misused. Fortran programmers occasionally overlook one or more of the many restrictions imposed on DO loops and consequently introduce hard-to-find bugs into their programs. The restrictions listed in this article are explicitly stated in the current American National Standards Institute (ANSI) definition of Fortran (X3.9-1966). These restrictions apply to CDC Fortran (compiled by RUN, MNF, and FTN), IBM Fortran (all levels), and DECsystem-10 Fortran (F10 and F40).

Violations of the restrictions given below may not be diagnosed by a Fortran compiler and the resultant object code may not perform what the programmer intended. In fact, the results may be completely unpredictable. The programmer who either through luck or compiler quirk has "gotten away with" violating a DO loop restriction has not discovered an undocumented feature, but has found a way to introduce possible bugs into his program.

The following restrictions must all be satisfied before any DO loop can be given at least a cursory "clean bill of health".

1. If the Do loop execution is terminated normally (i.e., by satisfying the iteration count), the value of the index is no longer defined. The most common pitfall here is the user's assumption that in this case the index is equal to the sum of the loop's terminal value and the increment.

2. DO loop initial, terminating, and increment values are computed once, prior to execution of the DO loop. Any changes to these variables from within the loop have no effect on the operation of the DO loop.

    The DO index should not be changed within the loop. Doing so will generate an information diagnostic but the loop will function as expected.

    DO increments must be positive.

    If the initial value exceeds the terminating value, the DO loop will not execute even once.

3. If DO loops are nested, each loop in the nest must have a unique index. This restriction also applies to I/O statement implied DO loops within a DO loop.

4. Control must never be transferred into the range of a DO loop except by executing the DO statement which governs the loop. That is, it is expressly prohibited for any statement within the range of the loop to be the object of a transfer from outside the range of the loop. See restriction 6 for "extended range" DO loops.

5. If nested DO loops end on the same statement, any transfer to the terminating statement must originate from within the innermost loop. While this is not an ANSI restriction, it is imposed by most Fortran compilers, including the CDC RUN, MNF, and FTN compilers, the IBM G and H level compilers, the DEC-10 F10 and F40 compilers, and the UNIVAC FORTRAN V compiler. Since this restriction is imposed by our Fortran compilers, users are warned that any violation gives undefined results.

6. It is possible to transfer out of the range of a DO loop,
   execute a sequence of statements, and then transfer back
   into the same DO loop. This structure is called an
   "extended range" DO loop, since, logically, the statements
   so executed are part of the DO loop. All statements by
   the extended range must adhere to restriction 2 above. In
   addition, the extended range must not include a DO statement,
   and, in the case of a DO loop nest, only the innermost loop
   may have an extended range. In any case, the extended
   range of a DO loop must not lie within the range of any other
   DO loop. Also, the extended range should not be entered by
   means of a transfer (except from within the DO loop having
   the extended range) or by falling through into the extended
   range by normal sequential execution of statements pre-
   ceding the extended range. The use of extended range DO
   loops should be avoided, since they complicate program
   logic and often completely defeat compiler optimization of
   DO loop object code.

───────────────────── USER OPERATIONS & SERVICES

PRODUCTION JOBS

In order to facilitate the users' scheduling of jobs, the
following production schedule of large Computer Center jobs is
being presented. Whenever possible the jobs will be run 2nd or
3rd shift.

RUN DATE	WALL CLOCK RUN TIME	LINE PRINTER	PUNCH
5/18	4 1/2 hours	95K	
5/25	1 hour	10K	
5/28	2 hours	12K	
6/2	1 hour	10K	
6/10	3 hours	120K	
* 6/14	Evening		
* 6/15	Morning		
6/17	4 1/2 hours	145K	4K
7/12	2 hours	400K	
7/19	3 1/2 hours	450K	50K

*Student Grade Processing

CYBER CONVERSION PROJECT/CYBER PROGRAM LIBRARY

The Computer Center is currently involved in a project to convert faculty programs for use on the CYBER computer. In coordination with this project an OSU CYBER PROGRAM CATALOG is being compiled for the general use of the CYBER user community. Any persons with programs, routines, or systems of programs currently operating on the OSU CYBER SYSTEM, of possible interest to other users, please contact Phil Brown, x 2494.

If you have any questions or would like more information on the Conversion Project please contact the Conversion Project Office at x2161.

NEW DIGITIZER RATES

Effective July 1, 1976, the rates for digitizer use will be increased. The new rate will be $15/hour with an operator, and $12/hour without an operator. For those users wanting to do their own digitizing at the lower rate but are not familiar with the digitizer operation, there will be a $25 minimum charge for initial instruction and program setup.

NEW TERMINAL MAINTENANCE RATES

Effective July 1, 1976, the hourly rates for maintenance of teletype terminals will be increased from $8/hour to $12/hour, and for electronic terminals and systems from $10/hour to $15/hour. All maintenance calls will be billed a minimum of one hour. There will also be maintenance contracts available. For further information contact the Computer Center.

——————————————————— EDUCATIONAL ACTIVITIES

ONTARIO UNIVERSITIES COMPUTING CONFERENCE

The 7th Ontario Universities Computer Conference will be held at the University of Waterloo from June 2 to June 4, 1976. The theme of this year's conference is "Applications and Objectives", and in exploring this theme, the sessions will examine the impact of changing conditions of computing to meet the objectives of the academic institution.

If you would like a Preliminary Agenda and Registration Form, please contact: Roger Watt, Program Chairman, OUCC, Computing Centre, University of Waterloo, Waterloo, Ontario, N2L 3G1, 519-885-1211 x2183.

FACULTY WORKSHOP TO BE HELD SEPTEMBER 13-17, 1976

Oregon State University Computer Center will again sponsor a Faculty Workshop September 13-17, 1976. The workshop is intended for all who are engaged in undergraduate education, including universities, four-year colleges, and two-year colleges. The workshop will provide an opportunity for college and teaching faculty to increase their skills related to the use of the computer. It will provide a regional forum for the presentation, discussion, and dissemination of ideas, programs, and other curricular matters dealing with the instructional use of computers. Those attending this workshop need not have a background in computers. An attempt has been made to meet the needs of those with no background as well as those who have used the computer in some way. The purpose of this workshop is threefold:

1) To provide basic training in the development of computer skills in FORTRAN, BASIC, etc., on the OS-3 time-sharing system and the KRONOS 2.1 operating system.

2) To provide training in the development of user skills which will facilitate use of the computer within an academic area. These include the use of the plotter, files, *CATALOG programs, OSCAR, SPSS, ARAND, SIPS and Library programs for both the CYBER 73 and the 3300.

3) To provide instruction and examples of the in-class use of computer curriculum modules in specific disciplines.

If you are interested in receiving more information or in attending this workshop, please return the form on page 15.

STATEMENT OF INTEREST
FOR THE FALL COMPUTER INSTITUTE

Oregon State University
September 13-17, 1976

Please Return to:

Joanne Hayes
Computer Center
Oregon State University
Corvallis, OR   97330

NAME:_____ DATE:_____

INSTITUTION:_____

DEPARTMENT:_____

SUMMER MAILING ADDRESS:_____
(If different)
          _____

For scheduling purposes, please indicate the sessions you would be
interested in attending:

Operating Systems

    /_/ Kronos (CYBER 73)   /_/ OS-3 (CDC 3300)

Editing and Interactive Computing

    /_/ CYBER 73   /_/ CDC 3300

FORTRAN

    /_/ CYBER 73   /_/ CDC 3300

    /_/ Beginner   /_/ Intermediate   /_/ Advanced

Statistical Systems

    /_/ SPSS (CYBER 73)   /_/ SIPS (CDC 3300)

Simulation Languages

    /_/ EXPERSIM   /_/ GPSS

Graphics

    /_/ KRONOS   /_/ OS-3

Interactive Languages

    /_/ BASIC   /_/ OSCAR   /_/ APL

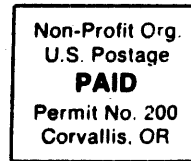Miscellaneous

    /_/ Computer Assisted Instruction

    /_/ ARAND (Time Series Analysis and Numerical Modeling)

Other:_____

Please return by July 1, 1976

There will be a nominal charge for this workshop.

Oregon State University
Computer Center
Corvallis, OR   97331

ADDRESS CORRECTION REQUESTED

OREGON STATE UNIVERSITY
COMPUTER CENTER NEWSLETTER

TABLE OF CONTENTS

Page

LEGISLATURE APPROVES 3300 RETENTION AND CYBER UPGRADES

The Computer Center received approval from the Legislature Data Processing Committee to retain the CDC 3300 computer beyond the current contract period ending in January 1, 1977. Accompanying the approval were the following stipulations:

a) That OSU standardize and convert all present systems on the 3300 to be transportable to other hardware within a four-year time frame.

b) No new major systems to be implemented on the CDC 3300.

c) Periodic reporting of progress related to the conversion activity.

Included in the legislative action was approval of hardware upgrades to the Cyber, details of which will appear in future Newsletters.

SUMMER CONSULTING SERVICE

The consulting for the summer will be in Room 122 of the Computer Center from 10:00 a.m. to 12:00 noon and from 1:00 p.m. to 4:00 p.m. Monday through Friday. The phone number for this service is 3474. If no answer, call 2494 and ask for the consultant on duty. Users having questions about the consulting service may request a copy of the Consulting Guidelines from Gayle at x3483.

EQUIPMENT ACQUISITION PROCEDURES

Faculty and staff are reminded that all requests for purchase of data processing equipment must be reviewed and signed by the Computer Center Director before forwarding to purchasing. The request must have an attached justification in narrative form following the guidelines established by the Executive Department. Responsibility for preparation of the purchase request, justification and any necessary follow-up rests primarily with the requesting department. The Computer Center will, however, assist in coordinating and reviewing requests for completeness. Copies of the justification outline are available in the main office of the Computer Center.

FIELD LENGTH MAXIMUM ON CYBER CHANGED

On May 10, 1976, the Computer Center imposed maximum field lengths on each job in an attempt to improve batch turnaround and terminal response time. Since the last Newsletter, the field length restrictions have been changed during the prime or day shift. An up-to-date table of central memory and Export/Import availability follows (all field lengths given in octal).

Weekdays	Telex Jobs	Batch Jobs
10:00 a.m. - 5:30 p.m.	120,000	120,000
* 5:30 p.m. - 7:30 p.m.	120,000	130,000
7:30 p.m. - 9:30 p.m.	120,000	120,000
* 9:30 p.m. - 11:00 p.m.	120,000	130,000
11:00 p.m. - 12 Midnight	120,000	120,000
*12 Midnight-End of Shift	131,000	131,000

Saturday		
* 8:00 a.m. - 2:00 p.m.	120,000	130,000
2:00 p.m. - 5:00 p.m.	120,000	120,000

Sunday		
*12 Noon - 6:00 p.m.	Maximum possible - approximately 153,000	

*Times when Export/Import not available.

Jobs larger than 131K should be scheduled with Dan Berg, Operations Supervisor x2736.

NEW PROGRAMMER AND ANALYST RATES

Effective September 1, 1976, the programmer and analyst rates will be increased to the following:

Junior Programmer	$8.00/hour
Programmers	$12.00/hour
Analysts	$16.00/hour

3

COMPUTER CENTER HOLIDAY SCHEDULE

The Computer Center plans to be closed Sunday, September 5 and
Monday, Labor Day, September 6, 1976.

OPERATING STATISTICS

		May	June
Batch Logons	OS-3	8554	6848
Batch Logons	Cyber	17632	9856
Teletype Logons	OS-3	37527	24454
Teletype Logons	Cyber	12577	7704

SOFTWARE

A NEW VERSION OF OS-3 TO BE RELEASED

A new version of OS-3 is due to be released sometime around
August 1, 1976. The most significant feature of this new
release is the ability to inform users of a detached terminal
logged on to their number.

At logon time, users may receive the message: YOU ARE ALSO
DETACHED ON TERMINAL nnn.

This means that terminal nnn was logged on and then detached,
(either by a user typing DETACH or by a communication line
going into break state).

Upon receiving the message a user can then re-attach to his
job by typing ATTACH,nnn.

For further information on ATTACH and DETACH, see OSU Computer
Center Newsletter, May/June, 1975.

PLOTTING ROUTINE CHANGES

Several months ago, (March/April Newsletter) you may recall,
we indicated a desire to change plot routines on the standard
OS-3 loader library (*LIB). Since we received no negative
feedback to this proposal, we will be going ahead with the
change.

Effective August 1, 1976, the FORTRAN and TEKPLOT plotting
routines will no longer be available on *LIB. They will be
available on *FORPLOT and *TEKPLOT, respectively. Plotting
routines on *COMPLOT will be available on *LIB as well, and
users of *COMPLOT routines will no longer need to load
*COMPLOT with their programs.

KRONOS 2.1.2 RELEASE SCHEDULE

The new release of the Cyber KRONOS operating system, 2.1.2,
will replace the existing KRONOS 2.1 system according to the
following schedule.

July 19-July 30:

   KRONOS 2.1.2 will be available from 0900 to 0945, Monday
   through Friday. KRONOS 2.1 will be available during
   regular scheduled hours.

August 2-August 31:

   KRONOS 2.1.2 will be available from 0900 to 1045 Monday
   through Friday.

   KRONOS 2.1 will be available on these days from 1100 to
   normal shutdown times.

September 1:

   KRONOS 2.1.2 completely replaces 2.1 and will be available
   during all schedule periods.

Time and file space used on 2.1.2 through August 31 will be
free and is intended to be used only for conversion purposes.
All other Computer Center charges will be in effect and unchanged.
Users desiring to use the 2.1.2 system may have their user
numbers and job numbers established in the 2.1.2 system by con-
tacting Gayle Zandofsky, x3483.

Users are responsible for transferring files between the 2.1 and
the 2.1.2 systems. Files saved during a 2.1.2 test period will
automatically be available during subsequent 2.1.2 test periods
until the file owner purges it or until August 31. Effective
August 31 all existing 2.1.2 files will be purged.

Only terminals connected to the "A" multiplexor may access
KRONOS 2.1.2. OSU Newsletter, Volume XI, number 2 contains a
description of the Front-End Processor (FEP) for the "A"
Multiplexor.

The 2.1.2 system contains several significant changes affecting
users. The major ones are:

1) A character set change and consolidation

2) Loader changes

3) 029 punch character set changes

4) Various new control cards

5) Some new parameters on existing control cards

6) Interactive FORTRAN replaced by FTNTS (TSRUN will not be
    available)

7) BASIC language changes (including full ASCII support)

8) TEXT EDITOR changes

9) All programs should be recompiled before attempting
    execution in 2.1.2.

A conversion guide is in preparation and will be announced
as soon as it is ready for distribution.

Please direct any questions, comments, or suggestions to Bill
Hunteman, x2494.

MPOS

MPOS is a Multi-Purpose Optimization System developed at
Northwestern University to solve optimization problems on the
CDC 6400 computer. The system was developed to permit users
to state problems in English and standard mathematical pro-
gramming notation and access one of many well-known algorithms:

LP algorithms:	REGULAR	2-phase simplex
	REVISED	revised simplex
	DUAL	dual simplex
	MINIT	primal-dual algorithm
IP algorithms:	BBMIP	branch and bound mixed integer
	DSZ1IP	direct search 0-1 integer programming
	GOMORY	Gomory's cutting plane
QP algorithms:	WOLFE	Wolfe's quadratic simplex
	BEALE	Beale's algorithm
	LEMKE	Lemke's complementary pivot algorithm
General:	APEX1	MPOS-APEX data file
	APEX2	interface

MPOS is now available on the OSU Cyber computer. Please contact
Bill Chou for the user's guide and advice about using the
system at x2726.

GASPIV AND MDP

GASPIV, a FORTRAN based simulation language, is now available on the Cyber. Instructions to use GASPIV are:

1. BATCH JOB, FORTRAN SOURCE AND DATA ON CARDS.

```
    <JOBID>,CM70000,T36,<STUDENT NAME AND RUN ID>.
    ACCOUNT,<USERNUM>,<PASSWORD>.
    FTN.
    GET,G4LIB/UN=30053.
    LINK,P=G4LIB,B.
    LGOB.
    7/8/9
            PROGRAM <PROGNAM>(INPUT,OUTPUT,TAPE5=INPUT,TAPE6=OUTPUT)
                .
                .
                .
            [FORTRAN SOURCE DECK]
                .
                .
                .
        END
    7/8/9
                .
                .
                .
        [DATA DECK]
                .
                .
                .
    6/7/8/9
```

2. BATCH JOB, FORTRAN SOURCE AND DATA ON FILES.

```
    <JOBID>,CM70000,T36.<STUDENT NAME AND RUN ID>.
    ACCOUNT,<USERNUM>,<PASSWORD>.
    GET,<FTNDECK>.
    FTN,I=<FTNDECK>.
    GET,G4LIB/UN=30053.
    LINK,P=G4LIB,8.
    GET,<DATDECK>.
    LGOB,<DATDECK>.
    6/7/8/9
```

3. OBTAIN COPY OF GASP COMMON SOURCE STATEMENTS.

```
                .
                .
                .
    GET,G4COM/UN=30053.
                .
                .
```

Instructions to use GASPIV on OS-3 are also available from
Billy Chou at Batcheller 300, x2726.

The MDP system developed by Billy Chou and Dr. Mark Lembersky
of the OSU Statistics Department, is an interactive command
processing system for solving problems formulated as Markov
Decision Processes (I.E., infinite horizon, finite state and
action dynamic programs). The system is available on the Cyber
and the user's manual will be available early Fall term.

Two by-products in the development of the MDP system:

   -An iterative conjugate gradient method is capable of solving
    very large systems of linear equations.

   -Simulated READEC and WRITEC subroutines.

LINE PRINTER PLOTTING PACKAGE

A plotting package has been converted from OS-3 for use on the
Cyber line printer. The routines are comparable to those for
the Calcomp X-Y plotter. LPLTLIB is the library containing
the general purpose subprograms. Access is as follows:

   GET,LPLTLIB/UN=30048.

Note: These plotting routines require the use of "CHARLIB",
available from the Cyber Library. For documentation or questions
please contact Les Richey, x2494.

————————————————————— **USER OPERATIONS & SERVICES**

DIGITIZING SERVICES

A reminder! Digitizer rates were increased effective July 1.
The new rates are $15/hour with an operator and $10/hour
without operator. The old rates which have been in effect
since 1970, were $10/hour and $7.50, respectively. For those
wishing to do their own digitizing, at the $10 rate, a one-time
$25 minimum charge will be made to cover instruction and
familiarization.

A second digitizer has been obtained from GSA surplus in Denver.
The acquisition should reduce the excessive downtime now
encountered with the current machine.

OSU CAMPUS COMMUNICATION LINE PROBLEMS

With the Pacific Northwest Bell installation of an electronic switching system in Corvallis and the accompanying rerouting of the OSU campus data communication lines, numerous problems have been reported by OSU Computer Center remote terminal users. We ask for your continued cooperation in reporting malfunctions and Computer Center personnel will strive to isolate the problem and notify Pacific Northwest Bell. When reporting malfunctions call x2033.

INDEX TO COMPUTER-BASED LEARNING

The 1976 edition of "Index to Computer-Based Learning" has been received by the Computer Center. It will be available for reference use in the main office, room 217.

The volume, published by the Instructional Media Laboratory, University of Wisconsin-Milwaukie, presents an index to 1800 computer-assisted instructional programs in over 120 categories. Each entry is listed by subject matter, and provides the author's name, the source and a description of the program. Also listed for each program are prerequisities, level of instruction, hours of available material, average student completion time, the status of the program, the computer language used, terminals used, and central processing unit for which the program is designed.

NAUCAL CONFERENCE

The National Association of Users of Computer Applications to Learning announces a conference in Portland, Oregon, October 28-30, 1976. With the theme of "Educational Computing: It Does Make a Difference", the conference is jointly sponsored by the Oregon Association for Education Data Systems (OAEDS) and the Oregon Council for Computer Education (OCCE). Topics to be included are: Computing for Elementary Schools; Micro/Mini Processors; Career Guidance Systems; Competency Achievement; and New Thoughts on Administrative Computing.

For further information, contact:

Marcia Zuber, Conference Chairman
PO Box 200
Beaverton, OR   97005

FACULTY WORKSHOP TO BE HELD SEPTEMBER 13-17, 1976

Oregon State University Computer Center will again sponsor a
Faculty Workshop September 13-17, 1976. The workshop is intended
for all who are engaged in undergraduate education, including
universities, four-year colleges, and two-year colleges. The
workshop will provide an opportunity for college and teaching
faculty to increase their skills related to the use of the
computer. It will provide a regional forum for the presentation,
discussion, and dissemination of ideas, programs, and other
curricular matters dealing with the instructional use of computers.
Those attending this workshop need not have a background in
computers. An attempt has been made to meet the needs of those
with no background as well as those who have used the computer
in some way. The purpose of this workshop is threefold:

1) To provide basic training in the development of computer
   skills in FORTRAN, BASIC, etc., on the OS-3 time-sharing
   system and the KRONOS 2.1.2 operating system.

2) To provide training in the development of user skills
   which will facilitate use of the computer within an
   academic area. These include the use of the plotter,
   files, *CATALOG programs, OSCAR, SPSS, ARAND, SIPS and
   Library programs for both the CYBER 73 and the 3300.

3) To provide instruction and examples of the in-class use
   of computer curriculum modules in specific disciplines.

If you are interested in receiving more information or in
attending this workshop, please return the form on page 15.

CONDUIT PIPELINE MAILING LIST

Future issues of the Pipeline will be mailed from CONDUIT/Central.
OSU users who want to remain on or get on the CONDUIT mailing
list and receive the Pipeline should mail in the form on page 14.
of this Newsletter to CONDUIT/Central. Pipeline is a publication
produced three times each year by CONDUIT containing articles
and papers dealing with education, computers in Education,
transportability of educational computer packages, and other
articles relevant to the purpose of CONDUIT.

If you have any questions about CONDUIT in Oregon, contact
JoAnn Baughman or Dave Fuhrer at x2161.

PLATO AT OSU

The Oregon State University Computer Center and OSU Faculty presented a demonstration of PLATO to the State Board of Higher Education on June 22, in Portland, Rebecca Herrold, Music Department and Earl Dickinson, Veterinary Medicine, presented some examples of class use of the PLATO system. JoAnn Baughman and Ted Hopkins represented the Computer Center.

OSU's PLATO terminal arrived in March of 1976. It was used Spring term by 60 students in Music and English. The students were enthusiastic about the medium and found it easy to use and contributed significantly to their learning experience. All the faculty members involved with the project viewed it as an unqualified success. PLATO is in use this summer and will be available to OSU faculty for classroom use Fall term. If you are interested in using the PLATO materials or would like additional information, contact Academic Services at x2161.

CAUT PROJECT

The Computer Center again participated in the annual Oregon State University College and University Teaching project. This is a one-year program in four phases in which faculty participants learn the skills necessary to analyze the learning needs in their areas. Participants then design and develop instructional materials to meet these needs.

The Oregon State University College and University Teaching (CAUT) Project began as a special workshop in the summer of 1974 sponsored by the OSU Office of Undergraduate Studies.

24 OSU faculty memebers and 4 students participated in the 1974 two week summer workshop (Phase I). The faculty participants continued the design (Phase II), development and implementation (Phase III), and evaluation (Phase IV) of their instructional projects throughout the year.

The results from the 1974 CAUT Project were evaluated and used to implement minor changes in the format of the 1975 CAUT summer workshop (Phase 1). 23 OSU faculty members and 3 faculty members from outside institutions of higher education participated in the workshop learning activies.

Evaluation activities similar to those used in 1974 are presently being conducted with the results integrated into the 1976 workshop.

The 1976 CAUT Summer Workshop Phase 1 was extended to a full three weeks to accommodate the learning activities suggested by the previous participants.

During the past year, CAUT Project staff members have put on seminars for over 20 educational groups in Oregon and other states to explain the program and the idea of faculty development programs.

If you would like further information about the College and University Teaching Project, please contact: Dean Osterman, Coordinator, CAUT Project, IRAM Center, Oregon State University, Corvallis, OR   97331.

Mail to: Conduit
          P.O. Box 388
          Iowa City, IA   52240

PIPELINE Mailing List

If you would like to continue receiving the PIPELINE, please fill out and return this form.

MAILING ADDRESS:

NAME ....
               (last)   (first)   (initial)

DEPARTMENT ....

INSTITUTION ....

ADDRESS ....

....
          City   State   Zip

AREA OF INTEREST (check one):

☐ Physical Sciences   ☐ Humanities

☐ Social Sciences   ☐ Engineering

☐ Applied Sciences   ☐ Other ....

☐ Health Sciences

DISCIPLINE (number areas of interest in order of preference; select no more than two):

☐ Biology   ☐ Physics

☐ Business   ☐ Political Science

☐ Chemistry   ☐ Psychology

☐ Education   ☐ Sociology

☐ Economics   ☐ All

☐ Mathematics   ☐ Other ....

Please check any of the following documents you wish to receive.

☐ PIPELINE (*no charge* for single copy of each issue)   ☐ Author Guide ($3.00)

Interdialect Translatability of the
BASIC Programming Language:

☐ Catalog ($4.00)   ☐ Summary ($1.50)

☐ State of the Art Reports ($5.00)   ☐ Full ($2.50)

☐ CAI Activity Report ($2.00)

☐ Documentation Guidelines ($2.00)   ☐ Payment Enclosed

☐ Technical Transfer Guide ($3.00)   ☐ Bill me

REGISTRATION
FOR THE FALL COMPUTER INSTITUTE

Oregon State University
September 13-17, 1976

NAME_____ DATE_____

INSTITUTION_____

DEPARTMENT_____

SUMMER MAILING ADDRESS   _____
(if different)
                         _____

                         _____

For scheduling purposes, please indicate the sessions you plan to attend:

/ / Running Programs on OS-3   / / Beginning FORTRAN

/ / OS-3 Graphics   / / Intermediate FORTRAN

/ / Basic (OS-3)   / / Advanced FORTRAN

/ / OS-3 Graphics (Grafit)   / / Running COBOL on KRONOS

/ / OS-3 Graphics (Plot Drive)   / / Basic (KRONOS)

/ / OS-3 Graphics (Review)   / / FORTRAN differences between
                                                  OS-3 and CYBER
/ / OS-3 Lab
                                          / / Programming for Transferability
/ / Running on KRONOS (Intro.)
                                          / / SPSS
/ / Running on KRONOS (Mag Tapes)
                                          / / PLATO
/ / Running on KRONOS (Library)
                                          / / SIPS
/ / Running on KRONOS (Modify &
       Debug)   / / EXPERSIM

/ / Running on KRONOS (FORTRAN)   / / APL

/ / Running on KRONOS (Interactive)   / / OSCAR

/ / Graphics on KRONOS   / / Soc./Pol. Sci./SPSS/SIPS

/ / KRONOS Lab


The charge for this workshop will be $12.00.

Please return this form by August 25, 1976, to:

                    Joanne Hayes
                    Computer Center
                    Oregon State University
                    Corvallis, Oregon 97331

*Participants submitting their registration fee with this form prior
 to the deadline will receive appropriate session materials prior
 to the workshop.

Oregon State University
Computer Center
Corvallis, OR   97331
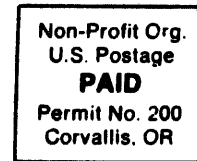
ADDRESS CORRECTION REQUESTED

OREGON STATE UNIVERSITY
COMPUTER CENTER NEWSLETTER

TABLE OF CONTENTS

Page

GENERAL INFORMATION

CENTER REORGANIZATION

On September first the Computer Center completed a reorganization which accomplished the realignment of assignments for several staff members. Specifically:

1. All personnel who work in support of research and instructional computing activities have been brought together into a unified section. An Assistant Director is to head up the Research and Instructional Computing section (see item on Assistant Director search).
2. All data processing systems, including those formerly administered in the Operations section, are now administered by the Data Processing Systems section (formerly Administrative Systems). Tony White has been named Manager of Data Processing Systems.
3. A Programmer Pool has been established in the Operations and Programming Services section (formerly Operations and Applications Programming). Dave Niess has been named Programmer Pool Supervisor and will be responsible for assigning pool programmers to projects in other sections of the Center or to user organizations which have their own systems analysts or project leaders. Ron Davis continues as Manager of Operations and Programming Services and also is serving in an acting capacity as Assistant Director, Research and Instructional Computing.
4. Billy Chou has been assigned Technical Specialist responsibility for statistical applications, assuming the duties carried out so well in the past by Dave Niess. Billy will also continue to consult with users in the fields of mathematical modeling, LP, etc. Persons who need help relative to any of these areas of application should contact Billy Chou in Batcheller 300, telephone extension (754) 2726.

OPERATING STATISTICS

		July	August
Batch Logons	OS-3	6183	5690
Batch Logons	Cyber	5581	5914
Terminal Logons	OS-3	17580	16660
Terminal Logons	Cyber	6435	6200

ASSISTANT DIRECTOR SEARCH

The Computer Center is conducting a search for candidates for the newly established position of Assistant Director, Research and Instructional Computing. Position announcements have been widely distributed and applications will be accepted through October 15, 1976.

The Assistant Director will have administrative responsibility for Computer Center support of research and instructional computing. Duties will include management of a staff of technical specialists, support of and participation in grant proposals, planning and implementing programs of service to the academic community (workshops, consulting services, program library, etc.), and coordination of plans with other Computer Center administrative personnel.

For further information regarding this important upgrading of the Center's support of research and instruction please call Computer Center Director, Tom Yates on x2494.

ADDITIONAL CYBER EQUIPMENT

Oregon State University received approval to add 32K central memory to the Cyber and a second disk controller. The additional memory is scheduled to be installed around October 1 and will increase the Cyber central memory from 64K to 96K. The disk controller should be installed later during Fall term.

CPR TRAINING

More than 40 staff members of the Computer Center have recently completed a training session in cardio-pulmonary resuscitation (CPR). This training was presented by the Corvallis Fire Department at the request of the Computer Center Safety Committee in an attempt to increase our emergency preparedness for accident and emergency in which CPR has demonstrated its life-saving value. Our thanks go to the Fire Department for making this service available.

THANKSGIVING HOLIDAY HOURS

The Computer Center will close at 10:00 pm on Wednesday November 24 and will reopen at 6:00 am on Friday November 26.

SOFTWARE

$UBACKUP

$UBACKUP is an overlay available on OS-3
to backup on tape any desired files or
RAF's in the standard OS-3 backup format.
These files can then be recovered any
time using $RECOVER.

Since $UBACKUP will allow users to backup
desired files on the user's own tape, it
is hoped that users will take advantage
of this by backing up seldom used files
to tape and removing them from on-line
storage.

The program calling sequence is as
follows:

    [$UBACKUP[,I=<lun/name>][,O=<lun>][,A]

I - Specifies a lun or filename contain-
ing names of files to be backed up. File
names are given to $UBACKUP one to a
record, beginning in column one. File
name input is terminated with a file mark
(CNTL-W from a TTY). If "I" is omitted,
$UBACKUP will default to reading file
names from unit 60.

O - Specifies the output tape lun for
backed-up data. The tape must be
equipped prior to calling $UBACKUP and
must be at load-point. If "O" is
omitted, $UBACKUP will write backup data
on lun 1.

A - indicates an append run. If an "A"
is present in the parameter string,
$UBACKUP will append new files to the end
of a previously created backup tape.
(See 8 below).

Output produced is standard OS-3 backup
data with the following limitations:

1. The backup set ident is ZZ, and this
   set name must be specified in $RECOVER
   runs.
2. The user code on the tape is always
   ZZZZ and this code must be used for
   requesting file recovery with $RECOVER.
   That is, on each file recovery request,
   the user code is given to $RECOVER as
   ZZZZ, no matter what the real user
   code was that the file belonged to.
3. $UBACKUP can currently backup only one
   tape's worth of data. This is
   roughly 5000 file blocks.
4. $UBACKUP also places a "directory" of
   files backed-up at the end of the
   backup data. The overlay $BACKDIR
   will read this directory from a backup
   tape and produce a list of the files
   backed-up on the tape.
5. $UBACKUP requires roughly one CPU
   second per 20 file blocks backed up.
   RAF's are cheaper to backup than
   files.

6. Tapes to be used for $UBACKUP must be
   equipped at 556 bpi.
7. Recovery with $RECOVER is done as
   follows:

       [JOB, (etc.)
       [TIME,MFBLKS, (etc.)
       [EQUIP,51=MT,nnnnn,AT 556,R
            PW=xxxxxxxx
       [$RECOVER
       /SET   ZZ
       <recovery request cards>
       [[
       [LOGOFF

Note that $RECOVER reads from unit 51
only. Therefore, lun 51 must be
equipped to the proper backup tape
prior to calling $RECOVER.

Note also that /SET must begin in
column one, and that the ZZ on the set
card must start in column 10.

For each file to be recovered, a
recovery request card must be placed
in the recovery deck. Recovery request
cards are as follows:

    Col. 1-8   Filename of file as it
                appears on the tape
    Col. 10-15 Job Number file was
                backed up under
    Col. 20-23 ZZZZ (Fictitious user code
                - must be ZZZZ)
    Col. 30-37 Name file is to be saved
                as, if different from
                name in col. 1-8.

8. Files may be appended to an existing
   "backup" tape as follows:

   A. The user must specify an append run
      by including the letter "A" in the
      parameter string.
   B. The job number a run is made on,
      though not necessarily the user
      code, must be the same for all
      $UBACKUP runs to a particular tape.
   C. If a certain filename is backed up,
      and then the same filename is
      specified on a subsequent append
      run, $RECOVER will recover only the
      first version of the file. This
      will not usually produce the desired
      result. Eventually $RECOVER may be
      changed to allow the user to
      specify which copy of a particular
      file is desired, however, users are
      cautioned against placing multiple
      versions of the same file on their
      backup tapes, at least for now.

Any questions or problems should be re-
ferred to Guy Lauterbach, MCC 124, x2494.

3

TERMINAL ACCESS TO HOST COMPUTERS

There have been a number of changes to various aspects of data communication with respect to OS-3 and Cyber as reported previously.

This is a summary of the current state of terminal access to host computer systems (OS-3 and KRONOS). Interactive terminal access falls into three categories:

1. Patch terminals - These are terminals that can be manually patched to either OS-3 or KRONOS via calling x2033 and asking operations personnel to do so.

2. OS-3 terminals only - These are terminals that have a dedicated port into OS-3 only. These terminals can not at this time access KRONOS.

3. OS-3 or KRONOS terminals - These terminals have access to either OS-3 or KRONOS. The method of accomplishing the access to the desired host is described in the following article New Front End Processor (FEP) System.

NEW FRONT END PROCESSOR (FEP) SYSTEM

Terminals connected to the 'A' multiplexor (terminal numbers ending in 'A') will respond to keyboard entries without being logged in. This includes terminals hard-wired to the 'A' multiplexor as well as patch terminals, manually patched in by the operator. Terminals connected to the 'B' multiplexor will respond only to the BREAK key and CTRL-A.

If you are connected to the 'A' multiplexor and are not logged in, the possible commands are:

P   - Print port (physical terminal) number.
S   - Print a list of logical terminals, physical terminals and hosts for all terminals logged in through the 'A' multiplexor.
HELP   - Print commands available. This includes this list.
CTRL-A - Select OS-3 as host system.
CTRL-Q - Select KRONOS 2.1.2 as host system.
CTRL-Z - Select GCOS (Honeywell 66/40) as host system.

Two error messages may be experienced when attempting to select a host:

NO PORT - means that all ports to the system are saturated.

HOST DOWN - means that no response is available from the selected host.

If you have problems, please call x2033 and give the operator all information you have concerning the problem so we can find a solution.

*DOCUMENT

Making massive changes to a large document can be a traumatic experience. Now many of the headaches associated with this can be alleviated by using *DOCUMENT (OS-3).

Input for this program can be prepared by using the text editor. This technique provides the capability to add, delete, revise, or move portions of a document. The formatting of pages and page numbers are taken care of by *DOCUMENT.

A number of special features are available via commands and/or the parameter string in the call. Some of the more attractive features are:

1. Right-hand margin alignment.
2. Over-printing for italics effect.
3. Maximum number of lines per page and lines per inch.
4. Left and right-hand margins.
5. Table alignment via the tab character.
6. Allowance for insertion of diagrams.
7. Offset alternating pages so a xerox copy can be made on both sides of a page and put in a binder.
8. Print footnotes at the bottom of a page, at the end of a chapter, or at the end of the document.
9. Automatically number the sections.
10. Print the final draft on 8 1/2 x 11" 1-part console paper (no lines).

The calling sequence is as follows:

*DOCUMENT,input=<lun/name>, output=
    <lun/name>, contents=<lun/name>,
    diagram=<lun/name>, scratch=<lun/
    name>, final, label=<'user name'>,
    xerox, multiple=<number of input
    files>, scratch=<lun/name>.

For further information consult HELP, *DOCUMENT. If you have any questions or problems please contact Les Richey x2494.

NEW EDITOR

On October 1, 1976, the old OS-3 text editor will be laid to rest. A new editor (currently EDITX) will appear in its place. The new editor provides many new features not available before. A detailed manual is available from Lia Van Otten, MCC 142. EDITX will no longer be available as EDITX, it can be called simply by typing EDIT. The old editor will be available for a limited time under OLDEDIT. Questions or problems should be referred to Guy Lauterbach, MCC 124, x2494.

NEW VERSION OF CYBER COMPLOT RELEASED

In conjunction with the introduction of KRONOS 2.1.2, a new version of CYBER COMPLOT has been released. The major changes and improvements are described below:

1. All subroutines which are available on OS-3 COMPLOT and described in the complot Manual are now also available on CYBER COMPLOT. These include IGRINPT, ITALICS, and POSITON which were previously unavailable. Subroutine names that were longer than seven characters have been shortened to satisfy the CYBER naming convention.
2. A new plot type (-4) has been defined which allows simultaneous plotting on the Hewlett-Packard and Gerber plotters.
3. Several changes have been made to the subroutines which drive the Hewlett-Packard plotter. Lines with a length of more than three inches are automatically drawn in more than one segment to allow the pen to properly respond. Pen movements made with the pen up no longer produce a dot at the data point as they have in the past.
4. It is now possible to generate plots using CYBER COMPLOT and transfer them to the Calcomp plotter for plotting. This is accomplished by means of the following procedure:

   a. Before executing the plotting program, define the plotting unit to be a magnetic tape by use of the following control card:

      LABEL,TAPE1Ø,VSN=(User's Tape No.), LB=KU,F=S,PO=W. PW=(Tape Password)

   b. When plotting has been completed, copy the magnetic tape to the CDC 3300 for plotting on the Calcomp plotter as follows:

      7_8JOB,MT1,(Job Number), (Validity (Code)   SAVE FOR (User's Name)

      7_8EQUIP,1=MT,(User's Tape No.), AT 8ØØ,R PW=(Tape Password)

      7_8EQUIP,2=PLOT

      7_8LABEL,2/SAVE FOR (User's Name)

      7_8COPY,I=1,O=2,P=Ø

      7_8REWIND,1

      7_8LOGOFF

If the plot is a large one, it may be necessary to increase the MFBLKS limit in order to have sufficient scratch space to hold the plot while it is being copied to the plotter.

Additional details concerning the new CYBER COMPLOT are available in the new CYBER addendum to the COMPLOT Manual (available in MCC 142). Questions, comments, and suggestions should be referred to the faculty or student consultants as appropriate for resolution.

Users who have new or unusual graphics terminals and wish to be able to use them with the CYBER COMPLOT system should make their desires known to the Computer Center. If the application has the potential for wide usage or appears to be of great usefulness, the Computer Center may plan a revision to COMPLOT consistent with other demands on programming resources. If you have any questions call Bill Hunteman x2494.

FLECS

FLECS, which stands for Fortran Language with Extended Control Structures, is both an extension to the Fortran language and a transportable preprocessor for implementing that extension. As a language, FLECS contains nine control structures not found in standard Fortran. These control structures allow the programmer to program more easily and naturally as well as allowing the use of structured programming techniques. In all other ways, FLECS is identical to Fortran. The preprocessor translates FLECS control structures into equivalent Fortran and produces a nicely formatted and indented listing which displays the logical structure of the program.

Designed by Terry Beyer of the U of O Computer Center, FLECS is easy to learn and easy to use. Since FLECS is a true extension of Fortran, the Fortran programmer who moves to FLECS need not give up features of which he is fond nor subject himself to a relearning process. FLECS is being used successfully by both beginning and advanced programming students and by professional programmers at installations throughout the country.

The OSU Computer Center now has an operational version of FLECS on Cyber. Calling sequence is:

    GET,FLECS/UN=30078
    FLECS,<input>,<output>,<fout>

where <input> = file containing program written in FLECS (default name=INPUT)

   <output> = file containing structured FLECS output listing (default name = OUTPUT)

   <fout> = file containing FORTRAN program output from FLECS (default name = FOUT),

   ready to compile with the FTN command:

   FTN,I=FOUT,L=0,....

5

FLECS (cont.)

The current Cyber verison of FLECS requires RFL 40,100 to load and 27,500 to run, and is relatively inefficient. A more efficient version should be available soon.

The FLECS user's manual is available for $.60 from Lia Van Otten in MCC 142.

Questions or comments on FLECS should be referred to George Beekman or Phil Brown, MCC 150, x2494.

USE OF IMSL ROUTINES IN THESES AND DISSERTATIONS

The Computer Center subscribes to the International Mathematical and Statistical Library (IMSL) so that this excellent library of routines is available for users. However, IMSL is a private corporation and the routines are proprietary. Therefore, even though graduate students and other researchers may use IMSL routines in programs related to their research, publication of listings of IMSL routines is restricted. The following information about publication in theses and dissertations is excerpted from the "IMSL Numerical Computations Newsletter", Issue 11, May 1976:

> If, in the opinion of the author, listings of IMSL Library source code must be reproduced in the resultant thesis or dissertation in order that the [research] results be duplicatible by others, IMSL grants permission for such reproduction.
>
> In cases of such usage, IMSL requests that the author make the following points in the research document in a manner noticeable to someone interested in the listings:
>
> 1. The listed code is part of a proprietary product belonging to International Mathematical & Statistical Libraries, Inc. (IMSL), in Houston, Texas.
> 2. The listings are reproduced with the permission of IMSL.
> 3. The listings may not be extracted for other purposes, or used as the basis for any software development.

PIG AVAILABLE ON OS-3

Program for Interactive Graphics (PIG) is now available for public use. PIG is a two-dimensional picture-manipulation system. The user interface with this system is via interactive graphics terminals (e.g., Tektronix 4002, 4010, etc.). Supporting libraries exist for the application areas of electronic logic schematics, electronic printed circuit board artwork and computer program flow charting. For information on obtaining documentation use the OS-3 command:

    HELP,MANUALS,PIG.

Contact Steve Johnson 754-2494 for additional information on PIG and its areas of application.

USER OPERATIONS & SERVICES

COMPARISONS OF COMPUTER GRAPHICS DEVICES

The OSU Computer Center has two hard copy plotting devices available for public use. The CALCOMP 1627 II is a drum plotter which moves in increments of .01 inches. This plotter has been in use since 1966. The second plotter is a GERBER 1022 flatbed plotter which was acquired shortly after the arrival of the CYBER 73. The GERBER has a higher resolution and has an accuracy of .002 inches. The GERBER is an off-line plotter, which means the user produces the plot on a magnetic tape and the computer operator transfers the tape to the plotter to be plotted at a later time. This allows the GERBER to be used from either machine. The CALCOMP on the other hand is an on-line plotter, which allows the user to use it much like the line printer or card punch. Since the CALCOMP is on-line to the CDC 3300, the Cyber user is at a slight disadvantage. The Cyber user can still access the CALCOMP but must do so indirectly. The Cyber user generates the plot on a magnetic tape, then uses the 3300 to copy that tape to the CALCOMP. A set of plot drivers has been written which allows plotting on either of the above devices, as well as various Tek graphics terminals or an HP plotter. These plot drivers are available on either the 3300 or the Cyber and are described in detail in a manual called COMPLOT by Larry Hubble and Jeff Ballance. The COMPLOT manual is available in the Computer Center in room 142. This manual also contains the required control cards for using either machine with either plot device.

Plotting cost comparisons were made with a few other large computer sites on the west coast and are listed below for information purposes.

Stanford - 36" - 3 pen Calcomp drum plotter: $30/hour.

Washington State University - 36" Calcomp drum plotter: $20/hour.

University of Washington - 36" 3-pen Calcomp drum plotter: $26.88-$96.00/hour varies with type of user and priority.

COMPARISONS OF COMPUTER GRAPHICS DEVICES
(cont.)

Bonneville Power Administration - 4-pen
   flatbed: $27/hour.

OSU - 30" Calcomp drum plotter: $5/hour
   + paper charges.

      Gerber flatbed plotter: $10/hour.

The above 36" Calcomp plotters are rated
at 1.2 times the speed of the Calcomp at
the Computer Center and the flatbed
plotter at BPA is no more than 2-3 times
as fast as the Computer Center's Gerber
plotter.

NEW TERMINAL LABS PLANNED

The Computer Center is participating in
two cooperative facilities development
ventures intended to make terminals and
keypunches more readily available to
both faculty and students. It is hoped
that use of these facilities will reduce
congestion in the Computer Center
building.

The first of the new facilities will be
located in Dearborn 119 and is a joint
undertaking with the School of
Engineering. This facility is scheduled
to have eight teletypes, two Tektronix
terminals as well as four or five key-
punches. This data prep and terminal lab
is to be available to both faculty and
students Monday through Friday from 8 am
to 10 pm and Saturday 8 am until noon.
Equipment for this facility should be
installed about the start of Fall term.

The second development will be a joint
venture with the Department of Statistics
and will be housed in Home Ec 5. That
room will be partitioned into two
sections, the larger of which will be
equipped with the teletypes presently
located in Kidder 76. This part of the
facility will be utilized by Statistics
lab sessions but otherwise will be open
to the public. The other section of the
room will be reserved for faculty and
staff and will be equipped with a variety
of terminals and a keypunch.

Home Ec 5 should be ready for occupancy
midway through Fall term. Operating
hours will be announced and posted.

PORTABLE COMMUNICATIONS TERMINALS

The state of Oregon has stated that all
portable terminals must be acquired and
controlled by computer centers. To
comply with this rule and offer portable
terminals to our campus users the Computer
Center has recently purchased two light-
weight portable terminals (PortaCom,
weight 30 lbs.) that are now available on
short term rental basis, with a minimum
charge of $15.00. Access to computer

system is accomplished by means of an
integral acoustic coupler. The PortaCom
terminals have an attractive attache type
carrying case, a speed of 110 baud and
uses standard sprocket feed paper.

DIAL-UP LINES

OS-3 / CYBER

Corvallis

110 baud	754-3761
300 baud	754-3781
2000 baud (200 UT) Cyber only	752-9828

Portland

110 baud	229-3121
300 baud	229-3116

- - - - - - - - - - - -

OS-3

Corvallis

110 baud	754-4111
300 baud	754-3536
300 baud	754-3651
2000 baud (200 UT) Contact Guy Lauterbach or Fred Beebee	

Portland

110 baud	229-3106
300 baud	229-3101

S.O.S.C.

Contact Tim Kelley	482-6449

E.O.S.C.

110 baud	963-8000

IN CASE OF DIFFICULTY

Users are reminded that when their term-
inals stop because of a hardware or
software problem in the Center they
should not assume they have automatically
been logged off. If response does not
resume in a short period of time they
should contact the I/O room, x2033, for a
status report on the problem. OS-3 users
may request the operator log them off or
elect to wait until the problem has been
corrected to resume processing. Cyber
users should attempt to use the RECOVER
feature when they are able to log on after
the problem has been corrected.

LIBRARY CHANGES

The following files are not yet operational under 2.1.2:

    PLOT10, SCRIBE, PL1 and DFPRT.

PL1 will not be converted to run under 2.1.2.

The remaining files are being converted and will be announced as they are completed.

SNOBOL4 is operational under 2.1.2 but requires changing source decks to represent a colon (:) with a 6-8 punch.

SNOBOL4 can be used interactively with the following conditions:

    & is the SNOBOL $\wedge$ character

    ! is the SNOBOL $\vee$ character

    The program is not listed when the L=parameter is used on the SNOBOL4(---) command.

These conditions apply ONLY to SNOBOL executions from a terminal.

DIGITIZER RATES--A CORRECTION

The last two newsletters have contained conflicting digitizer rates. The correct digitizing charges are:

    with operator $15/hour

    without operator $12/hour

For those users wanting to do their own digitizing at the lower rate but are not familiar with the digitizer operation, there will be a $25 minimum charge for initial instruction and program setup.

OSU CAMPUS COMMUNICATION LINE PROBLEMS

With the Pacific Northwest Bell installation of an electronic switching system in Corvallis and the accompanying re-routing of the OSU campus data communication lines, numerous problems have been reported by OSU Computer Center remote terminal users. We ask for your continued cooperation in reporting malfunctions and Computer Center personnel will strive to isolate the problem and notify Pacific Northwest Bell. When reporting malfunctions call x2033.

TELEX MESSAGES

Occasionally messages are sent to all users logged on to KRONOS. Please comply with any instructions in these messages as soon as possible. Requests to logoff are usually sent because the operator is preparing to end the system or because of a hardware or software malfunction. In either case all users must logoff to permit correction of the problem.

EDUCATIONAL ACTIVITIES

VIDEOTAPE SERIES STARTS OCTOBER 11

Faculty and students are invited to view the videotape series on the use of OSU computer facilities beginning October 11, 1976. The two series are designed to acquaint the new user with OSU's time-sharing system (OS-3) and with the FORTRAN language.

Tapes will be shown on Cable Channel 5 and in Kidder 113T Monday through Friday at 10:30 am with repeat showing Monday through Thursday evenings from 10:00 to 11:00 pm on Channel 5 and in Kidder 108E. The series runs for three weeks.

CONVERSION PROJECT

Fisheries and Wildlife has submitted 26 CDC 3300 programs containing nearly 5000 lines of code to be converted to the Cyber over the next several months. To date the conversion project has converted programs for researchers in Engineering, Physics, Statistics, Mathematics and Chemistry.

If you have programs for use in research projects which you would like to have converted from the 3300 to the Cyber, contact the Conversion Project office at x2161.

COMPUTER CENTER

Oregon State University

Computer Rates*

*There is a monthly minimum charge of $1.00 for computational services.

OS-3

CPU Time	$ 5.00 per CPU minute
Tape	.015/sec. channel time ($.50 handling charge)
Elapsed time at teletype	2.00/hour
Elapsed time at high-speed terminal	7.50/hour
On-line disk storage	.15/block/month (512 words/block)
Punch cards	.30/100 records
Input cards	.15/100 records
High speed input	.50/100 records ($1 handling charge)
Paper Tape punch (PDP-8)	.50/100 records ($1 handling charge)
Remote line printer	.05/100 records
Line Printer	.125/100 records (extra charge when special forms are requested)
Calcomp Drum Plotter	.12/100 records + .15/ft of paper
Gerber Plotter	10.00/hour wallclock time + materials

2nd Shift - 37.5% discount

3rd Shift - 62.5% discount for CPU and terminal connect time - 37.5% discount for all other computer charges.

Commercial rates are 125% of University rates.

CYBER

CPU Charge	$ .085/system second
Input Cards	.012/pru
Punch Cards	.024/pru ($.0096/pru if stock supplied)
Line Printer	.0075/pru (+ charge for special forms used)
On-line Disk Storage (Indirect Files)	.064/640 characters + $5.00/direct access file/month.

Interactive Terminal Connect Charges:

110-1200 baud	$ 2.00/hour
2400 baud	4.50/hour

Remote Batch Terminal Charges

Input Cards	.005/pru
Line Printer	.005/pru

9

CYBER (cont.)

Commercial Rates are 160% of University rates.

2nd Shift - 33.3% discount.

3rd Shift - 66.7% discount for CPU and terminal connect time -
 33.3% discount for all other computer charges.

Note: Sunday is batch only. No telex. Jobs run on "time available"
 basis only. Turnaround time not guaranteed.

Personnel Rates

Keypunch/Verifying	$ 7.75/hour
Clerical	6.00/hour
Programmer	8.00/hour
Senior Programmer/ Programmer Analyst	12.00/hour
Senior Analyst/Analyst	16.00/hour

Other Services

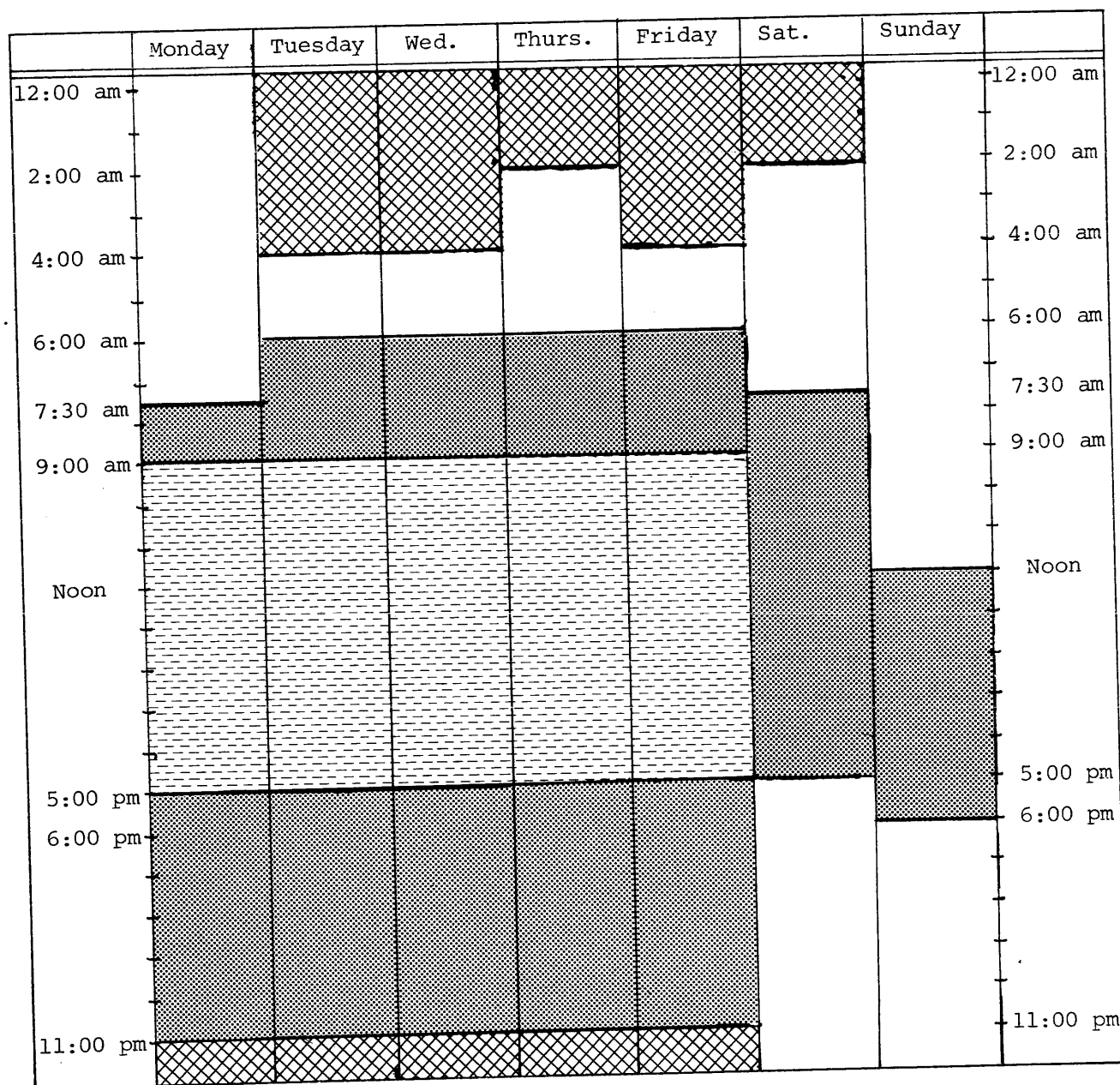|	Without Operator per hour charge	With Operator per hour charge
CALMA 302 Digitizer	$ 12.00	$ 15.00
IBM 083 Sorter	2.00	7.50
Interpreter		7.50
Burster and Decollator		7.50
Magnetic Tape Reels Rental	1.00/month ($.25 minimum)	

Time and File Limit Updates

Requests for time and file limit updates must be made before 4:00 pm
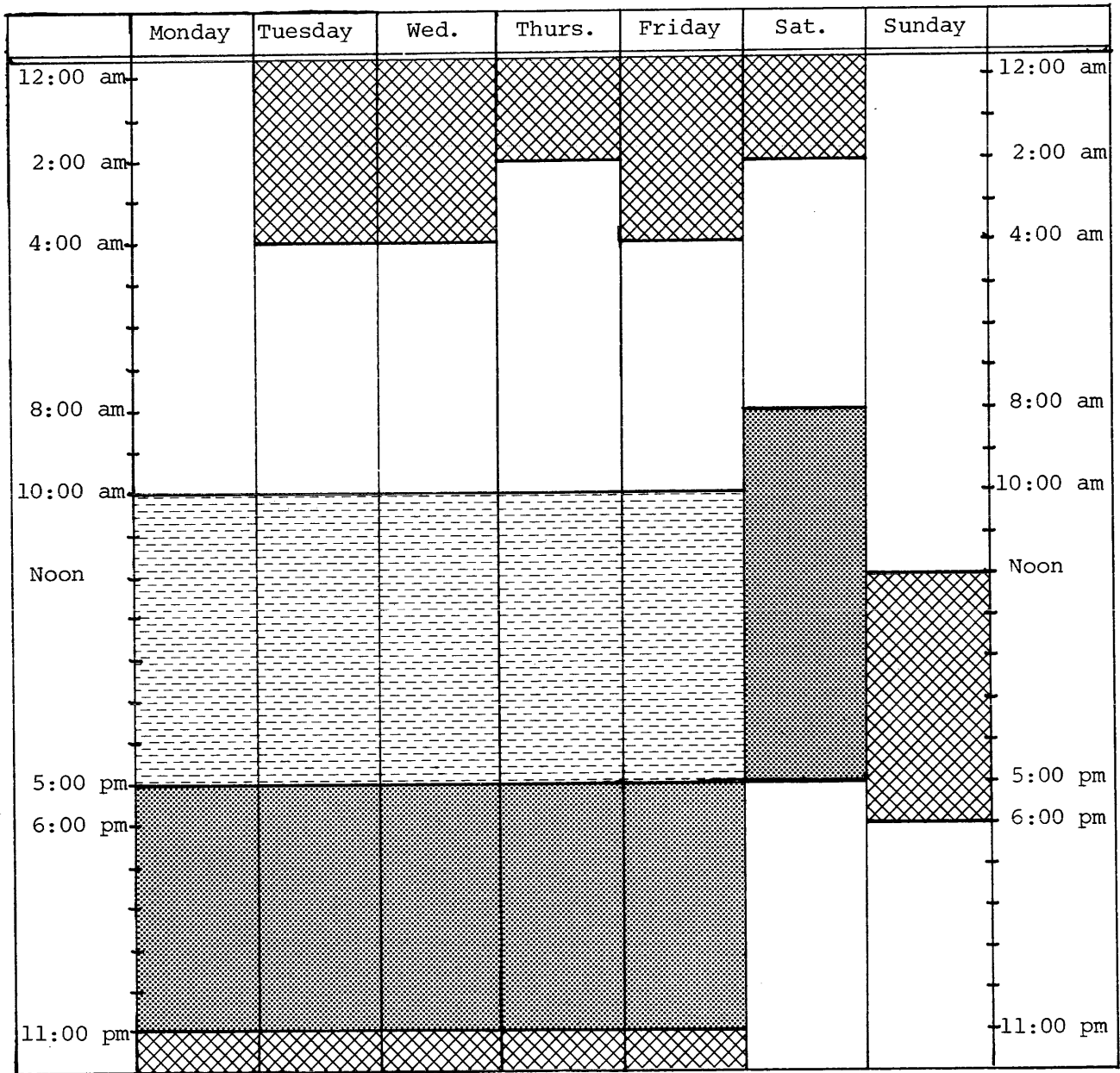to be on system by the next morning. Call 754-3483.

OS-3 OPERATING HOURS AND SHIFT SCHEDULE

	Monday	Tuesday	Wed.	Thurs.	Friday	Sat.	Sunday	

LEGEND:

[ ] Systems Maintenance and Development

[ ] Prime Shift - No discount

[ ] 2nd Shift - 37.5% discount

[ ] 3rd Shift - 62.5% discount for CPU and terminal connect time
    - 37.5% discount for all other computer charges.

11

CYBER OPERATING HOURS AND SHIFT SCHEDULE

	Monday	Tuesday	Wed.	Thurs.	Friday	Sat.	Sunday	

Time scale left axis: 12:00 am, 2:00 am, 4:00 am, 8:00 am, 10:00 am, Noon, 5:00 pm, 6:00 pm, 11:00 pm

Time scale right axis: 12:00 am, 2:00 am, 4:00 am, 8:00 am, 10:00 am, Noon, 5:00 pm, 6:00 pm, 11:00 pm

LEGEND:

☐ Systems Maintenance and Development

▦ Prime Shift - No Discount

▨ 2nd Shift - 33.3% discount

▩ 3rd Shift - 66.7% discount for CPU and terminal connect time - 33.3% discount for all other computer charges.

Note: Sunday is Batch only. No Telex. Jobs run on "time available" basis only. Turnaround time not guaranteed.

13

Directory

COMPUTER CENTER
Oregon State University

Telephone:

503-754-2494

MANAGEMENT:

Director--Thomas L. Yates
Manager Data Processing Systems--Anthony J. White
Manager Operations and Programming Services--Ronald A. Davis
Manager Communications and Hardware--James W. Fryklund
Manager Educational Computing Services--Jo Ann Baughman
Manager Systems Software--William Hunteman
Business Manager--Michael McQueen

OFFICE SERVICES

General Information 754-2494
Job Numbers--Gayle Zandofsky 754-3483
Billing (Accounts Receivable)--Lia Van Otten . . 754-4183
Purchasing (Accounts Payable)--Dolores Gugel . . 754-2638
Manuals for sale--Lia Van Otten 754-4183
Newsletter--Sue Mills 754-2494
Instructional Computing Requests--Dorrie Lemon . 754-2494
Unsponsored Research Grants--Dorrie Lemon . . . 754-2494

PRODUCTION SERVICES

Card Sorting, Interpreting, etc. 754-3584
Digitizing--RJay Murray 754-4156
Input/Output Area 754-3584
   Computer Supervisor--Dan Berg
   Day Supervisor--Dale Hannon
   Night Supervisor--Clyde Webb
Keypunching and Verifying--Verna Wohlers 754-2494
Magnetic Tape Librarian 754-3584
Optical Scanning--Sue Mills 754-2494
Purged Files--Sue Mills 754-2494
Terminal Connection 754-2033
Testing Services--George Beekman 754-2494
Time-Sharing Services
   CYBER 73   300 Baud 754-3781
   CYBER 73   110 Baud 754-3761

   3300   300 Baud 754-3651, 754-3536
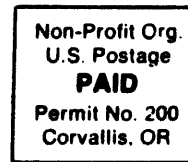   3300   110 Baud 754-4111

HARDWARE SERVICES

Teletype--Doug West, Gary Jarman   . . 754-2455, 754-2494
Electronic Terminals--Fred Beebee, Randy Grainger 754-2494

PROGRAMMING

All programming questions should be referred to:
Consultant 754-3474

Oregon State University
Computer Center
Corvallis, OR   97331

Address Correction Requested

OREGON STATE UNIVERSITY

COMPUTER CENTER NEWSLETTER

TABLE OF CONTENTS

GENERAL INFORMATION

ASSISTANT DIRECTOR SEARCH

The search for an Assistant Director, Research and Instructional Computing is proceeding on schedule. By the application deadline on October 15, 1976, there were nearly 40 applicants. Preliminary screening of the applications reduced the number still under consideration by about one half. A screening committee comprised of Dr. John Allen, School of Oceanography, Dr. Ed Anderson, School of Education and Computer Center Director Tom Yates has made a ranking of the candidates. Applicants from the top group have been invited to the campus for interviews during the month of November.

EQUIPMENT ACQUISITIONS COMMITTEE

State Executive Department policy requires that any computer equipment acquisition request must be accompanied by a justification statement. The format of the justification statement is available from Dorrie Lemon, telephone 2494. This policy includes all purchases and rentals, no matter which funding source is to be used, including gifts. Non-university computer services and software package acquisitions also are covered by this policy.

Since the Purchase Request form which accompanies the justification statement must be countersigned by the Computer Center Director, a committee has been established to review the justification statements and make recommendations regarding the requests. The committee is comprised of Ron Davis (chairman), Jim Fryklund and Ted Hopkins.

To expedite the committee's review of the acquisition requests it is desirable that the members are familiar with present and planned uses of DP equipment in the various departments. To this end the committee and Center Director Tom Yates are available to visit the departments. For more information call Ron Davis (2494).

USER PHONE

For the convenience of Computer Center users, a telephone has been installed in the hall near the southeast door of the building. Calls are restricted to campus and local area only.

PROBLEMS WITH GAMES

The Computer Center has received complaints regarding the use of the computers (especially the Cyber) for the playing of time consuming games such as Startrek, chess, etc. The Computer Center recognizes that development of such games is a challenging and worthwhile undertaking, but excessive use of the games in competition with productive work is undesirable. Consequently, the Center does not support such games in its library of Cyber routines available to the public, and controls have been implemented to inhibit their use on the 3300 when they are likely to adversely affect system performance. There undoubtedly is a certain amount of educational benefit to be derived from these games under the right conditions. Users are urged to moderate the use of such games on their own job numbers, especially during periods of heavy computing.

CONVERSION PROJECT

Last spring funds were made available to the Computer Center for the purpose of converting programs used by researchers from the 3300 to the Cyber. The Center has been directed by the Executive Department to complete all conversions by 1980.

An estimated 600,000 lines of programming code reside on the 3300 according to a survey of academic computing made eight months ago. Several requests have gone out from the Center for researchers to submit their programs for conversion. To date the response has been slow.

The conversion project is designed to aid academic users in converting programs to the Cyber, and Computer Center staff members are available to do such conversion. Please call x2161 for more information. A form to request program conversion is on page 7 of this newsletter for your convenience.

OPERATING STATISTICS

		Sept.	Oct.
Batch Logons	OS-3	5769	7892
Batch Logons	Cyber	3637	8554
Terminal Logons	OS-3	13846	21848
Terminal Logons	Cyber	5337	8329

CHRISTMAS/NEW YEAR'S HOLIDAY SCHEDULE

For the Christmas holiday the Center will be closed Friday, Saturday and Sunday, December 24-26, and reopen Monday December 27th at 7:30 a.m. Thursday night's closing will be at the regular time of 4:00 a.m.

For the New Year's holiday the Center will close at 5:00 p.m. New Year's eve December 31 and reopen Monday morning January 3, 1977 at 7:30 a.m.

Have a happy holiday.

SOFTWARE

PLOT10

The Tektronix graphics packages: Terminal Control Software and Advanced Graphics II are now available in a prerelease form. These packages allow transportable graphics software to be written in FORTRAN for the Tektronix 4010 series terminals.

To use the packages:

From batch enter:

```
ATTACH,PLOT10L/UN=30060.
LOAD(PLOT10L)
**The  Rest of Your Loader Statements**
    or
ATTACH,PLOT10L/UN=30060.
LIBRARY(PLOT10L)
**The Rest of Your Loader Statements**
```

From a terminal enter:

```
ATTACH,PLOT10L/UN=30060.
X,LIBRARY(PLOT10L)
**The Rest of Your Loader Statements**
```

Note: A simple program will require approximately 55000B FL to load and 36000B to run. Moderate to large programs may need as much as 70000B or more.

A LOAD will always get "4 LOAD ERRORS". This is normal. Unless you stop it a map will always be produced.

If you find an error: document it and send all relevant material to:

Jeff Gilbert
Milne Computer Center

Documentation is presently not available.

SIMSCRIPT II.5

SIMSCRIPT II.5 is now available on the Cyber. It is a well-established and widely used simulation language.

SIMSCRIPT II.5 was designed to operate in an interactive as well as batch processing environment. The language contains an expanded and complete repertoire of input and output facilities. These include free-form read and write statements, (without format specifications), the reading and writing of arbitrary length character strings, and complete flexibility for format specification and control. List processing capabilities and dynamic storage operations are greatly expanded. Compound entities and implied subscripts are now permitted. In SIMSCRIPT II.5, routines may be recursive. Powerful debugging features are a part of the language. New powerful concepts such as Monitored Variables allow the user to conveniently monitor values of selected variables prior to storing and retrieving.

To facilitate learning, SIMSCRIPT II.5 has been organized into five separate levels. The user can learn one level at a time, and at any point can write complete programs using only the facilities of the levels he has learned thus far. These levels range from a very simple algorithmic language comparable to BASIC up to a full discrete event simulation language and a system programming language.

If you have any questions call Bill Hunteman x2494.

CYBER MEMORY RESTRICTIONS

Effective October 18, 1976 the maximum field length restrictions for Cyber jobs were changed as follows: (All field lengths are given in octal.)

Weekdays 10:00-Closing	All jobs 140,000
Saturday 8:00-5:00	All jobs 140,000
Sunday 12:00-6:00	All jobs 220,000

Export and telex will be available at all times.

Jobs larger than the maximum restriction should be scheduled with Dan Berg, Operations Supervisor, x2736.

Note: The availability of telex and export on Sunday are subject to periodic evaluation. These packages will be withdrawn if usage is very low. Users will be notified if any change becomes necessary in the Sunday operation of telex and export.

3

DFPRT

The routine DFPRT to print the last n lines from your dayfile is now available from the LIBRARY.

DFPRT will extract the requested number of lines from the end of the dayfile and print them in the order they occur in the dayfile.

To get DFPRT for use from the batch subsystem enter:

GET,DFPRT/UN=LIBRARY.

DFPRT may be executed by the following call:

DFPRT(N=NUM,L=FN)

The parameters are optional.

DFPRT may be called with the following parameters:

NUM - The number of lines to print from the end of the dayfile. NUM defaults to the last 10 lines in the dayfile.

FN - The file name to contain the lines taken from the dayfile.

FN defaults to the output file.

To get DFPRT for use in the other subsystems enter:

GET,DFP/UN=LIBRARY.

DFPRT may be executed from the subsystem by the following call:

-DFP(M=NUM)

The parameter is required.

NUM - Number of lines to be printed from the end of the dayfile.

MPOS JOB SETUP ON KRONOS 2.1.2

(Jobname),CM60000,Txxx.   (User's name).
USER,(User number),(User password).
ATTACH,MPOS/UN=LIBRARY.
MPOS.
  or
MPOS(...filenames...)
  .
  .
  .
6
 7
  8
   9

1. See page 123 in MPOS User's Guide for selection of filenames.
2. User's guide can be purchased at the Computer Center in room 142 at a cost of $4.50.
3. Please report problems to Billy Chou at x2494.

CYBER PERFORMANCE

On October 18 the total Cyber memory space was increased from 65K to 98K. This increase has significantly improved overall performance of the Cyber.

Utilization of the central processor unit increased over 100% due to the fact that the additional memory now allows at least two jobs to reside in central memory at the same time. Additional jobs may be loaded into memory when the space is available.

Disk channel utilization increased approximately 45% due to the increased requirements for normal user program input/output and swapping of user jobs. The increased disk activity also increased contention for the disk channel by approximately 85%.

Addition of a disk channel to permit two simultaneous data transfers to or from the disks and tuning of the operating system for the two disk channels are planned for early November.

USER OPERATIONS & SERVICES

EDIT USERS

OS-3 Edit users should be aware of a potential problem resulting from small differences between the old and new text editors.

If a user created COSY decks with the old editor (COUT command), it may prove difficult to read them into the new editor. Due to a difficiency in the old editor, COSY decks could be created with no COSY/ card. The new editor (and COSY) requires COSY decks to be in proper COSY format.

In order to correct this problem users should read COSY decks into the old editor (OLDEDIT), remove all COSY/ cards from the front, and COSY-out the decks, remembering to specify a deck name so that a COSY/ card will be placed on the front of the deck. This will allow the deck to be read into the new editor (EDIT) or processed by COSY.

The form of the COSY-out command is:

COUT,<filename>,<deckname>

<filename> and <deckname> may be the same if desired.

USER COMMITTEES

The Computer Center is anxious to establish and maintain open lines of communication with the user community. One method for such communication is the so-called advisory committee. At present there are two such organizations functioning at OSU. Users should take advantage of the availability of these groups to register their views regarding Computer Center services.

The two groups are the Computer Committee and the Academic Users Council. Membership of the two organizations is listed below. The Computer Committee is appointed by the Dean of Administration and is principally concerned with allocation of instructional computing resources. The Academic Users Council members serve by invitation of the Computer Center Director. The Council is primarily concerned with Center services and policies affecting the research community.

There are also other adhoc or limited interest committees at the university which are concerned about computing services. The Center is responsive to requests to meet with such groups.

Academic User Council:

Dr. John S. Allen, Oceanography; Dr. Edwin L. Anderson, Education; Dr. William G. Brown, Ag and Resource Economics; Dr. Frank S. Conklin, Ag and Resource Economics; Dr. Robert Hudspeth, Civil Engineering; Dr. Charles B. Miller, Oceanography; Dr. Roger G. Peterson, Statistics; Dr. Donald A. Pierce, Statistics; Dr. W. Bruce Shepard, Political Science; Prof. Solon Stone, School of Engineering; Mr. Andy VanderPlaat, Agriculture Fiscal Office; Dr. Albert Tyler, Marine Science Center; Dr. William S. Bregar, Computer Science and Dr. Paul Paschke, School of Business.

Computer Committee: (1976-77)

Paul E. Paschke, Chairman, Business Administration; Curtis R. Cook, Computer Science; Melvin Cutler, Physics; Russell G. Dix, Office of the Registrar; Eugene Elzy, Chemical Engineering; Lewis G. Hogan, Oceanography; Roger G. Kraynick, Ag. and Resource Economics; Robert L. Newton, Business Affairs; Donald A. Pierce, Statistics; Richard H. Waring, Forest Management; Warren L. Webb, Forest Management, and Ex Officio: Jo Ann Baughman, Computer Center.

9 TRACK TAPE CONVERSION

The Computer Center has made arrangements with Data Services Center to convert tapes from 9 to 7 or 7 to 9 track. The conversion routines will work on either character to character (EBCDIC to BCD) or binary to binary conversion where the binary conversion is a bit for bit transfer with no transliteration.

If you have a tape to be converted to need a specialized routine for tape conversion contact Ron Davis, x2494.

HOW TO RECOVER PURGED OR LOST FILES

The storage of disk files is usually very effective, efficient, and safe. However, these benefits can lead computer users to a false sense of security. One must always keep in mind that any type of computer media storage is vulnerable to partial or total loss of information. Also, there is also the threat that seldom used files may be purged. So it is extremely wise to keep duplicate copies of important files on some type of backup media. However, if a disk file is damaged, destroyed, garbled or purged, the Computer Center has taken steps to back up files within certain limits.

All disk files are backed up by the Center by dumping them to magnetic tape after the computer systems are off the air. These tapes are then stored off-site in a fire proof vault for security purposes. Because writing disk files to tape is a very time consuming and expensive process a full dump of all files is accomplished only once a week (on Sundays). On Monday through Saturday only those files that have been newly created are copied to tape. This provides us with the following backup schedule.

CDC 3300 System -

1. Mon-Sat: Newly created files are saved.
2. Sun: Total dump of disk files. These tapes are retained for 4 weeks.

CDC Cyber System -

1. Mon-Sat: Newly created files are saved.
2. Sun: Total dump of disk files. These tapes are retained for 6 weeks.

To request files to be restored you may:

1. Fill out a "Request to Recover Files" form at the I/O counter, Computer Center room 207.
2. Call 754-3584 and give the following information to the I/O receptionist.
   a. System the files were on - 3300 or Cyber
   b. Your name
   c. Your telephone number
   d. Department and address
   e. The job number user code where the files are to be stored
   f. The job number, user code where files were stored
   g. File names

h. The date the files were last changed, written on, or purged.
i. The date the files were last known to be present and usable.
j. How were the files lost.

Remember that:

1. Backup tapes go back only 4-6 weeks, depending on the system, purged files will be saved for one year.

2. The tapes are kept off-site and are not readily accessible. Therefore, file recoveries are not instantaneous. There may also be a problem if all the tape drives are being used. Allow for a few hours before checking to see if your files are back.

3. File recovery costs can be as low as $1 per file or as much as $10 per file. This difference exists due to the following variables:

   a. Where the files are located on the magnetic tape
   b. The number of jobs on the system at the time the files are being restored.
   c. Whether the job is run on first, second or third shift.

If there are any questions you should contact the operations supervisor on x2736 or the shift supervisor on x3584.

Remember, the disk file backup is a service provided by the Computer Center but not a guarantee that files will always be available. Do notbe misled into believing that data on disk or tape is indestructible. Have a backup of your critical files. They are your work and a little insurance policy is very wise.

EDUCATIONAL ACTIVITIES

1977 CONFERENCE ON COMPUTERS IN UNDERGRADUATE CURRICULA   JUNE 19-22, 1977

Purpose
The conference itself serves to open channels of communication between persons who have used, are using, or would like to use computers in undergraduate education. Both experienced users and new users have benefited from the practical nature of the conference. It is the only national multi-disciplinary conference serving this purpose. In addition, the proceedings of the previous conferences have had wide circulation and have provided guidelines for many who have sought to use the computer to enrich, modify, or revamp undergraduate courses.

Travel Grants
This year a limited number of partial travel and subsistence grants may be available to speakers and attendees from minority institutions and small colleges. To obtain further information and an application write to:

CCUC/8 Travel Grant Committee
Eppley Center
Michigan State University
East Lansing, MI   48824

Deadline - January 15, 1977

Send papers to:

Gerald L. Engel
Virginia Institute of Marine Science
Gloucester Point, VA

Please do not send papers to the conference chairman.

For more information call Educational Computing Services B300 at x2161.

CONDUIT NEWS

CONDUIT is an organization, supported by the National Science Foundation, whose purpose is to facilitate use of instructional computing at the collegiate level. CONDUIT seeks to accomplish this purpose by providing instructors with ideas, curriculum materials, and information about instructional computing. It encourages instructors and development teams to produce materials which can be useful to educators at other schools.

Major CONDUIT activities include reviewing and testing computer-based instructional materials, developing guidelines to ease the movement of computing materials, and seeking to establish an effective clearing-hours and distribution system.

It is currently reviewing and testing materials in biology, chemistry, economics, mathematics, physics, political science, business administration, geology, sociology, and psychology. It is focusing on materials which are not widely distributed, but which are easily moved to a wide variety of course and computing environments.

Among the problems in developing computer instruction which CONDUIT is attempting to overcome are the lack of adequate professional rewards for developing or using new instructional techniques, inadequate means for disseminating information and materials, lack of trained technical support, non-standardization of equipment, and inadequate documentation of existing materials.

Oregon State University is represented in CONDUIT by Tom Yates, Policy Board member; JoAnn Baughman, CONDUIT Coordinator; Dave Fuhrer, CONDUIT Programmer and Dr. Cliff Gray, Chairman, Business Discipline Advisory Committee.

Users who are interested in learning more about the CONDUIT materials should call x2161. Also call that number to arrange subscriptions to PIPELINE, the CONDUIT magazine.

Please fill out top part only and return entire form to Jo Ann Baughman.

FACULTY APPLICATION
3300 Conversion Project

NAME:_____   DATE:_____

DEPARTMENT:_____   Phone Number:_____

PROGRAM NAME:_____

Attached: ___ Program Listing   ___ Program Source (<u>required</u>)

   ___ Program Abstract   ___ Program Documentation   ___ Sample Data

NOTE: We <u>REQUIRE</u> only the program source deck - this can be in the form
        of cards or a public file on the 3300. It would also be helpful
        to have sample data to test with for comparison of 3300 runs.

_____
_____

<u>Computer Center Use Only</u>

Project Code:_____   Language:_____

Programmer Assigned:_____   Lines of Code:_____

Date Assigned:_____   Difficulty Level:_____

Estimated Conversion Time:_____

Tasks to be Completed:
   ___ Convert Program to CYBER
   ___ Sample Run and User Instructions
   ___ Program to ANSI
   ___ Write Technical Documentation

   ___ _____

_____
_____

(To be completed at end of conversion)
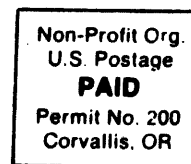
The program runs to my satisfaction. The following documents have been
turned over to me:

   ___ Program Listing
   ___ Source Code: ___ Cards   ___ Mag Tape
   ___ Instructions for use on CYBER with CYBER sample run

                        Signature:_____
                        Date:_____

7

Oregon State University

Computer Center

Corvallis, OR   97331

ADDRESS CORRECTION REQUESTED