CYBER-72 COMMITTEE APPOINTED

Many users of the OSU Computer Center have inquired about the rumored acquisition of a CDC 6400 (CYBER-72) Computing System. The following is a summary of the Center's plans and activities regarding this new acquisition.

Almost three years ago a CDC 3500 central processor, channels, and memory were ordered as an "upgrade" to the leased model 3300. Subsequent to this order, it became possible to purchase the mainframe components of the model 3300 and the delivery of the model 3500 was postponed indefinitely. A number of major improvements (some hardware but mainly in the OS-3 Time-Sharing System) extended the model 3300's performance capabilities so that it has been possible to meet the increased computational demands during this time period.

Control Data Corporation has offered OSU the opportunity to acquire a CYBER-72 system in lieu of the CDC 3500. The CYBER system would provide greatly expanded capabilities to support instructional, research, and administrative computing requirements. In addition, full computing support could be provided to other OSSHE institutions that currently do not have adequate facilities. The powerful processing capabilities of the CYBER system would be used to support a variety of high-speed remote job entry terminals. The CDC 3300 would continue to support time-sharing applications.

The Chancellor's Office has appointed a committee to evaluate this recommendation and to project data processing requirements within OSSHE over the next five-year time period. This committee is meeting at the present time and is scheduled to furnish its recommendation to the Chancellor's Office by April 1, 1972.

CONDUIT PROPOSAL FUNDED BY NSF

CONDUIT, a project supported by the National Science Foundation, is a national study to find ways to more effectively disseminate computer-based curriculum materials developed for use in higher education. Five regional networks are participating in CONDUIT to coordinate program exchange and to test both the process of program exchange and the educational validity of selective materials transported. These networks are Oregon State University, Dartmouth College, University of Iowa, North Carolina Educational Computer Service (NCECS), and the University of Texas. A separate CONDUIT central organization is located in North Carolina.

Five categories of activities are proposed for the CONDUIT organization: a) central cataloging of programs; b) national dissemination - the design and implementation of a mechanism under which dissemination can efficiently and effectively occur; c) transportability techniques - testing and designing the implementation and evaluation of all respects of transportability; d) classroom techniques to use in presenting materials; e) training faculty members in the use of transported materials.

To physically transport materials to the three basic computer hardware environments of its five networks, the activities at the network will include 1) an initial collection of materials, 2) faculty training in the use of converted materials to the specific environment, and 3) the setting up of the evaluative tests designed by the CONDUIT staff. CONDUIT is proposed for the two-year period, January 1, 1972 - December 31, 1973, with possible extension after evaluation to a third year of activity.

At Oregon State University, from four to eight interdisciplinary workshops will be held during 1972 for selected faculty members. These workshops will provide initial contact with the materials to be tested and some expertise in defining both the practical and educational parameters involved in the test materials.

Eleven disciplines are proposed for this study: accounting, biology, business administration, chemistry, economics, geography, mathematics, physics, political science, sociology, and statistics.

Dr. Larry Hunter is principal investigator at OSU. Jo Ann Baughman is the curriculum coordinator for the Oregon Regional Network.

CONDUIT MEETING HELD

Dr. Larry Hunter and Mrs. Jo Ann Baughman attended a conference held in Austin, Texas, January 24-25. The five schools involved in the CONDUIT project met for a planning session at the University of Texas.

OPERATING STATISTICS

For November through January, OS-3 usage was as follows:

November 1 - November 30:

Number of batch jobs run:	10,769
Number of console runs (LOGON-LOGOFF):	32,791
Number of console hours used:	5507.11
CPU time used - console and batch:	146.39 hours
Total number of hours OS-3 was on the air: (15 1/2 hrs. Mon.-Fri.; 9 1/2 hrs. Sat.)	363.5 hours
Average number of console users:	15
Amount of CPU time used by an average user for one hour of console time:	64.8 seconds

December 1 - December 31:

Number of batch jobs run:	10,141
Number of console runs (LOGON-LOGOFF):	33,599
Number of console hours used:	5698.68
CPU time used - console and batch:	153.85 hours
Total number of hours OS-3 was on the air: (15 1/2 hrs. Mon.-Fri.; 9 1/2 hrs. Sat.)	370 hours
Average number of console users:	15.4
Amount of CPU time used by an average user for one hour of console time:	60.83 seconds

January 1 - January 31:

Number of batch jobs run:	11,631
Number of console runs (LOGON-LOGOFF):	30,229
Number of console hours used:	4915.39
CPU time used - console and batch:	134.30 hours
Total number of hours OS-3 was on the air: (15 1/2 hrs. Mon.-Fri.; 9 1/2 hrs. Sat.)	373 hours
Average number of console users:	13.2
Amount of CPU time used by an average user for one hour of console time:	59.3 seconds

QUARTERLY NEWSLETTER OF SOCIAL SCIENCE ARCHIVAL ACQUISITIONS

The Laboratory for Political Research of the University of Iowa has been funded by the National Science Foundation to publish a quarterly newsletter. The basic function of the newsletter is to collect and communicate at regular intervals information on data acquired by archives. Each archive will be contacted quarterly and will be requested to provide information on its new data sets.

Approximately 30 archives have been contacted and they have been asked to cooperate in the publication of the newsletter.

The goal of the newsletter is to contribute to a more effective utilization of machine-readable data for academic research and research training in the social sciences.

For more information about this newsletter, or forms for subscription, contact Jo Ann Baughman at extension 2494.

INSTRUCTIONAL COMPUTER USE, FALL TERM, 1971

School of Agriculture

Ag Engineering	$ 125.39	
Fisheries and Wildlife	315.86	
		$ 441.25

School of Business and Technology

Business & Technology	2,556.09	
		2,556.09

School of Education

Education	247.40	
		247.40

School of Engineering

Chemical Engineering	3,498.31	
Civil Engineering	1,174.79	
Electrical Engineering	1,068.69	
Industrial Engineering	1,363.10	
Mechanical Engineering	1,781.58	
Nuclear Engineering	432.40	
		9,318.87

School of Forestry

Forestry	178.53	
Forest Research Lab	325.65	
		504.18

School of Home Economics

Institution Management	5.48	
		5.48

School of Humanities & Social Sciences

Political Science	46.22	
Psychology	425.65	
		471.87

School of Pharmacy

Pharmacy	130.99	
		130.99

School of Science

Biochemistry-Biophysics	$ 186.18
Chemistry	607.35
General Science	1.00
Mathematics	10,485.33
Physics	656.49
Radiation Center	608.35
Statistics	8,160.50
	$ 20,705.20

Alumni Office

	2.25
	2.25

TOTAL INSTRUCTION USE FALL TERM

$ 34,383.58

* P R O G R A M M I N G   T I P S *

*GFREQ

The generalized frequency distribution program (*GFREQ) has been re-
vised to include percentage distributions also. For revised documen-
tation and/or questions contact Les Richey or Ron Davis at extension
2494.

MODELING CAPABILITIES BEING ADDED TO THE ARAND SYSTEM

A group of programs dealing with stochastic modeling, prediction, and
transfer function modeling is being developed as part of the OS-3
ARAND System, a programming system for the analysis of time series
data. The class of linear models involved is suitable for representing
a variety of time series, including geophysical and economic in origin,
and series that are stationary or non-stationary. In addition, the
general model includes provisions for representing time series exhi-
biting seasonal or periodic fluxuations.

Specific routines that are now nearing completion allow for 1) model
identification, 2) preliminary estimation of parameters in the iden-
tified model, 3) final estimation of parameters, and 4) forecasting
with the fitted model. Diagnostic checks for assessing model fit are
included. A similar collection of routines will be developed for
transfer function modeling. An outline of these routines, and more
importantly, a complete exposition on the class of models, can be
found in Time Series Analysis, Forecasting and Control by G. E. P.
Box and G. M. Jenkins.

For further information contact Lyle Ochs, extension 2494.

NEW FORTRAN

The new FORTRAN compiler will be released as FORTRAN in the very near
future. The old FORTRAN will be available as OLDFTN. Persons

experiencing problems with the new compiler should contact the systems programmers at extension 2494. The new compiler is currently available as *F30.

SORT/MERGE

The programs *XSORT and *MERGE will soon be changed to SORT and MERGE.

COMPUTER CENTER BUILDING TO BE DEDICATED

The Computer Center building will be dedicated April 24 in honor of
Dr. William E. Milne, former Chairman of the Department of Mathematics at
Oregon State University. Dr. Milne was widely known for his work in num-
erical analysis and was instrumental in pioneering the introduction of
computers to OSU. The building will be named Milne Hall.

An Open House will be held on April 24 from 2-5 p.m. at the Computer
Center. At 3 p.m. Professor Arvid Lonseth will give the address dedi-
cating the Computer Center building. At 4 p.m. a special lecture will be
given by Dr. Thomas E. Hull, a guest lecturer from the University of
Toronto, Ontario, Canada. Dr. Hull will describe Milne's contribution to
Mathematics. On Tuesday, April 25, from 3:30-5:00 Dr. Hull will present
an invited talk as the first Milne Colloquium Lecture speaker.

The public and interested people are invited to attend the Open House and
the lectures. All lectures will be held in Kidder Hall (see the Mathe-
matics Department or later announcements for the exact room numbers).

ANNOUNCEMENT OF CONDUIT SUMMER WORKSHOPS IN EDUCATIONAL COMPUTER USAGE, 1972

It is planned to hold a one- or two-week workshop in several disciplines
this summer to prepare faculty for working with CONDUIT instructional
materials. Travel and subsistence will be paid by CONDUIT for a limited
number of participants. Participants will spend their time learning to
use the materials, discussing the role of the computer in the conceptual
structure of their courses, and learning about procedures and the types of
data required for the evaluation of their experiences at the end of the

academic year. Computing time for this experiment will also be provided
by CONDUIT through its regional member networks.

It is not anticipated that excessive amounts of reporting or data collec-
tion will be required of faculty. The emphasis will be on acquiring
information concerning the various problems, difficulties, and satisfac-
tions which faculty and students experience in different environments and
disciplines as they use these materials. "Negative" results are as impor-
tant as "positive" results for our knowledge of the computer's educational
potential. Even if there is NO interest in participation among the faculty
in your department we hope that you will make this fact known to us as well
as your reasons, if possible.

If you are interested in using the computer in your teaching during all or
part of the next academic year, please send the following information to
Jo Ann Baughman, OSU CONDUIT Curriculum Coordinator.

1. Name, affiliation, address, department, faculty position.
2. Name and description of the course(s) you will be teaching
   during the next academic year.
3. Name and description of the course(s) you are teaching this year.
4. Your previous computer experience (if any) and its nature.
   (This is not a prerequisite for participation.)
5. At least two periods during the summer when you would be most
   available for a workshop, in order of preference.

PROCEDURE FOR ALL COMPUTER SERVICES CONTRACTS

The purchase of computing services from any outside or commercial source
now requires the approval of the Data Systems Division, Executive Depart-
ment, in Salem. All requests for outside computer services at OSU must be
approved by the Computer Center Director and forwarded through the OSU
Business Office to the Chancellor's Office prior to submission to the Data
Systems Division.

The specific wording of the policy is:

> No contract for the purchase of computing services
> from a commercial source will be consumated without
> the approval of Data Systems Division, Executive
> Department. The request for services must include

a statement of examination as to what specific steps
were taken to insure that State computing resources
are, in fact, not available and that support require-
ments can only be satisfied by commercial services.

Ample lead time should be allowed for all requests, since this new policy
requires several new levels of approval.

ANNUAL SUMMER INSTITUTE TO BE HELD AT OSU

The annual instructional Institute for Faculty Training will be held at
Oregon State University in late August or the beginning of September.
The institute is designed to develop the computer skills of faculty and
graduate student personnel who are or will be using the OS-3 Time-Sharing
System.

Workshop I will consist of instruction in how to use the computer, and
classes in FORTRAN, OSCAR, BASIC, EDITOR, and plotting.

Workshop II will consist of classes in the use of Instructional Systems
available on the OS-3 system. Among these are:

1. SIPS, the OS-3 interactive statistical package
2. DIALOG, a computer-assisted instruction package
3. GROPE, an interactive graphics language
4. DRAFT, a system for mechanical drawing and drafting
5. GPSS, a simulation package
6. ARAND, a modeling and prediction package applicable in Economics,
        Atmospheric Sciences and Oceanography

If there is sufficient interest, it will also be possible to make materials
available in Chemistry, Biology, Accounting and other areas. To express
interest in these or other areas, please contact Jo Ann Baughman, ext. 2494.

If you are interested in attending this institute please return the form
on the last page of this Newsletter to the Computer Center.

SPRING VIDEOTAPE SCHEDULE

April 17-21	Introduction to OS-3	K128, cable 5 3:30-4:30 pm	
April 17-19	Introduction to OS-3	9:00-10:00 pm	cable 5
April 20	Introduction to OS-3	9:00-11:00 pm	
April 24-28	Introduction to FORTRAN	K128, cable 5 3:30-4:30 pm	
April 24-26	Introduction to FORTRAN	9:00-10:00 pm	cable 5
April 27	Introduction to FORTRAN	9:00-11:00 pm	
May 1-5	Introduction to FORTRAN	K128, cable 5 3:30-4:30 pm	
May 1-3	Introduction to FORTRAN	9:00-10:00 pm	cable 5
May 4	Introduction to FORTRAN	9:00-11:00 pm	

CONDUIT MEETING HELD

Dr. Larry Hunter, Computer Center Director, attended a meeting for CONDUIT
board members in Washington, D.C., March 22. They discussed CONDUIT's
plans and strategies for the coming year.

CONDUIT, a project supported by NSF, is a national study designed to dis-
seminate computer-based curriculum materials among the five participating
regional networks at OSU, Dartmouth, University of Iowa, University of
Texas, and North Carolina Educational Computer Services (NCECS).

Other CONDUIT staff members at OSU are:

        Jo Ann Baughman, Curriculum Coordinator

        Kay Porter, Information Officer

        Keith Avery, Programmer

        Dave Fuhrer, Programmer

For any questions regarding CONDUIT activities, the reader may contact
Jo Ann Baughman, extension 2494.

COMPUTERS IN THE UNDERGRADUATE CURRICULUM CONFERENCE TO BE HELD IN JUNE

The third conference for computers in the Undergraduate Curriculum will be held June 12-14, in Atlanta, Georgia. This conference, held in 1971 at Dartmouth, and in 1970 at the University of Iowa, has presented some excellent papers by university professors who have used the computer in many areas of the undergraduate curriculum. This conference has provided many ideas and insights to those who have attended. Any person wanting more information about this conference should contact the Computer Center, extension 2494, for details.

*GROPE, AN ON-LINE GRAPHICS DISPLAY PACKAGE

Oregon State University has developed an interactive Graphics system with an underlying goal to facilitate the educational process. Graphical representations of parameterized expressions are easily developed and displayed on a Graphics display terminal. The computational power of the Graphics system, the flexibility of commands, and the interactive capability make the system a powerful research tool as well as a viable instructional aid for the hands-on use of students.

The user may perform the following three basic functions:

1. define functions and types of plots to be produced
    a. Analytic functions
    b. Systems of differential equations
    c. FORTRAN compatible functions
2. specify the ranges of the dependent and independent variables
3. plot and label the curves

This system is available for a Tektronix display terminal on the overlay *GROPE. *CGROPE will produce displays on the Calcomp Plotter. Manuals describing the use of this system are available in Room 126 of the Computer Center. Any questions about the system may be directed to Jeff Ballance, Larry Hubble, or Dave Grillot at extension 2494.

OPERATING STATISTICS

For February and March, OS-3 usage was as follows:

	February	March
Number of batch jobs run:	14,980	10,704
Number of console runs (LOGON-LOGOFF):	29,540	33,576
Number of console hours used:	7,058	7,910
CPU time used - console and batch:	150.92 hrs.	205.13 hrs.
Total number of hours OS-3 was on the air: (15 1/2 hrs. Mon.-Fri.; 9 1/2 hrs. Sat.)	362	366
Average number of console users:	19.5	21.6
Amount of CPU time used by an average user for one hour of console time:	57.5 sec.	69.3 sec.

INSTRUCTIONAL COMPUTER USE, WINTER TERM, 1971-72

School of Agriculture
Ag Economics	$ 529.47	
Ag Engineering	492.00	
		$ 1,021.47

School of Business & Technology
Business & Technology	6,526.85	6,526.85

School of Engineering
Chemical Engineering	2,572.52	
Civil Engineering	712.29	
Electrical Engineering	5,447.59	
General Engineering	1,674.41	
Industrial Engineering	4,337.36	
Mechanical Engineering	2,542.99	
Nuclear Engineering	1,162.80	
		18,449.96

School of Forestry
Forestry	883.29	883.29

School of Humanities & Social Science
Economics	173.64	
Psychology	331.79	
		505.43

School of Oceanography

Oceanography   106.78   106.78

School of Physical Education

Physical Education   58.30   58.30

School of Science

Atmospheric Science	477.11	
Chemistry	431.00	
Crop Science	225.81	
Entomology	95.04	
Mathematics	9,627.05	
Physics	1,082.86	
Radiation	432.59	
Statistics	12,159.34	
Zoology	29.89	
		24,560.69

TOTAL INSTRUCTIONAL USE FOR WINTER TERM $52,112.77

200 TERMINAL IN OPERATION

The CDC 200 remote batch terminal is up and operating. Anyone interested in learning how to use it should call Ron Davis for details at ext. 2494.

MANUALS AVAILABLE

The revised SORT/MERGE manual (ccm-71-6) and the revised FORTRAN: Entering, Editing, and Running from Remote Units (ccm-68-39R) are now available in CC Room 126.

A new manual entitled "Primer for OS-3 Users" (ccm-71-07) is available in CC Room 126. This "Primer" is intended for all new users of the OS-3 system. It is written in a programmed instruction fashion, and has many examples that the new user will find helpful in running his programs on the OS-3 system.

8.

NOTICE TO THE USERS OF OS-3 PLOT ROUTINES

All the subroutines described in "Using the Plotter: Documentation and Examples" are now available from a library file called *PLOTLIB. Rather than loading *LOG1, *LOG2, *LOG3, *LOGN, *MLTIPLT, *TTYPLOT, *PLOTP, *PLTSUBS, *PLTRTNS, *GRAPHIC, *TTYHIST, *HISTPLT, *LPCONTR, or *CONTOUR with the calling program, simply use L = *PLOTLIB on the LOAD statement. For example:

```
#LOAD,56,L = *PLOTLIB    (cr)
RUN                      (cr)
```

The individual binary files will be removed from the system shortly, so start using the plot library, *PLOTLIB.

SUMMER INSTITUTE
FOR FACULTY TRAINING

OREGON STATE UNIVERSITY
1972

NAME_____DATE_____

INSTITUTION_____

DEPARTMENT_____

SUMMER MAILING ADDRESS_____

_____

_____

I am interested in the following areas:

/_7 Workshop I (computer Skills)   /_7 Workshop II (Use of Instructional
                                              Systems)

/_7 FORTRAN   /_7 DIALOG
/_7 BASIC   /_7 GROPE
/_7 EDITOR   /_7 DRAFT
/_7 OSCAR   /_7 GPSS
/_7 Plotting   /_7 ARAND
/_7 SIPS

I would also be interested in the use of materials in:

/_7 Chemistry   /_7 Biology   /_7 Accounting/Econ/Business
/_7 Social Studies   /_7 Other_____

Please list your order of preference of dates you'd like to attend:

Workshop I   ___ Sept. 5-8   or   ___ Aug. 22-25
Workshop II   ___ Sept. 11-14 or   ___ Aug. 28-31

Return this form to:

    Jo Ann Baughman
    OSU Computer Center
    Corvallis, OR 97331

OREGON STATE UNIVERSITY
COMPUTER CENTER NEWSLETTER

KEELING KENNETH
OCEANOGRAPHY

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NEW COMPUTER CENTER EMPLOYEES

Dorette Lemon began work on May 22, 1972, as the Secretary to the Computer Center Director, Dr. Larry Hunter. She was formerly employed by the Oregon State University Mathematics Department.

Betsy Miller joined our staff May 1, 1972. She is an Accounting Clerk, and her office is located in room 126.

FORMS CHARGE EXPLANATION

There has been some misunderstanding about forms charges on billing statements. The Computer Center charges $1.00 for each type of form requested. A $1.00 handling charge is applied each time special forms are employed by the user for card punching, line printing, or plotting, and on all high speed paper tape punching. However, this $1.00 is translated into records on the user's bill. Although a user may only punch 10 cards, he will be charged for 410 cards, since 400 cards is the equivalent for a $1.00 handling charge.

Equivalent form charges are:

Punched cards	$1.00 = 400 cards
Line printer	$1.00 = 800 lines
Plotter records	$1.00 = 510 plotter records
Paper tape	$1.00 = 200 paper tape records

HIGH SPEED PAPER TAPE CHARGE REDUCED

The Computer Center charges $1.00 for paper tape mounting. However, the charge for punching paper tape is now $.50/100 paper tape records (62 words/record).

Other OS-3 charges (Prime Time) are:

CPU time	$5.00/minute
Tape	$.50/tape (tape mount charge) + $.03/sec (channel time)
Elapsed time at Teletype	$2.00/hour

On-line disk storage	$.15/block/month
Punch cards	$.25/100 records
Input cards	$.15/100 records
Line printer	$.125/100 records
Plotter	$1.00/510 records
High speed input	$.50/100 records
Paper tape punch (PDP-8)	$.50/100 records

REMOTE BATCH QUEUE

Turn-around will be variable on jobs initiated by the remote batch TASK command because tape jobs are normally run in this queue.

Therefore, jobs submitted by remote batch TASK will probably have a longer turn-around time than those submitted by the regular batch method.

Users will find it convenient to use the DO,lun control mode statement in running a deck set-up for remote batch mode (see section on new Control Mode).

COMPUTERS IN THE UNDERGRADUATE CURRICULUM CONFERENCE TO BE HELD JUNE 12-14

The third conference for computers in the Undergraduate Curriculum will be held June 12-14 in Atlanta, Georgia. Dr. Larry Hunter, Computer Center Director, and Jo Ann Baughman, CONDUIT Curriculum Coordinator, will attend the conference. They will also attend a CONDUIT meeting to be held during the conference.

NEW OS-3 MONITOR AND CONTROL MODE SYSTEMS RELEASED

A new OS-3 monitor and control mode system were recently released by the Computer Center. The following excerpts were taken from *SYS, a public file which can be called from any user number.

(1) LIBRARY CALLS AND OVERLAY CALLS

The OS-3 assembler previously available as *ASSEM or *ASSEMBLER is now available as a library program, under the name ASSEM. It can be called from control mode, edit, or from user programs (using a LIB-CALL XREQ).

ALGOL and COMPASS are no longer library programs. They can still be called from control mode, but are loaded from overlays. They cannot be called from edit, nor from user programs.

DECKEDIT, DECKLIST, MERGE, and SORT can be called from control mode (no * required). They are loaded from overlays, like ALGOL and COMPASS.

(2) CHANGED CONTROL STATEMENTS

LOGOFF now prints the cost, MFBLKS, wall-clock time (WC time), and number of records printed, punched, etc.

New forms of MFBLKS and time are now available. MFBLKS+<integer> sets scratch file block limit to CFBLKS+<integer>. (CFBLKS=current file space in use.) TIME+<integer> sets time limit to (time used so far) plus <integer> (seconds).

A repetition factor is now allowed on luns in the statements BKSP, FWSP, SEFB, SEFF, WEOF, and WFM. For example: SEFF,17(5),20(3) searches forward past five (5) file marks on lun 17, then searches past three (3) file marks on lun 20.

More than one argument can now be used with DELETE, EQUIP, FP, RFP, SAVE, and UNEQUIP. Examples:

```
DELETE,ZIP,ZORCH
EQUIP,1=60,3=PUN,27=DATAFILE
FP,27,ZAP
RFP,80,TESTFILE
SAVE,2=GLOP,7=NEWFILE
UNEQUIP,17,23,5
```

The form RFP,LUN=NAME is no longer allowed.

Magnetic tapes and user disk packs (MSF) can now be equipped by control statements on teletypes and TV's, provided that the proper switch on the machine console is turned on. The form is:

```
EQUIP,LUN=MT NUMBER AT DENSITY COMMENTS
```

DIRECTORY is now a control mode statement. It is no longer a library program.

(3) NEW CONTROL STATEMENTS
DO,LUN or DO,NAME causes control mode to begin obeying control statements in the specified file. Statements do not require any special character at the left, and may be control mode statements, library calls, or overlay calls. If processing is interrupted (by BREAK or CONTROL A, for example), it can be resumed by DO (with no LUN or NAME).

LUNLIST is a control mode statement that prints a list of all LUNs which are equipped. It is like *LUNLIST, but does not disturb the user's status.

RESET unequips all LUNs (0 to 99) and equips 60=100 and 61=100. (In a batch job, 61 is not unequipped.)

SEND LUN TO DEVICE   The LUN must be a line printer and DEVICE must be PR1 or UT01. This can be used to send output to a different printer than the one normally associated with the user's job. PR1 is the CDC 3300's printer, and UT01 is the printer on the 200UT.

WEOF is the same as WFM.

XABORT reverses the abort bit (useful in batch jobs).

(4) CHANGES IN THE WAY CONTROL MODE WORKS
When an overlay is called, that loads into lower memory, all of lower memory is set to zero before the overlay is read in.

TV users can now type several control statements, using "RETURN" between them, then press "SEND".

In batch jobs, if control mode reads a BCD card or a binary card, it prints an error message and aborts the job. If it reads an end-of-file card, it prints the message "EXTRA END OF FILE" but does not abort the job.

(5) CHANGES IN THE USER'S SIMULATED MACHINE

In a batch job, if a user program attempts to read from the card reader, and the next card is a control statement, no information is transferred and the END-OF-DATA bit is set in the card reader status.

For a complete description of the monitor and a list of control mode commands, the user can type *SYS on a Teletype or copy the file out on the line printer in the regular way.

CONDUIT BUSINESS WORKSHOP TO BE HELD AT OSU AUGUST 14-18

The purpose of this workshop is to prepare interested faculty to use the selected materials in their classrooms during the next academic year. Participants will spend their time learning to set up and use the materials and discussing the role and method of integrating the computer augmented materials into their current courses.

The CONDUIT Curriculum Committee for Economics and Business has collected educational materials which can be utilized in standard undergraduate business courses during the coming academic year, 1972-73. This committee has attempted to evaluate these computer packages by selected criteria such as pedigogy, practicality, pertinence, transportability, documentation, innovativeness, modularity, student level, and completeness.

In an effort to stimulate the use of computers in the business curriculum, the committee is conducting a small workshop to demonstrate how selected computer materials are used in the classroom. Many excellent materials were considered.

For this year's workshop the committee has selected two newly developed packages in the operations management area. One package, developed by William Barry (Purdue) and Clay Whybark (Harvard), uses computer-augmented cases to supplement the standard operations management text. The other package, developed by Roy Harris and Michael Maggard (University of Texas), uses quantitative computer models to supplement a

standard operations management text. This workshop is intended for teachers of courses in undergraduate Operations Management, Production Management, Management Science, Quantitative Methods, Business Models, or other related areas. Professors Whybark and Harris will lead the workshop and demonstrate how they use their material in the classroom.

For more information, readers should contact Dr. Clifford Gray, Department of Business Administration, Oregon State University.

CONDUIT CONVERTING BIOLOGY AND ECONOMICS PROGRAMS

The CONDUIT project has begun the conversion of a group of Biology and Economics programs recently received from the North Carolina Educational Computing System (NCECS), another CONDUIT participant.

The nine Biology programs include the following instructional applications:

CLONE — maps genotypes from growth on plates supplemented with various nutrients

FOXRAB — an ecology game using the LOTKA predator - prey model for foxes and rabbits

GROWTH — determination of population growth for two species given competition constants, initial population, carrying capacity and growth rate

HARDY — calculation of populations, frequencies for dominates and recessives from gene frequency using basic Medelian genetics from the Hardy Weinberg Equilibrium

POPMOD — a two Allele population genetics model which calculates frequency and progeny of genotypes and total population size at variable generation intervals

CITY — a simulation of city growth based on logistic curve growth characteristics

FPOPPROJ   a population projection from logistic curve growth char-
acteristics

GENE   the calculation of phenotype ratio from four genes of
each of two parents

STIMULI   a simulated experiment on a frog sciatic nerve using the
Hodgkin-Huxley model for nerve impulse

The fourteen Economics programs are:

MIC01   a teaching unit in the "Law of Diminishing Marginal
Utility"

MIC03   a cobweb model of supply and demand

MIC05   a microeconomic program in marginal cast, revenue and
price elasticity of demand

MAC03   four Keynesian models

MAC04   four Keynesian models based on Treyz model

MAC05   macroeconomic policy using Keynesian model developed by
R. Attiyeh

MAC08   a macroeconomic policy game based on the Hicks-Hansen
model

MACII   a macroeconomic simulation which emphasizes policy making

MICR01   simulation of economic equilibrium in a competitive
industry

MSIII   macroeconomic policy making tax rate model

SUMER   economics game for non-economists

AGSIM   a model which simulates market economy and which deals
with national income equilibrium

FISGAME   a macroeconomic game which computes individualized GNP accounts for any number of students in a class

HOLBROOK   a macroeconomic game with ten (10) identical countries in the world

For more information on these programs, contact Jo Ann Baughman, extension 2494.

STUDENT LOAN FISCAL ACCOUNTING SYSTEM NOW IN OPERATION

The financial accounting system for student loans is now being processed on the CDC 3300. The accounting system handles all the record keeping tasks for the Student Loan Office. The three types of student loans handled are National Defense, Health Professions, and OSU Special Loans.

The student loan system maintains individual student loan records and furnishes monthly reports to the student loan office which include a control accounting summary report, a list of checks distributed to students, and a repayment record report. The system also updates the student loan file each month with status change information, student loan balances, principal, interest, and other related information.

OSU COMPUTER CENTER ANNUAL SUMMER INSTITUTE TO BE HELD SEPTEMBER 11-15

The annual OSU Computer Center Summer Institute will be held September 11-15 at the Computer Center. Registration fee will be $12. If outside funding can be obtained, there will be no fee.

This institute is open to any faculty member at OSU or other institutions who use or will be using the CDC 3300 and the OS-3 system.

This workshop will provide instruction and computer time in the following areas:

I. Computer Skills

    A. FORTRAN
    B. BASIC
    C. OSCAR
    D. EDITOR
    E. Plotting

II. Instructional Systems

    A. SIPS A - use of SIPS in Statistics and Math
       SIPS B - use of SIPS in Social Science, Humanities, Education and Economics
       SIPS C - use of SIPS in Biology and Physical Sciences
    B. GROPE A - use of interactive graphics in Physics
       GROPE B - use of interactive graphics in Mathematics
       GROPE C - use of interactive graphics in other areas
    C. DRAFT - interactive mechanical drawing and drafting system
    D. GPSS - a simulation language
    E. ARAND - a modeling and prediction package applicable in Oceanography, Atmospheric Sciences and Physical Chemistry
    F. DIALOG - a computer assisted instructional package

III. Instructional Programs in Academic Areas

    A. Physics - Dartmouth CO-EXIST materials; computer related problems and materials in general physics
    B. Mathematics - Iowa Math materials; computer related problems and programs in linear and modern algebra
    C. Biology - NCECS programs; computer related programs and problems in genetics, ecology, and population growth
    D. Chemistry - NCECS programs; computer related programs in general chemistry

To pre-register for this workshop, please complete the form at the end of this newsletter and return it by July 15 to:

    Jo Ann Baughman
    OSU Computer Center
    Corvallis, OR 97331

It is not necessary to send a fee at this time.

We will also attempt to schedule courses to allow participants to take as many courses as they wish.

TTY REPAIRS

For Teletype servicing and repairs, users should either call Doug West
at extension 2494, or report TTY malfunctions to the I/O desk, exten-
sion 2033.

NEW AND RECENT COMPUTER CENTER MANUALS

The following manuals are now available in Room 126 of the Computer Center.

    BASIC User's Manual, ccm-71-08 (available July, 1972)

    SORT/MERGE, revised, ccm-71-6

    OS-3 PRIMER, ccm-71-07

    FORTRAN, Entering, Editing, and Running from Remote Units, revised,
        ccm-68-39R

COMPUTER CENTER MANUALS AVAILABLE FOR PERUSAL

A group of Computer Center manuals and reports is available for user
perusal in the downstairs hall outside of room 126 in the Computer Center.
Users are encouraged to use these manuals for reference whenever they wish.

SURVEY CONDUCTED ON THE INSTRUCTIONAL USE OF COMPUTERS AT OSU

A questionnaire, Instructional Use of the Computer, was sent to every
staff member who requested instructional computer time Spring term. The
Computer Center is compiling a report on OSU Instructional Use. We
would appreciate instructors sending back these forms to Jo Ann Baughman,
Kay Porter, or Keith Avery, as soon as possible.

P R O G R A M M I N G   T I P S

*LISP

A LISP interpreter is now available under the name *LISP. It was coded
in FORTRAN by some people at Uppsala University in Sweden and has been
modified to adapt it to OS-3. LISP is a widely-used list processing
language. However, each version differs in some respects from the
others. For more information about this version, see Gil Bachelor in
K144 or phone 1726.

*INDEX

A program called *INDEX is now available. It is called by a control
statement of the form:

        *INDEX,I=LUN OR NAME,L=LUN OR NAME,C,F

The input (I) can be either a BCD file or a COSY deck. The output (L)
consists of an alphabetic list of all symbols and integers that appear
in the input. For each item, a list of all the line numbers where that
item appears is printed. In other words, *INDEX produces a cross-
reference index.

The C and F parameters are optional. If neither is present, all lines
are scanned and items consist of letters and/or digits. If F is present,
"FORTRAN" mode is assumed: lines that begin with "C" are not scanned.
If C is present, "COMPASS" mode is assumed: lines that start with "*"
are not scanned, and items may contain periods (.) as well as digits and
letters. If both C and F are used, periods are allowed in items, and
lines that start with "C" are not scanned.

*COBOL

*COBOL is available and operating under OS-3. The CDC publication,
ANSI COBOL, Version 2, Master/MSOS, Reference Manual, #60281100B, can be
ordered in room 126 of the Computer Center for $4.00.

Classes at Eastern Oregon College in La Grande are now using the *COBOL compiler under the OS-3 operating system.

*LINEUP, A PROGRAM TO GENERATE A LINEUP FORM FOR THE LINE PRINTER
*LINEUP,L=2,R=80,P=5,N=50,O=61,C=1,M=message.

This program generates a lineup form for the line printer.

Left   - specifies the print position of the left margin.   "[" is printed in that position

Right   - specifies the print position of the right margin.   "]" is printed in that position

Pages   - specifies the number of pages to be printed

Number   - specifies the number of lines per page

Output   - specifies the logical unit number of the print file

Carriage   - specifies the carriage control character for the first line of each page

Message   - specifies a message to be printed between the left and right margins of each line

Allowable values for each parameter are as follows:

L - 2-59   If not specified or not in that range, default value of 2 is used.

R - 3-136   Default value is 80.

P - 1-20   Default value is 5.

N - 1-100   Default value is 50.

O - no range check is made, default value is 61.

C - any character is valid, default value is 1.

M - any characters are valid; if present, this parameter <u>must</u> appear as the last parameter of the string. Default value is a blank field.

The parameter string is processed as follows:

First the string is searched for a valid parameter character. Then the value of the parameter is obtained in one of the following three ways:

1. L,R,P,N, and O - the first sequential string of numeric characters found in the string.

2. C - the character immediately following a "=" character.

3. M - the characters immediately following a "=" character.

For any questions concerning *LINEUP, call Harvey Thoennes at extension 2494.

PRE-REGISTRATION FORM FOR

SUMMER COMPUTER INSTITUTE

OREGON STATE UNIVERSITY

September 11-15, 1972

NAME_____DATE_____

INSTITUTION_____

DEPARTMENT_____ __

SUMMER MAILING ADDRESS_____

_____

_____

For scheduling purposes, please indicate which sessions you would like to attend:

/_/ Beginning FORTRAN (3 hrs)

/_/ Intermediate FORTRAN (3 hrs)

/_/ Beginning Plotting (1 hour)

/_/ Intermediate Plotting (2 hrs)

/_/ SIPS A (use of SIPS in Stat & Math) (2 hours)

/_/ SIPS B (use of SIPS in Social Science, Humanities, Education, and Economics) (2 hours)

/_/ SIPS C (use of SIPS in Biology and Physical Science) (2 hours)

/_/ BASIC (2 hours)

/_/ Running programs on the OS-3 System (EDIT) (3 hours)

/_/ OSCAR (2 hours)

/_/ DIALOG (2 hours)

/_/ GROPE A (use in Physics) (3 hours)

/_/ GROPE B (use in Math) (3 hours)

/_/ GROPE C (use in other) (3 hours)

/_/ DRAFT (2 hours)

/_/ ARAND (3 hours)

/_/ GPSS (3 hours)

/_/ Chemistry (NCECS Chemistry materials) (3 hours)

/_/ Linear Algebra (Iowa Math materials) (3 hours)

/_/ Physics (Dartmouth CO-EXIST materials) (3 hours)

/_/ Biology (NCECS materials) (3 hours)

Please return this form by July 15, 1972, to:

Jo Ann Baughman
Computer Center
Oregon State University
Corvallis, Oregon 97331

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Jo Ann Baughman
Computer Center
Oregon State University
Corvallis, Oregon 97331

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OREGON STATE UNIVERSITY
COMPUTER CENTER NEWSLETTER

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CONSULTING SERVICE OPEN TO STUDENTS AND FACULTY

The Computer Center consulting service is now located in Room 138
of the Computer Center. The phone number is 1650, and the consul-
tant is David Richelderfer. Consulting hours are Monday through
Friday from 1 p.m. to 4 p.m.

This service is now available to students also. However, help for
students does not include consulting on logic errors but only assis-
tance in the interpretation of error messages and errors in pro-
gramming languages and the use of the operating system.

CDC PURCHASES OSU STUDENT INFORMATION SYSTEM

The Oregon State University Student Information System (OSSIS) has
been acquired by Control Data Corporation for installation on CDC's
Mass Storage Operating System. The generalized programs which CDC
plans to install at a number of colleges include subsystems for
admissions, sectioning, registration reporting, and grade processing.

In exchange for the programs and their supporting documentation,
Control Data is turning over the title to the 814 Disk File to OSU.
The 814, which is currently valued at nearly $100,000, has been the
principal mass storage device for OS-3. The resulting rental savings
will enable the Computer Center to add an 841 Disk File next winter,
nearly doubling the on-line file capacity of OS-3.

CHARGES FOR PRIVATE DISK PACKS

Private disk packs are available to Computer Center users. The rates
for private disk packs are:

> $15 per month rental
> $5 mounting charge for each time a disk is used
> $7.50 per hour wall clock time charge (connect time)

A user can purchase a disk pack for $180 rather than renting it.
Mounting and connect charges are still the same, however.

Private disk packs are sector addressable with up to 32,480 sectors
on each disk pack. A user program has to recover from disk errors and
other hardware malfunctions.

For further information, contact Dave Skinner, ext. 2494.

NEW FORTRAN COMPILER (VERSION 3.1) TO BE RELEASED SOON

A new FORTRAN compiler, version 3.1, will be released in the near
future. This new version has improved compile time diagnostics and
a new listing format which includes EDITOR line number. A new double
precision package is being written but is not currently available.

Users can use this new version now by calling *F31 with the standard
FORTRAN parameter string.

NEW OS-3 FORTRAN REFERENCE MANUAL TO BE WRITTEN

A comprehensive FORTRAN reference manual is being written by the
Computer Center which follows the format of the CDC FORTRAN Refer-
ence Manual (60057600-D). The OS-3 FORTRAN Reference Manual will be
specifically for the OS-3 Operating System and should be much more
helpful to OS-3 users than the CDC Manual.

It is planned to have this new manual available by fall term, so
it can be used in fall classes.

Any comments or recommendations regarding the content of this new
reference manual will be appreciated.

WHO IS USING THE TEK TERMINAL AND/OR THE CALCOMP PLOTTER?

The Computer Center is gathering information about the use of graphics
on the OS-3 system. Any user of the OS-3 system (at OSU or at any
location off the campus) who is using graphics in any way (instruc-
tion, research, or otherwise) is urged to contact Larry Hubble
(ext. 1183) or JoAnn Baughman (ext. 2494).

The Center would like to compile a report on graphics use on the
OS-3 system; and while we know about many of the applications, it is
sometimes difficult for us to know all of what is going on in this
large area. Your assistance will be appreciated, so do give us a
call and tell us what you are doing!

INSTRUCTIONAL COMPUTER USE, SPRING TERM, 1972

School of Agriculture

Ag Economics	$ 1,382.23	
Ag Engineering	102.25	
Fisheries & Wildlife	46.61	
Range Management	122.66	$ 1,653.75

School of Business &
Technology

	5,734.15

School of Education

Education	537.84	
Industrial Education	10.50	548.34

School of Engineering

Chemical Engineering	3,893.96	
Civil Engineering	4,066.53	
Electrical Engineering	3,154.99	
General Engineering	1,389.84	
Industrial Engineering	2,590.72	
Mechanical Engineering	4,308.98	
Nuclear Engineering	1,709.70	21,114.72

School of Forestry

Forestry	765.26	765.26

School of Humanities and
Social Science

Economics	247.95	
Political Science	93.95	
Psychology	524.08	865.98

School of Physical
Education

Physical Education	4.33	4.33 ·

School of Science

Atmospheric Sciences	315.90	
Chemistry	912.24	
Entomology	55.63	
General Science	98.00	
Mathematics	13,519.85	
Physics	1,841.36	
Radiation	22.49	
Statistics	11,624.48	28,389.95
		$59,076.48

SIXTY DAY OR OLDER FILES ARE STILL PURGED

Users should remember that saved files which have not been accessed for 60 days are periodically transferred to a back-up tape. This is necessary in order to allow the most efficient use of the currently available on-line storage. With the planned addition of the 841 disk early in 1973, this practice will no longer be required.

CONDUIT WORKSHOPS SCHEDULED AUGUST 14-18

CONDUIT workshops in Business and Economics will be held at the OSU Computer Center the week of August 14-18. Seventeen participants from the U.S. will attend the sessions.

Participants will learn how to use instructional computer materials developed by CONDUIT schools.

For other details, the reader may refer to the CC Newsletter, May/June, 1972.

COMPUTER CENTER SUMMER INSTITUTE SCHEDULED SEPTEMBER 11-15

As previously announced in the May/June CC Newsletter, the annual Summer Institute for faculty will be held September 11-15. Although most registration has been completed, interested users can contact JoAnn Baughman for information about late registration.

For a list of classes offered, the reader may refer to the May/June CC Newsletter, pages 9-10.

QUESTIONS AND ANSWERS

For answers to questions users may have about the CC or the system, call the consulting desk at ext. 1650, or drop a line to the editor of this newsletter, Kay Porter. We will try to answer your questions through the newsletter, or personally. We would like to urge users to make comments about the system or to suggest improvements in it.

P R O G R A M M I N G   T I P S

*SIMCMP

A new version of the macro processor *SIMCMP has been released.
SIMCMP is used to translate BLIP programs, and the new features make
it faster and easier to use. The main improvement is that SIMCMP
can now call the assembler *SAM as a subroutine, to assemble the output
from SIMCMP without writing it on a file. This saves considerable
time and file space. (For a description of SIMCMP, see the article
"A Base for a Mobile Programming System," by Orgass and Waite, in
Communications of the ACM 12,9 (September, 1969) pp. 507-510.) For
further information, contact Gil Bachelor, K144.

OREGON STATE UNIVERSITY
COMPUTER CENTER NEWSLETTER

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COMPUTER CENTER HOURS

The Oregon State University Computer Center hours for OS-3 Time-Sharing Service are:

            7:30 a.m. - 11:00 p.m. Monday-Friday
            7:30 a.m. - 5:00 p.m. Saturday

NEW USERS

Any new user who wishes to receive a copy of the newsletter should contact Sue McGaughey at extension 2494 and request that his name and department be added to the newsletter mailing list. Users with job numbers automatically receive the newsletter.

CONSULTING SERVICE OPEN TO STUDENTS AND FACULTY

The Computer Center consulting service is now located in the viewing room of the Computer Center. The phone number is 1650; the consultant is Shawn Ayromloo. Consulting hours are Monday through Friday from 1 p.m. to 4 p.m.

This service is now available to students also. However, help for students does not include consulting on logic errors but only assistance in the interpretation of error messages and errors in programming languages and the use of the operating system.

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Users should remember that saved files which have not been accessed for 60 days are periodically transferred to a back-up tape. This is necessary in order to allow the most efficient use of the currently available on-line storage. With the planned addition of the 841 disk early in 1973, this practice will no longer be required.

SCHEDULE OF VIDEOTAPE SERIES

The Introduction to OS-3 videotapes and the Introduction to FORTRAN videotapes will be shown beginning October 16. Any student or faculty member may attend the showings. The tapes will be shown

twice a day on cable TV at 3:30 p.m. and 10 p.m. on channel 5 and once at 3:30 in Kidder 128 on campus.

The schedule is:

DAY Schedule

Introduction to OS-3; Kidder 128 and channel 5

October 16, 17, 18	3:30-4:30 p.m.
October 19	3:30-5:30 p.m.

Introduction to FORTRAN; Kidder 128 and channel 5

October 23, 24, 25	3:30-4:30 p.m.
October 26	3:30-5:30 p.m.
October 30, 31, November 1	3:30-4:30 p.m.
November 2	3:30-5:30 p.m.

NIGHT Schedule; channel 5 only

October 16-19	10-11 p.m.	Introduction to OS-3
October 23	10-11 p.m.	Introduction to OS-3
October 24-26	10-11 p.m.	Introduction to FORTRAN
October 30- November 2	10-11 p.m.	Introduction to FORTRAN
November 6-8	10-11 p.m.	Introduction to FORTRAN

INTRODUCTION TO OS-3 VIDEOTAPE SERIES SEQUENCE

No.	Name of Tape	Instructor	Length (min:sec)
1	Tour of Computer Center	Bob Pinneo	11:10
2	TTY Operations	Bob Pinneo	17:14
3	Introduction to On-line Operations	Tom Mahan	28:28
4	OS-3 Editor from Remote Terminals	Fred Dayton	27:35
5	BASIC	Pete Murray	23:08
6	OSCAR	Gil Bachelor Mary Berryman	29:30
7	FORTRAN from Remote Terminals	Lyle Ochs	32:07
8	*CATALOG	Keith Avery	27:45
9	Debugging with RADAR	Mark Ebersole	28:30
10	The OS-3 Time-Sharing System	George Rose	47:00

FORTRAN VIDEOTAPE SERIES SEQUENCE

Instructor: Jim Sasser

No.	Name of Tape	Length (min:sec)
1	Introduction to Computers	30:00
2	Bit Structure, Part I	29:35
3	Bit Structure, Part II	31:25
4	Assignment Statements Input/Output	31:10
5	Input/Output - Format	30:30
6	Starting, Stopping, Transfer of Control	30:00
7	Arithmetic IF: OS-3 Control Statements	32:00
8	Program Ex. 1; Summation and Counting	30:00
9	Summation and Counting: Logic Concepts	32:00
10	Logical IF; Prog. Ex. 2	32:00
11	Arrays and Subscripts	26:52
12	Other Types of Constants, Variables and Format Specifications	27:17
13	DO Loops	32:00
14	DO Loops Cont.	31:30
15	Nested DO-Loops Input/Output of Arrays	31:00
16	Input/Output of Arrays Cont. Program Examples	33:00
17	Two-Dimensional Arrays: Subprogram	31:05
18	Subprograms Cont.; Other Specification Statements	33:10
19	Entering and Editing FORTRAN from Teletype	30:00
20	Entering and Editing FORTRAN from Teletype, Part II	30:30

If an instructor wishes to show the videotapes to his class at another time, the tapes can be scheduled through Classroom TV, extension 2675. These tapes are shown as a service to the university community.

A booklet, Introduction to the OS-3 Videotape Series (CCM-71-04), is available in room 126 of the Computer Center. A manual to accompany the FORTRAN videotapes, FORTRAN Programming on the CDC 3300 Under OS-3, is currently being written.

COMPUTER CENTER AFFIRMATIVE ACTION ACTIVITIES

The Computer Center, as an administrative unit of OSU, is participating in the institution's Affirmative Action program. Kay Porter has been assigned the task of coordinating the Center's activities in this program.

The Computer Center is committed to provide consulting and programming services which will assist other units in meeting their Affirmative Action goals. Inquiries are also going out to other Computer Centers to collect information relative to their activities in this area.

ASSISTANT MANAGER OF ADMINISTRATIVE SYSTEMS APPOINTED

Harvey Thoennes has been appointed to the position of Assistant Manager of Administrative Systems. He has been a member of the Computer Center staff for six years, most of which he has spent in developing administrative applications on the OS-3 time-sharing system.

In his new position Harvey will be responsible for major administrative system planning and development. He will also assist in the supervision of production activities involving administrative systems.

SOME INFORMATION ABOUT INSTRUCTIONAL COMPUTER TIME

Although instructional computer time has already been allocated for the Fall term, 1972, adjustments or new requests for computer time can still be submitted by instructors.

Application forms for requesting instructional computer time can be obtained at the Computer Center Office, room 217.

An explanation about the process of obtaining instructional computer time might be helpful to new faculty members.

Ordinarily the Dean in each school appoints a coordinator for his school. The coordinator is responsible for collecting requests

for instructional computing time from each faculty member in the school. The request forms are then submitted to the Computer Center. The campus Computer Committee reviews the collected applications and distributes computer time for the whole school year. The Computer Committee is appointed by the Dean of Administration and is normally composed of at least one representative from each school. Sometimes the department head, rather than the school coordinator, will submit these requests.

Adjustments or new requests are accepted for each new term if, for some reason, the instructor did not apply for instructional computing time at an earlier date. The Computer Committee then reviews each new adjustment or request and approves or disapproves the application at the beginning of each term.

REQUESTS FOR COMPUTER TIME FOR UNSPONSORED RESEARCH

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

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

COMPUTER CENTER USER SERVICES SURVEY

A questionnaire, The Computer Center User Services Survey, will soon be sent out by Kay Porter to all newsletter subscribers. We at the Computer Center are attempting to assess the needs of users, so we would like to encourage users to take a moment to fill out the form and return it to us as soon as possible. Hopefully, the results will give us some insight into which of our services might be improved. Thanks for your cooperation!

TELETYPE RENTALS FOR DEMONSTRATIONS

The Computer Center will rent teletypes and/or acoustic couplers to users associated with the University for demonstrations, etc.

The rate schedule includes equipment rental and maintenance:

     33KSR Pro-rated @ $35/mo

     33ASR Pro-rated @ $50/mo

     Acoustic Coupler Pro-rated @ $15/mo

There is a minimum charge of $10.

If the above equipment is not to be located on the OSU campus, a fee of $8/hr for travel time will be charged for the off-campus maintenance.

If you have any questions, please call Doug West at extension 2494.

OSCAR V59 RELEASED

OSCAR V59 was released in August. To get a description of the new features of V59, users can use the statement:

            COPY,I=*OSCNEWS

For additional information, users can call Gil Bachelor, extension 1726.

OPERATING STATISTICS FOR AUGUST, 1972

Teletype and Batch Utilization

BATCH LOGONS		4860
TELETYPE LOGONS		22590
TOTAL TTY CONSOLE HOURS		5855
TOTAL CPU HOURS		189.65
BATCH CPU SEC	126904.77	
TTY CPU SEC	555847.71	
OS3 HOURS		364
AVERAGE NUMBER OF CONSOLE USERS		16:1
CPU SECS/CONSOLE HR		94.9

COMPUTER RATES OF SEPTEMBER 1, 1972

Minimum Charge

$1.00 monthly minimum charge for computational services.

OS-3 Charges (prime time)

CPU time	$300/hour ($5.00/minute)
Tape	$.50/tape (tape mount charge) + $.03/sec (channel time)
Elapsed time at Teletype	$2.00/hour
On-line disk storage	$.15/block=$.03/track/month
Punch cards	$.25/100 records ($1.00=400 cards)
Input cards	$.15/100 records
Line printer	$.125/100 records ($1.00=800 lines)
Plotter	$1.00/510 records
**High speed input (papertape)	$.50/100 records
**Paper tape punch	$.50/100 records ($1.00=200 paper-tape records)

OS-3 (NON-PRIME TIME)

Special rates for volume work in non-prime time. (Non-prime time is the time when the teletypewriters are not on the air.) Special forms for volume work must be used and are available at the input desk.

CPU	$300/hour for the first 10 minutes CPU then, $200/hour for CPU time over 10 minutes
Punch cards	$.25/100 for the first 2,000 cards, then, $.15/100 for all cards thereafter
Input cards	$.15/100 for the first 2,000 cards, then, $.05/100 for all cards thereafter
Line Printer*	$.125/100 for the first 5,000 records, then, $.05/100 for all records thereafter

* These rates are for one-part paper only. If users want multi-part paper or special forms, they will be charged for the materials used.

** $1.00 handling charge per run.

Other	Without Operator per hr. charge	With Operator per hr. charge
CALMA 302 Digitizer	$ 7.50	$ 10.00
IBM 407 Tabulator	6.00	10.00
IBM 083 Sorter	2.00	6.00
Keypunching	no charge	6.00
Verifying	not available	6.00
Interpreter		5.00
Burster & Decollator		5.00
Paper Tape Input (with operator only)		1.00 (handling charge)
		No. of records-25¢/100 input blocks (1 input block = 62 characters)
3300 Computer		30.00 (special rate for listing)
Programming		
Programmer		6.00
Sr. Programmer		9.00
Prog. Analyst		12.00
Magnetic Tape Reels	$ 1.00/month ($.25 minimum)	

Industrial users charged additional 25%

CHARGES FOR PRIVATE DISK PACKS

Private disk packs are available to Computer Center users. The rates
for private disk packs are:

> $15 per month rental
>
> $5 mounting charge for each time a disk is used
>
> $7.50 per hour wall clock time charge (connect time)

A user can purchase a disk pack for $180 rather than renting it.
Mounting and connect charges are still the same, however.

Private disk packs are sector addressable with up to 32,480 sectors
on each disk pack. A user program has to recover from disk errors
and other hardware malfunctions.

*NEWS

We are again attempting to update *NEWS regularly. It will contain notices of when the Center and system will be off the air and other pertinent information. To make comments or suggestions for *NEWS, users may call Ron Davis, extension 2494.

*FNEWS

For recent information about the new FORTRAN compiler, users may call *FNEWS. This file will contain changes and comments regarding FORTRAN only. Other OS-3 and CC information will be available from *NEWS.

RECYCLE PAPER AND CARDS

The Computer Center recycles all used printer paper and punched cards. Users may turn in recyclable paper and cards to the I/O room in the Computer Center building.

*SCOOP AND *HI

*SCOOP and *HI are public files which give the user a current list of the maximum amount of money left on his job number and validity code, the maximum time left on the number, the number of scratch file blocks actually being used, and the SFBLK limit.

Example:

```
#*SCOOP
SEPT 20, 1972   2:26 PM
MAXTIME     2794
MAX $     232.83
SFBLKS        61
SFBLKLIM    1500
NO. USERS     22
```


*CAINEWS

The Computer Center staff has been working on a few CAI routines. For information on these programs, users may type #*CAINEWS.

OSU COMPUTER CENTER ANNUAL SUMMER INSTITUTE HELD

The annual Computer Center Summer Institute for faculty training
was held September 11-15. The workshop had 86 participants,
including faculty and employees from OSU, University of Oregon
Medical School, Linn Benton Community College, Clackamas Community
College, Southern Oregon College, Southwestern Oregon Community
College, Eastern Oregon College, Oregon State Game Commission,
Bureau of Mines, Lane Community College, US Forest Service, Oregon
College of Education, and Blue Mountain Community College.

Classes offered to participants included computer skills classes
such as FORTRAN, BASIC, OSCAR, EDIT, and plotting; classes in
instructional systems running on the OS-3 system such as SIPS,
GROPE, DRAFT, GPSS, ARAND, and DIALOG; and special classes which
discussed the instructional programs developed for the academic
areas of Physics, Mathematics, Biology, and Chemistry from the
CONDUIT project, currently underway at OSU.

The annual summer institute was begun in 1969. Its purpose was
to instruct faculty and update their skills in computer usage in
instruction and research. We think that this year's workshop went
well. The comments that were received will help us improve the work-
shop content in future years.

We hope that users will feel free to call or come by the Center
to discuss any problems they might have. Ron Davis is Manager
of Operations. The instructional staff at the Center includes:
Jo Ann Baughman, Kay Porter, Keith Avery, Dave Fuhrer, and Jim
Bailey.

CONDUIT STAFF MEMBERS

Jo Ann Baughman, Kay Porter, Keith Avery, Dave Fuhrer, and Jim
Bailey are also associated with the CONDUIT project, an NSF grant
awarded to OSU and the four other universities listed below for
the implementation and sharing of instructional programs developed
for the undergraduate curriculum. These staff members are

available for consultation with instructors, and can assist the instructor in choosing existing computer programs which might be appropriate for use in his current courses.

Currently, the CONDUIT staff is converting programs from North Carolina Educational Computing Service, Dartmouth, the University of Texas, and the University of Iowa in Chemistry, Physics, Mathematics, Social Sciences, Biology, Business and Economics. Programs in these areas are or will be available on the OS-3 system during the 1972-73 school year.

For more information about CONDUIT, users may call Jo Ann Baughman or Kay Porter at extension 2494.

CONDUIT WORKSHOPS IN BUSINESS AND ECONOMICS HELD AT OSU

CONDUIT workshops in Business and Economics were held at Oregon State August 14-18. Sixteen participants attended the week-long sessions. Dr. Mike Hall (Lawrence University) and Dr. James Johnson (University of Iowa) led the Economics workshop, while Dr. Roy Harris (University of Texas/Austin) and Dr. Clay Whybark (Harvard) led the Business workshop. Participants were taught to use 22 business programs and five economics programs which were converted to run on the OS-3 system. Through CONDUIT, these programs have been converted to run on each of the four other university computer systems as well as the OSU system.

Summer workshops were also held in Chemistry, Physics, and Mathematics at Texas, Dartmouth, and Iowa, respectively.

Any professor interested in using these programs in his classes should call Jo Ann Baughman at extension 2494 for details.

A SELECTED LIST OF FREQUENTLY USED CC PUBLICATIONS

The following manuals are available in room 126 of the Computer Center:

Title	Number
Primer for OS-3 Users (March, 1972)	ccm-71-07
OS-3 Reference Manual (Revised July, 1971)	ccm-70-8R
OS-3 Editor Manual	ccm-70-7
BASIC User's Manual (July, 1972)	ccm-71-08
Brief Description of OSCAR (4th revision, Jan., 1971)	ccm-69-25R
EZPLOT	cc-69-18
RADAR	ccm-70-9
Sort/Merge for OS-3 (revised)	33-68-37R
COSY for OS-3	ccm-70-6
Program Library Catalog	ccm-70-21
FORTRAN: Entering, Editing, and Running from Remote Units Under OS-3 (revised)	ccm-68-39R

A complete set of Computer Center publications is on display out-
side the office (CC 126) in the basement of the Center.

ATTENTION PRIVATE MAG TAPE USERS

Users with privately owned magnetic tapes should punch their
equip card as follows:

$^{7}_{8}$EQUIP,<LUN>=MT,<mag tape number> at <200, 556, or
      800> BPI WITH (or WITHOUT) RING PRIVATE FOR
      <user's name>

The statement, "PRIVATE FOR <user's name>", will indicate to the
operations staff that the tape is not a Computer Center tape. There
has been confusion between Computer Center tape numbers and pri-
vate tape numbers. The use of the word PRIVATE followed by user's
name will help insure that the correct tape is mounted. Also,
the user should make sure his name and the word PRIVATE are
written on the tape label.

QUESTIONS AND ANSWERS

Q. I seem to have trouble keeping up with new manuals and revisions
    of old ones. I never know when new ones are available or

when old ones have been revised. Could you please mention this in the newsletter?

A. The Center has not produced as many manuals in the last year or so as it had previously. Also, instead of issuing new manual numbers to authors, we have begun revising and/or rewriting old manuals, so it is sometimes hard to tell what is new. In the May/June 1972 Newsletter, we had an item "New and Recent Computer Manuals." This item will be in the newsletter about every other issue or so. In this issue, you may refer to the item, "A Selected List of Frequently Used Computer Center Publications." The Computer Center also maintains a file of all manuals outside room 126 for user perusal.

Q. The source programs for the Stat. Program Library were recently removed from the disk file. How can I get a copy of the source programs for my own use?

A. Call Keith Avery at extension 2494 and he will give you a listing of the program(s) you need.

Oregon State University
Computer Center
Corvallis, OR 97331

FORWARDING ADDRESS REQUESTED

OREGON STATE UNIVERSITY
COMPUTER CENTER NEWSLETTER

TABLE OF CONTENTS

EXTENDED HOURS--LOWER AFTER-HOURS RATES

In response to many helpful suggestions from users, the following
changes have been implemented. Effective November 28, 1972,
the Computer Center will remain open all night every Tuesday
and Thursday. Jobs initiated after 11:00 p.m. and completed
before 8:00 a.m. will be billed at 5/8 of the normal rate.
This reduction in rates applies to all computer charges including
terminal connect time. Note that terminal LOGON and LOGOFF must
occur during these third-shift hours in order to be billed at
the reduced rates.

Since these charges are less than the current bulk rate, the
old bulk rate charge schedule is being dropped. A special job
cover card is available at the Center to schedule jobs for
third-shift processing.

Processing will be terminated for a 30 to 60 minute period
beginning at 4:00 a.m. in order to backup user files. The time
required for the backup is variable but normally requires about
30 minutes.

OS-3 CHARGE SUMMARY

OS-3 Charges (prime time)

CPU time	$300/hour ($5.00/minute)
Tape	$.50/tape (tape mount charge) + $.03/sec (channel time)
Elapsed time at Teletype	$2.00/hour
On-line disk storage	$.15/block=$.03/track/month
Punch cards	$.25/100 records ($1.00=400 cards)
Input cards	$.15/100 records
*Line printer	$.125/100 records ($1.00=800 lines)

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*   These rates are for one-part paper only. If users want
    multi-part paper or special forms, they will be charged
    for the materials used.

Plotter	$1.00/510 records
**High speed input (paper tape)	$.50/100 records
**Paper tape punch	$.50/100 records ($1.00=200 paper tape records)

OS-3 Third Shift (11:00 p.m. - 8:00 a.m.)

Jobs initiated after 11:00 p.m. and completed before 8:00 a.m. will be billed at 5/8 of the prime-time rate.

SUGGESTION BOX

A suggestion box has been placed in the Computer Center I/O room. The Center welcomes questions or suggestions relating to all services. If a name and address is included with a question, an answer will be sent directly to the individual. Questions or suggestions of general interest will be summarized in future newsletters.

One of the recent suggestions that was received was the following:

> Suggest you store all your blank, unused cards
> on magnetic tape. Then, when blank cards are
> needed, just copy the magnetic tape the punch
> and punch some blank cards. This way you
> wouldn't need to keep all those cards in the
> inventory. You would only have to punch
> blank cards when you need them.

WHOM TO CALL FOR WHAT SERVICES

Type of Question	Person
Validating or obtaining job user numbers	Milli Wohlers
Consulting Desk (from 1 - 4 p.m.)	Shawn Ayromloo (ext. 1650)
Questions on Program Library	Les Richey
Operations and Applications Programming	Ron Davis
Obtaining Manuals	Milli Wohlers
Obtaining Magnetic Tapes	I/O Desk (ext. 2033)

** $1.00 handling charge per run.

Computer Related Curriculum Materials   Kay Porter, Jo Ann
Baughman

Arranging for Terminals   Fred Beebee

Call the main Computer Center Office, extension 2494, for
additional information or questions regarding other services.

OREGON ASSOCIATION OF EDUCATIONAL DATA SYSTEMS MEETING, DECEMBER 8-9

The Oregon AEDS will hold its 1972 annual conference in Portland,
December 8-9, 1972, at the Hilton Hotel. Computers in Admin-
istration and Computers in Instruction will be the topics
on December 8th and 9th respectively. Jo Ann Baughman will
discuss the CONDUIT project at 1:30 p.m. Saturday, December
9th.

For registration information, contact John Loughlin, Math
Department, Lane Community College (747-4501).

For agenda information, contact Kay Porter or Jo Ann Baughman
at extension 2494.

CALL FOR PAPERS FOR THE CONFERENCE ON COMPUTERS AND UNDER-GRADUATE CURRICULUM

The call for papers for the Fourth Conference on Computers
and Undergraduate Curriculum is now in effect. Faculty are
invited to submit papers describing actual experiences with
computer use in a specific course or sequence of courses.
The papers that report concrete results will be given priority.
Projects that have been described in previous conferences
will not be considered. It is expected that most papers will
report on specific materials, problems, programs, and mea-
sures of successes and failures. The NSF grant provides funds
to assist with travel and subsistence costs for speakers.
The deadline for submitting papers is January 15, 1972. The
conference is scheduled for June 18-20, 1973. It will take

place at the Claremont Colleges in Claremont, California. All
papers should be sent to Dr. Fred W. Weingarten, Chairman, CCUC/4,
Institute for Educational Computing, McConnell Center, Pitzer
College, Claremont, California 91711.

CALL FOR PROPOSALS

The National Science Foundation has funded a project named CØMPUTe
whose purpose is writing and publication of course materials in
support of instructional uses of computing at the undergraduate
level. This is a three-year project, funded at $450,000, and
will provide summer salaries and travel expenses to and from
Dartmouth for authors. The summer of 1973 is the second year
of this project. The primary curricular target is the field
of environmental plans and supporting disciplines. CØMPUTe
seeks active teachers with successful experience in classroom
uses of computing and assists them in documenting that experi-
ence in a format likely to persuade other teachers elsewhere
to follow their example. All proposals should be submitted by
January 1, 1973. Decisions on selection will be announced by
March 1, 1973. Proposals should be sent to Arthur Luehrmann,
Director of CØMPUTe, Kiewit Computation Center, Dartmouth
College, Hanover, New Hampshire 03755. For further details on
this call for proposals, contact Jo Ann Baughman, Computer Center,
Oregon State University, Corvallis, Oregon 97331.

OPERATING STATISTICS, OCTOBER, 1972

Teletype and Batch Utilization

BATCH LOGONS		8341
TELETYPE LOGONS		28499
TOTAL TTY CONSOLE HOURS		6535
TOTAL CPU HOURS		181.30
BATCH CPU SEC	121909.39	
TTY CPU SEC	530762.92	
OS3 HOURS		366
AVERAGE NUMBER OF CONSOLE USERS		17.9
CPU/HOUR/TTY USER		81.2

COMPUTER FILMS AVAILABLE AT NO CHARGE

PROJECT SOLO, produced by Project Solo, University of Pittsburgh.

A documentary film which describes Project Solo, an experiment in regional computing in secondary schools. This film, which takes place in the classroom, describes how this project uses the computer as a teaching tool. Students who have been intimately involved in the project comment on their experiences and the roles that the computer has played in their education. (color, one hour)

HUNTINGTON II, produced by the Huntington II Project, Polytechnic Institute of Brooklyn.

Two filmstrips with audio cassette describe the Huntington II Simulation Project. For several years this NSF funded project has been dedicated to the development of simulation materials for use in a variety of disciplines. This documentary provides a behind-the-scene view of planning, implementation, and use of the simulation technique in the classroom. (color, one hour)

(This filmstrip and cassette may also be purchased from the Film Library for $15.)

The following films will be available later this fall:

My Computer Understands Me, produced by Project Solo, University of Pittsburgh.

This film explores the ways that the computer has strengthened thinking for students. Statements are made concerning the effect of the computer on learning and the future directions of computers in education. My Computer Understands Me deals with the ways that these learning improvements reveal themselves in the real school world of today. (color, one hour)

Personalized System of Instruction: An Alternative, produced by the University of Nebraska.

This film presents the learning climate in a PSI classroom as an alternative to the traditional approach to instruction. PSI (or the Keller Plan) is self-paced mastery oriented and student tutored for junior and college level construction. It has been tested at the high school level, as well, and covers a wide range of disciplines. Suitable for high school and college instructors, students of education and administrators. (black and white, 13 1/2 minutes)

All of these films may be borrowed at no charge from the library by contacting:

> Mr. Steve Kallis
> Film Library, 6-B2
> Digital Equipment Corporation
> Maynard, MA 01754

COMPUTER CENTER AFFIRMATIVE ACTION PROGRAM

Letters inquiring about computer analyses of AA/EOP data have been sent to thirty institutions of higher education in the western part of the United States. Replies to these inquiries are now being compiled.

One of the goals of the OSU Computer Center Affirmative Action program is to provide consulting and programming services which will assist all administrative units in meeting their goals within the Affirmative Action program. Interested departments are encouraged to contact Kay Porter for further details regarding Affirmative Action data analysis.

NOTES ON FORTRAN PARAMETER STRING

Some new options in the FORTRAN parameter string became available with the release of version 3.1.0. The most useful feature is the /R option which can be used with the I, L, A, X, H, and D parameters. This causes the lun to be rewound, if possible, before being used.

Examples are:

```
#FORTRAN,L=10/R,X,A,I=1/R
#FORTRAN,L,X/R
#FORTRAN,L=5,X=30/R,A=16/R
```

A new parameter is being added which is N= for number of lines
per page. If N is not specified, a default value calculated
from the system value is used. This parameter is for use with
the new system line printer driver which allows eight lines
per inch spacing. (See write-up elsewhere in this newsletter.)

STUDENT GRADE REPORTER PROGRAM AVAILABLE

The Student Grade Reporter (SGR)[1] is a computer program designed
to record, summarize, and report grades on a periodic basis.
The chief purpose of this student-oriented system is to pro-
vide the student with a frequent and accurate feedback on his
class performance throughout the term. This can be accomplished
with less time and effort for the instructor than with conven-
tional record-keeping systems.

The SGR program can handle up to five different types of scores
(quizzes, problems, exams, etc.), with up to eleven scores of
each type. Each type of score can be weighted according to
any scheme the instructor may choose. SGR will accommodate
excused absences; it will also drop the one or two lowest scores
within each type, if the instructor so desires. The program
is presently designed for classes of up to 140 students.

Any persons interested in using this program should contact
Jo Ann Baughman or Dave Fuhrer at extension 2494.

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1. This program was developed at Purdue University by
W. D. Downey, Department of Agricultural Economics. See
W. D. Downey and R. W. Taylor, "Feedback for Students on
Class Performance," American Journal of Agricultural Economics
(November 1969), pp. 946-947. It was revised and adapted at
Oregon State University by Doyle Eiler, Research Assistant
in Agricultural Economics.

NEW LINE PRINTER DRIVER BEING IMPLEMENTED

A new line printer driver will be run Saturdays and Sundays until December 30, 1972. After the first of the year, it will be run all the time. Users with non-standard carriage control tapes and those who expect "blank" to skip to level 11 instead of single space should contact Dave Skinner at 754-2494.

Four new carriage control characters are available for user programs:

1. Q   Clear AUTO PAGE EJECT (print over the crease in the page).
2. R   Set AUTO PAGE EJECT (skip over the crease in the page).
3. S   Print at six lines per inch.
4. T   Print at eight lines per inch.

The default values are six lines per inch and AUTO PAGE EJECT. It is no longer possible for the operator to manually select eight lines per inch; so if you want eight lines, you must use the "T" control character. None of these characters cause any printing to be done, and all should be followed by a PAGE EJECT.

The "W" carriage control character no longer exists. The same effect may be obtained by using "Q" control on the first line and blanks on all other lines. (If a job currently uses "W", they may be left in because all unused carriage control characters default to blank.)

It is now possible for persons to print all 136 columns. All line printer records written in binary will have single space carriage control and column one will be printed.

REVISED COSY MANUAL AVAILABLE BY FEBRUARY 1, 1973

The Computer Center manual, "COSY for OS-3" (ccm-70-6), has been revised and is being reprinted. It will be available after February 1, 1973 from room 126 in the Computer Center.

COMPUTER CENTER USER SERVICES SURVEY

Response to the Computer Center User Services Survey was excellent. Approximately 170 questionnaires were returned. The responses were tabulated by the *SIPS system.

A full report, including verbal comments, can be obtained from Milli Wohlers in CC 126.

COMPUTER CENTER TO SEND OUTPUT THROUGH CAMPUS MAIL

The Computer Center will mail output through the campus mail if it is labeled as such. To do this, user should use the label statement:

```
#LABEL,61/SEND THROUGH CAMPUS MAIL TO <NAME>, <DEPT.>
```

Oregon State University
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