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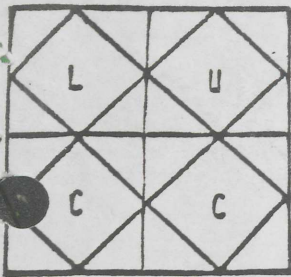
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# USER SERVICES EXTERNAL REPORT

LEHIGH UNIVERSITY COMPUTING CENTER  
 CDC CYBER 170 MODEL 730 (CM 256KW, NOS/BE)  
 DECSYSTEM-2060 (1024KW MEMORY, TOPS-20 V5)  
 IBM 4361 (DOS/VSE, RELEASE 3.0)

Vol. XI, No. 6  
 May 1, 1984

## COMPUTING CENTER DIRECTORY

### Information About Policies and Plans

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

### Information About Bills Received

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

### User Consultants

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

### Information About Programs in the Computer Libraries

Software Librarian 861-3993  
 Judy K. Allio

### Systems Status, Technical Information

On-duty Consultant 861-4141

### General User Information

User Services Secretary 861-3990  
 Florence M. Gabriel

### Information About Tapes and Supplies

Secretary/Tape Librarian 861-4140  
 Monica M. Morganello

### On-Campus Computer Access

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

### Off-Campus Computer Access

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

## STAFF CHANGES

Paul Kern, who had been with the Operations Group for four years, left on March 15th to join the U.S. Army. We wish Paul the very best of luck.

Margie Torres joined the Operations Group on April 16th. Margie recently received an A.A.S. degree in Data Processing from Northampton County Area Community College. Welcome, Margie!

## FROM THE DIRECTOR

by J. Gary Lutz

For many of you, this will be the last issue of USER that you will read before resuming classes in the Fall. There should be a number of changes in place or in progress upon your return.

NOS will be the production operating system on the CYBER 730 and will have been so since the end of May. If you have not taken advantage of the NOS seminars and NOS availability this past Spring, you may want to take a look at the "NOS/BE - NOS Differences" article at the end of this issue.

The disk systems on both the CYBER 730 and the DEC 2060 will be expanded. As most of you are aware, the DEC system is suffering from a severe space shortage, and the CYBER system is experiencing a disk access bottleneck. Both of these expansions should prove beneficial.

The construction at the new Mart facility should be all but complete, and LUCC will be well along in its planning for the move. Although the actual machine moves are not scheduled to occur until November for the IBM system and December/January for the CYBER and DEC systems, the LUCC administrative offices could conceivably be in the new facility when you return, depending on the availability of furniture, etc.

Finally, the first phase of the network implementation should be in its initial stages. As the 1984-85 academic year unfolds, I think it is fair to say that the network will be the dominant theme in many of our activities.



I want to take this opportunity to wish everyone the best of luck in the upcoming final exam period and much success to the outgoing seniors.

\*\* NOS CONVERSION DATE NEARS \*\*

This is a reminder that there are only about 3 weeks left until the CYBER 730 operating system is converted from NOS/BE to NOS. A number of users have taken advantage of the free NOS conversion sessions; however, these users represent only a small percentage of those who will need to convert. Following are the hours of NOS availability until May 23, 1984:

Every Wednesday, 7 AM to 10 AM  
Every Friday, 7 AM to 10 AM  
Every Saturday, 2 PM to 5 PM  
(Saturday NOS hours may be extended, subject to interruption, from 5 PM until 12 noon Sunday for NOS development.)

Normal NOS/BE operations should resume by 10:30AM following weekday NOS sessions.

Users interested in working with the NOS conversion system must submit a Request for NOS Conversion Directory, LUCC form #3. This form, along with a preliminary NOS User's Guide, is available from User Services, Room 115 Packard Lab. The contents of our NOS/BE - NOS Differences bulletin can be found later in this issue.

The final switch from NOS/BE to NOS will begin at 8:00 PM Friday, May 25th, at which time the CYBER will be taken out of service. All user files will be dumped to tape and then reloaded under NOS. CYBER operations are scheduled to resume no later than 10:00 AM Tuesday, May 29th. Users will need to apply for a new NOS user name and password before running on the new system - details will be available in the near future and announced on-line under NOS/BE and NOS.

Four NOS/BE - NOS differences seminars have been given so far. Two more have been scheduled, for May 10th at 4:00 PM and May 31st at 3:00 PM. Both will be held in Room 208 Packard Lab and will last approximately 2 hours. Those planning to attend should register with User Services at 261-3990.

If you have any questions about the conversion, or need specialized assistance in converting, please contact User Services at ext. 3990.

HEATH/ZENITH MICROCOMPUTER USER GROUP

The Lehigh Valley Heath/Zenith User Group is in the process of forming. LVHUG will meet monthly during the academic year. Meetings consist of discussions of hardware and software, an informal presentation on topics of interest to the members (e.g., communicating with mainframes, using spreadsheets), and the exchange of public domain software. Members of the Lehigh community who have

purchased Zenith equipment or are interested in Zenith microcomputers are welcome. While LVHUG is not affiliated with LUCC in any way, further information about the group can be obtained from Pat Kendi at ext. 3992.

ATTENTION TELEVIDEO 920C USERS

Have you ever had the cursor behave mysteriously during an interactive session? One symptom is the cursor moving into protected areas of a MUSE menu. Another symptom is the cursor simply returning to the beginning of the same line after a carriage return has been issued, with the system refusing to acknowledge the command entered. The problem might be that you have inadvertently placed your TVI-920C into "block" mode. At the lower left corner of the keyboard are two keys labeled SHIFT and BLOCK/CONV. They happen to be in a location where one might rest one's palm while typing. Pressing both keys simultaneously results in problems, especially when using the MUSE word processing program. To get the terminal to function properly again, depress the CTRL and BLOCK/CONV keys at the same time.

BOOKSTORE SOON TO SELL RS232/EIA CABLES

The University Bookstore will begin supplying RS232/EIA cables after its inventory has been taken, probably in early July. The Bookstore will be stocking 10' M-M, M-F, and F-F cables.

FROM THE LIBRARIAN

DEC 20 - Modified Software

NCP CALC - Spreadsheet Calculator (T50001)

Version 2.0 of NCP Calc has been installed and is now the default version accessed when you type the following at TOPS-20 command level:

@NCPCALC

Version 2.0 has a number of new features, among them the ability to sort data alphabetically or numerically, the ability to redefine control characters (allowing cursor control keys to work on TeleVideo terminals), additional format options, and additional functions.

A HELP file for Version 2.0 is available on the system, and is accessed by issuing the following command:

@HELP NCPCALC



A new manual, entitled NCP Calc Reference Manual, is available at the Packard Lab, Christmas-Saucen and Drown Hall sites, and at Mart Library (on one-day reserve). It is available for purchase at the University Bookstore.

The previous version of NCP Calc (Version 1.67) is still available on the system, on directory OLD:. It is the version accessed after the following has been typed in a terminal session:

```
@DEFINE SYS: OLD:,SYS:
```

#### SLAM II - Simulation Language (F40014)

SLAM II Version 1 has been upgraded on the system to SLAM II Version 2. SLAM II is an advanced FORTRAN-based language that allows simulation models to be built on three different world views. By having network, discrete event, and continuous modeling capabilities, SLAM allows one to develop models from a process-interaction, next-event or activity-scanning perspective.

The enhancements included in the upgrade to Version 2 provide additional efficiencies in the simulation modeling process. Ease of model design, speed of implementation, and clarity of output have also been enhanced.

More details about Version 2 enhancements can be found on the HELP file for SLAM, accessed by typing:

```
@HELP SLAM
```

This HELP file also contains information on how to access SLAM, a general description of how to use SLAM, and details about where documentation on SLAM can be found.

#### MINUTES OF THE USERS' SUBCOMMITTEE MEETING OF 3/1/81

Members Present: T. Delph, T. Foley, J. Hall, W. Hoffman, G. Rayna, W. Shade

The first item on the agenda was to discuss budgeted software additions for this fiscal year. The packages discussed were:

- RIM - a relational database system for the CYBER
- NIAL - an APL-like language for the DEC 20
- PLOT 10 - a graphics package for the CYBER

T. Foley outlined the possible uses of RIM on the CYBER and some of the features that the supported version of RIM has that our current version does not have, such as graphics capabilities and report-generating facilities. It was pointed out that instructors from the CSEE and IE departments had expressed an interest in using a relational database system in their courses and that our current version was unsupported. J. Hall also expressed an interest in using a database program in a graduate course that he will be teaching next Fall. The cost of RIM was estimated to be \$6000; it was decided to purchase the package. The NIAL language, which was requested by J. Wiginton for use in his IE 437 course, was also approved for purchase, at a cost of \$500. T. Foley suggested that a supported and more up-to-date version of PLOT 10 be acquired; this would cost \$4000. It was pointed out that we had just installed TEMPLATE - a very powerful graphics package - on the CYBER, but that its memory requirements made it impractical for course usage. G. Rayna pointed out that a package like PLOT 10 would be useful in an introductory graphics course, where you would want the students to create most of their own routines rather than have a package provide them. It was decided that our current version of PLOT 10 could meet this need, and that the newer version should not be purchased. Next, T. Delph briefly described some finite element packages being considered for purchase. It was decided to investigate these options further and discuss them at our next meeting.

Discussed next was the possibility of making changes to the accounting system on both computers. T. Delph and T. Foley mentioned a suggestion that was made by some faculty and students, which was that each student have just one account on each of our systems which would be used for all of the student's course work. The following advantages to this type of system were pointed out:

1. Instructors would not have to manage course-related computer accounts. Computer assignments could be given without setting up a specific course account. Instructors would no longer have to worry about account balances going negative, account termination dates, and obtaining usernames and passwords from their students.
2. A student would always be working from the same account.
3. Duplication of files common to many accounts, such as login.cmd files, would be eliminated.

Some possible problems in handling accounts this way were mentioned:

1. Limits for these accounts would have to be sufficient for most course needs, with exceptions being handled on a special basis.
2. Instructors would not be able to control the files their students have on their accounts.



3. Instructors would be unable to determine the amount of usage by each of their students.
4. Students would need to concern themselves with the dollar usage on their accounts, and would possibly need more funds if they were in a computer-oriented curriculum.

G. Rayna felt strongly that the current use of sub-directories was very useful, and should be continued. The Subcommittee agreed that this was a topic that needed further study, and that it could be explored at another time.

LUCC happenings were discussed next. T. Foley brought the Subcommittee up-to-date on the following:

- The Packard Lab Users' Area was finally upgraded, with the addition of 8 terminals hardwired to the CYBER, 2 hardwired to the DEC 20, 3 Seiko graphics terminals hardwired to the CYBER, 1 color hardcopy device connected to the graphics terminals, and the addition of a Spinwriter 7725 letter quality printer.
- The plotter study has gotten under way, and minutes of a meeting to determine the criteria to be used in the selection were distributed.
- The NOS conversion project was discussed, and it was pointed out that only a few users appear to be taking advantage of the testing time currently being made available on Wednesdays and Saturdays. W. Hoffman expressed his concern about the large number of jobs that Administrative Systems has to convert. T. Foley informed him that they could get started now, and that they should open up a conversion directory to begin their conversion as soon as possible.

The last topic on the agenda was the future of the Users' Subcommittee. T. Delph stated that, at the last meeting of the Computing Center Advisory Committee (CCAC), the possibility of merging the Users' Subcommittee and the CCAC was discussed. All members present felt that this was a good suggestion, and that it should be investigated further with the Vice Provost.

Before adjourning, W. Shade mentioned that he felt that the Users' Subcommittee should be more involved in the planning of the new Mart Users' Area. At the next meeting, T. Foley will make a presentation of the current plans for the configuration at Mart. W. Hoffman also mentioned that an IBM 4361 was scheduled to be installed the weekend of March 10th; it would replace the IBM 4331.

MINUTES OF THE USERS' SUBCOMMITTEE MEETING OF 4/11/84

Members Present: T. Delph, T. Foley, J. Hansz, W. Hoffman, C. Kostem, C. Orr, W. Schiesser

Additional software purchases for this fiscal year were discussed first. C. Kostem outlined the advantages and disadvantages of three finite element packages: NASTRAN, ANSYS, and ADINA. NASTRAN was described as an excellent package, but very complicated to use and very expensive. ANSYS was also characterized as a large complicated package. It was pointed out that an educational version of ANSYS could be obtained for \$200 per year. The educational version, however, had very strict usage limitations. This version could not be used for externally sponsored research projects. A non-educational version of ANSYS is available but at a cost of \$2000/month. ADINA was described as a more limited finite element package which was easier to use and had less overhead. The cost of ADINA is \$1200/year. Of these three packages, it was decided to look into the acquisition of both ADINA and the educational version of ANSYS.

The IMSL packages PROTRAN and TWODEPEP were discussed next. T. Delph and W. Schiesser both discussed requests that they had received from members of their departments on using these programs. The PROTRAN routines are designed to reduce programming effort. The PROTRAN packages discussed were: MATH, LP (linear programming), and STAT (statistics). The cost of all three packages is \$1500/year. TWODEPEP was described as a finite element program that solves time dependent, steady state and eigenvalue partial differential equations in general two-dimensional regions. The cost of TWODEPEP is \$1400 initially and \$900/year maintenance. It was decided to purchase both PROTRAN and TWODEPEP.

The next item discussed was the progress made so far in the search for a publication quality plotter. T. Foley distributed an initial recommendation, and displayed some example plots from the HP 7586B plotter - the only plotter to meet all of the established criteria. C. Kostem recommended that a smaller sample liquid ink plot be obtained from HP before any decision is made on the plotter.

Next, T. Foley distributed LUCC's recommendation for a monochrome graphics terminal to be used at the remote sites and to possibly replace the TeleVideo terminals as our basic alpha terminal. The terminal recommended was the Visual 102, which provides VT100/VT102/VT52 compatibility, Tektronix 401X emulation, and a graphics resolution of 768 X 293. The initial locations of these terminals would be at the Grace Hall and Whitaker sites. It was also pointed out that the HDS terminal currently in Whitaker 207 was going to be replaced with a microcomputer. W. Schiesser felt that the HDS should be relocated to Whitaker 354 which would give that site two graphics stations.

Next, T. Foley outlined the present configuration of the new MART addition. The Users' Area Faculty Work Room, Library, and Lecture Room were



discussed. A suggestion was made to have monitors, which would list every job in the system, located outside of the machine room. The availability of lockers was also questioned and T. Foley pointed out that lockers similar to our current lockers were being planned for.

At the end of the meeting, T. Delph pointed out that this was to be the LAST meeting of the Users' Subcommittee. The CCAC had decided at its last meeting that the CCAC and the Users' Subcommittee would be combined into one committee.

#### NOS/BE - NOS DIFFERENCES

(For the convenience of the many CYBER users who will soon need to convert to NOS, the contents of our NOS/BE - NOS Differences bulletin appear below. The use of NOS is described in detail in our preliminary NOS User's Guide, available from User Services.)

To a limited extent, the usage of the two operating systems is the same. Senator users will find the differences especially transparent. However, approximately two-thirds of the NOS/BE control statements will require either replacement with the corresponding NOS control statements or changes in syntax (refer to the Command Comparison Table at the end of this article). This is due to the architecture of NOS being more oriented toward timesharing and networking than that of NOS/BE. This design direction will more adequately support the amount of interactive use expected to occur.

Further information on the use of NOS is contained in LUCC's NOS User's Guide, and Control Data Corporation's NOS Version 2 Reference Set - Volume 3: System Commands (available at Mart Library and the Packard, Grace, Christmas-Saucon, and Drown sites).

#### Note to SORT/MERGE Users

Version 5 of the SORT/MERGE utility will be the only version available under NOS. Version 5 is now available under NOS/BE for program conversion. Users of SORT/MERGE Versions 3 and 4 should avail themselves of this opportunity as modifications required can be extensive. Please see Control Data Corporation's SORT/MERGE Version 5 Reference Manual for details.

#### File Usage

NOS/BE's local files/permanent files/small permanent files are comparable to NOS's local files/direct access permanent files/indirect access permanent files. The major differences are: 1) the control statements for permanent file manipulation are different, 2) permanent files are owned by a Username (see "Accessing NOS Interactively" below), permanent file names are limited to 7 characters, no ID's, no cycle numbers, and only one (optional) associated password, 4) permission must be explicitly or implicitly given before another

user may access a file, and 5) permanent files do not have retention periods (i.e., they are retained until purged).

Indirect access permanent files are "made local" by being copied from the permanent file catalog to a system scratch disk. It is this local copy that is modified during a user session. Associated commands are SAVE, REPLACE, and GET.

Direct access permanent files are linked directly to a user's workspace. This means that the permanent file catalog version is directly read or written into during a user's session. Associated commands are DEFINE and ATTACH.

#### Accessing NOS Interactively

Until the permanent conversion to NOS, your terminal should be configured for half duplex transmission. Thereafter, it should be configured for full duplex transmission. (Your modem, if dialing up, should be configured for full duplex transmission in both cases.) The following is an example of logging into the Network Operating System. (Note: lowercase is your input.)

```
WELCOME TO THE NOS SOFTWARE SYSTEM.  
COPYRIGHT CONTROL DATA 1978, 1983.
```

```
84/04/30. 23.35.52. T4D  
LEHIGH UNIVERSITY CY170-730. NOS 2.2 - 596/587.  
USER NAME: username <CR>  
PASSWORD: password <CR> (not displayed after 5/25)  
JSN: ABCD, NAMIAF
```

JSN is an abbreviation for Job Sequence Name. In this example, ABCD is the four character name assigned by the system to your terminal session (your session is considered to be a "job" by the system). NOS responds with a "/", the standard system prompt.

If the system disconnects you before you are done with your work, or if you disconnect yourself accidentally, you can log in again and try to resume your work by specifying the job sequence name assigned to your previous terminal session (if and when prompted for it). This must be done within 30 minutes of the disconnect.

By default, NOS treats the characters in column 1 of a file as data rather than as carriage control, so COPY and COPYBF may be used instead of COPYSBF when viewing a file at a terminal.

An interactive session is ended by typing LOGOUT or BYE.



## Terminal Control

DELETE CURRENT LINE - CTRL/X <CR>  
DELETE PREVIOUS CHARACTER - BACKSPACE  
- CTRL/H  
TASK TERMINATION - CTRL/T <CR>  
SUSPEND TERMINAL OUTPUT - CTRL/S  
RESUME TERMINAL OUTPUT - CTRL/Q  
ABBREVIATED JOB STATUS - %S <CR>  
DETAILED JOB STATUS - %E <CR>  
SYSTEM END-OF-RECORD - <CR>

Note that a <CR> by itself is not ignored by NOS. This may cause problems for an unprepared program which accepts input from your keyboard.

## NOS Help Features

The HELPME facility can assist you with using any valid interactive NOS command. You can obtain assistance with commands by typing:

HELPME, command

The system will provide a brief description of the command's function and format, prompt for parameter values, and then execute the command. Note that when being prompted for a parameter value:

- entering a "? <CR>" will cause the system to provide help text for that parameter.
- entering a "<CR>" only will cause the system to assume the default for that parameter.
- entering a ". <CR>" will cause the system to execute the command without prompting for additional parameters.
- entering a "CTRL/T <CR>" will cause you to exit from the HELPME facility.

Note that by simply typing "HELPME" with no command name, you can obtain a list of all commands for which help is available.

A facility is available on-line to help NOS/BE users learn about NOS commands. This facility can be accessed by typing "HELPBE". By typing the name of a NOS/BE command in response to HELPBE's "?" prompt, one can obtain information about the NOS command or commands which perform a similar function.

## NOS Senator Differences

The NOS/BE Senator command (checkpoint/revive various current files) is available in NOS Senator. SQUEEZE is automatically enabled when inserting lines in INPUT mode. The VETO prompt is "v\*\*".

### **\*\*Senator File Usage**

A user name is employed instead of a user id. The default is the user name in effect when Senator is initialized. As under NOS/BE, the presence of a colon in a file name specification signifies the presence of a user name. (Note: multiple SAVES with the same file name cannot be done.)

### **\*\*Time Limit Recovery under NOS**

The NOS equivalent to a NOS/BE system second is called a System Resource Unit (SRU). Whenever the "job step SRU limit" is reached, the system issues the following message to the terminal:

```
*SRU LIMIT*  
ENTER S TO CONTINUE OR <CR> TO STOP:
```

You should respond with one of the following:

S,\* increases the job step SRU limit to your authorized maximum job step limit. Command execution continues.

<CR> terminates the job step. Any commands issued between the one currently executing and this <CR> are not processed.

### **\*\*NOUT Command**

This new command copies a given file (by default, the current file) exactly and sends the copy to the destination printer. (The copy of the file is not prepared using COPYSEF as all files routed via the OUT command are. Thus, the characters in column one of this file are available for printer carriage control.) You are prompted for the destination (\* or C for central site, GRACE for Grace site) unless you have set the DEST option to C or GRACE - see below. NOUT's format is:

NOUT,filename

where filename is the file to copy and route to a printer. If no filename is specified, the current file is assumed.



Examples:

NOUT The current file is copied exactly and sent to the destination printer.

NOUT/ZZZZZVL The local file ZZZZZVL is copied exactly and sent to the destination printer. This is a good file name to remember, as the source listing from the latest RUN or COMPILE is written to it by default. Thus, if the compilation was good, the listing can be printed by issuing this command.

\*\*DEST Option

The DEST option sets the site at which files routed via OUT or NOUT will automatically be printed. Possible destinations are:

- null (i.e., "OPT,DEST=", the default) You are prompted for a destination (\* or C for central site, GRACE for Grace site), a page limit, and for whether printer carriage control should be suppressed.
- C Central site printer; no prompting.
- GRACE Grace Hall site printer; no prompting.

If DEST is C or GRACE, the page limit applied is the one last specified on a PAGES or B command, or the system default (about 6 or 8 pages for suppressed and unsuppressed printing, respectively) if no PAGES or B command was issued. Suppressed printing is assumed unless "N" was specified on a prior PAGES or B command.

\*\*SCP Mode Abbreviations

The following abbreviations are recognized in SCP mode:

Command verb abbreviations

a=attach	as=assign	bf=skipfb	br=bksp
c=copy	ca=catalog	ce=copyei	cf=copybf
ch=change	cl=catlist	cm=compass	cr=copybr
cs=copysbf	d=dayfile	de=define	e=enquire
g=get	l=library	le=libedit	lg=libgen
lm=limits	lo=logout	m=modify	p=purge
pe=permit	r=rewind	rn=rename	ro=route
rp=replace	rt=return	sb=skipfb	se=skipei
sf=skipf	sr=skipr	u=update	ul=unload
v=verify	wf=writef	wr=writer	--begin,

File name abbreviations

cc=compile	ii=input	ne=newpl	ol=oldpl
oo=output	ss=source	t1=tape1	t2=tape2
t3=tape3	t4=tape4	t5=tape5	t6=tape6
t7=tape7	t8=tape8	t9=tape9	

NOS Batch Processing

The job card is different under NOS. The ACCOUNT card has been discontinued. A new required card, the USER card, has been added. Note that the USER card, not the job card, identifies to the system what account is to be charged.

\*\*Job card

Format:

ujn,Tt,CMfl,STpd,Pp.

Parameter	Description
ujn	<u>Required</u> parameter. An alphanumeric user job name of from one to seven characters. It must begin with a letter. This name can be used to uniquely identify the individual jobs being run under the same user name, as this name is present (in small letters) on the banner page of output.
Tt	<u>Optional</u> parameter, where "t" is the System Resource Unit limit (decimal) for the job. (An SRU is comparable to a NOS/BE system second.) The default value is eight. Jobs requiring more than eight SRUs must include this parameter on the job card. Note that the higher the value of "t" specified, the lower the amount of central memory available to the job. The SRU limit specified may not exceed the maximum amount assigned to the authorization for the processing period unless a yellow Special Submission Card has been signed and submitted for the job.
CMfl	<u>Optional</u> parameter, where "fl" is the maximum <u>octal</u> field length to be used for the job. The system rounds the value to the next highest multiple of 100. The default field length is the maximum allowed for the value of "t" specified. This parameter would not be used unless more central memory than was already available was needed, in which case a yellow Special Submission Card must be signed and submitted for the job. Note that a value containing an 8 or 9, or the suffix D, will be interpreted as decimal.
STpd	<u>Optional</u> parameter, where "pd" specifies the processing period during which the job will begin running. The codes for pd are PRI, NON, and OFF for prime, non-prime, and off hours execution of jobs, respectively. The default for this parameter is the current processing period.
Pp	<u>Optional</u> parameter, where "p" is the priority level at which the job enters the system, ranging from 0 to 3. The default priority is 0, which is the maximum avail-



able to instructional and university sponsored authorizations. Priority 3 is reserved for urgent jobs which have permission to run at a high priority.

\*\*USER card

The second card of the deck must be the USER card. The system uses the parameters on the USER command to determine if you are a legal user, which resources you are validated to use, and the extent (limits) to which you may use those resources.

Format:

USER, username, password.

Parameter	Description
username	Specifies the user name you were assigned when your account was opened. This is the same user name as would be used when logging in to the system interactively. The user name appears in large block letters on the output banner page.
password	Specifies your four to seven character alphanumeric batch password. Initially, you are assigned the same password both to log in interactively and to have a batch job processed. Either can be changed at any time using the PASSWOR command. The password is deleted from the USER command before this command is issued to the dayfile.

#### Magnetic Tape Differences

Under NOS, tapes may be accessed by batch or interactive jobs. If only one tape drive at a time is to be used, it is not necessary to indicate this to the system ahead of time. If two or three units are needed concurrently, use the statement "RESOURC,NT=n.", where "n" is the number needed. RESOURC may only be used in a batch job and may appear anywhere prior to the assignment of the tapes.

Under NOS, the REQUEST statement has been modified to look almost exactly like the LABEL command. Use of REQUEST, however, should be avoided, since all tape processing can be accomplished with LABEL.

The default tape format is NOS internal, which is not compatible with NOS/BE internal format. (The F=SI option should be used to read current NOS/BE tapes.) ASCII and EBCDIC tapes can be processed using the FILE and COPYRM statements if the F=S or F=L, and CV=US or CV=EB, options are used. Please note that, when requesting NOS/BE tapes with VSNs of less than six characters, you must "pad" the VSN with leading zeroes so as to total six characters.

#### LABEL Statement Differences

NOS/BE	NOS
F=S (stranger)	F=I (NOS internal)
F=L (long stranger)	F=SI (NOS/BE internal)
	F=S (stranger)
	F=L (long stranger)
	default = I
No equivalent	LB=KL (labeled)
	LB=KU (unlabeled)
	default = KL
N=US (ASCII)	CV=US or AS (ASCII)
N=EB (EBCDIC)	CV=EB (EBCDIC)
	default = US
RING (write enable)	PO=W (write enable)
NORING (read only)	PO=R (read only)
	default = R
L=label name	L= or FI=label name
M=multifile set name from REQUEST statement	SI= or M=set name REQUEST not used
P=multifile position	QN=multifile position
N/A	G=1-4 digit generat. no.
N/A	FA=file accessibility (1 character): blank =>unrestricted A =>owner access on other =>specify same char. as on creation default = blank
V=section number	SN=section number



COMMAND COMPARISON TABLE

In the following table, the column labeled "Ref." contains information on where to find more information about the command. Its entries have the following meanings:

- chapter-page (e.g., "7-27") See that page in the NOS Version 2 Reference Set - Volume 3: System Commands manual.
- and The + is included when the command is also described in LUCC's NOS User's Guide.
- chapter-page+ is also described in LUCC's NOS User's Guide.
- N.U.G. See LUCC's NOS User's Guide.
- # See reference manual for language.
- \*\* See documentation filed under library number J90028.
- \*\*\* See CYBER LOADER Version 1 Reference Manual.
- \*\*\*\* See CYBER RECORD MANAGER Basic Access Methods Reference Manual.

NOS/BE	NOS	Ref.	Function
ALTER	None; occurs automatically with direct files		Change length of a permanent file
ASSETS	LIMITS	7-27+	List information about authorized resources
ATT	GET	10-19+	Access an indirect access permanent file
ATTACH	ATTACH GET	10-7+ 10-19+	Access a permanent file
BATCH	B	N.U.G.	Queue a file for printing, punching or plotting, or process file as a batch job
BEGIN	BEGIN	4-34+	Call and execute CCL procedure file
BKSP	BKSP	9-4	Bypass a number of logical records going backwards
CARDS	CARDS	N.U.G.	Set maximum number of cards to be punched
CAT	SAVE	10-34+	Retain a file as an indirect perm. file
CATALOG	DEFINE SAVE	10-16+ 10-34+	Retain a file as a permanent file
LIST	CAT	N.U.G.	List information about permanent files

NOS/BE	NOS	Ref.	Function
COMBINE	PACK	9-35	Combine logical rec'ds into a single record
COMMENT	COMMENT *	7-9 7-9	Place comments in the dayfile
COMPARE	VERIFY	9-64	Compare contents of files
Compiler calls	Compiler calls	#	Access compiler and compile source
CONNECT	ASSIGN	9-2	Assign file to the terminal
CONTENT	CATALOG ITEMIZE	15-5 15-14	List information about a library
COPY	COPY COPYEI	9-5+ 9-16	Copy to the E-O-I
COPYBF	COPYBF	9-11+	Copy binary files
COPYBR	COPYBR	9-12+	Copy binary records
COPYCF	COPYCF	9-13+	Copy coded files
COPYCR	COPYCR	9-15	Copy coded records
COPYSBF	COPYSBF	9-17+	Copy file shifting all one column to right
COPY72	COPY72	**	Copy 72 cols. of file
DISCONT	ASSIGN	9-2	Disconnect a file from the terminal
DISPLAY	DISPLAY	6-15	Place evaluated CCL expression in a file
DISPOSE	ROUTE	9-43+	Release file to designated queue
DMP	DMP DMD	11-6 11-5	Dump central memory
DROP	DROP	7-11+	Drop an executing job
DSPACE	CAT	N.U.G.	List information about permanent files
EDITLIB	LIBGEN LIBEDIT	15-32 15-17	Create and maintain program library file
ETL	SETJSL	7-58+	Set job step time lim.
EVICT	DROP	7-11+	Drop an input or output file
EXECUTE	EXECUTE	***	Execute program loaded into memory
EXTEND	None; occurs automatically with direct files		Add information to the end of a permanent file
EXIT	EXIT NOEXIT ONEXIT	6-18 6-23 6-23	Error condition branch



NOS/BE	NOS	Ref.	Function
FILE	FILE	**** N.U.G.	Describe file characteristics
FILES	F ENQUIRE, F	N.U.G. 7-12+	List names of local files
ITEMIZE	ITEMIZE CATALOG	15-14 15-5	List information about a file
JOERIND	ENQUIRE, JSN	7-12+	Report job status
KILL	DROP	7-11+	End executing job
LABEL	LABEL REQUEST	12-11+ 12-21	Request labeled magnetic tape
LDSET	LDSET	***	Set loader options
LIBLOAD	LIBLOAD	***	Load library programs
LIBRARY	LIBRARY	15-43 ***	Define global library
LINLEN	TRMDEF	8-7	Set no. of characters to be displayed horizontally on device
LISTMF	LISTLB	12-19	List contents of label on labeled tape
LOAD	LOAD	***	Load contents of file
LOGIN	None	N/A	Access CYBER interactively
LOGOUT	LOGOUT BYE	8-26+ 8-16+	Exit gracefully from system (interactively)
MESSAGE	MS=	J-20	Send mess. to operator
MAP	MAP	***	Generate loader reference map
MODE	MODE	6-21	Define exit error conditions
NOGO	NOGO	***	Complete load without execution
PAGES	PAGES	N.U.G.	Set maximum number of lines to be printed
PAUSE	None	N/A	Send mess. to operator
PLOTS	PLOTS	N.U.G.	Set maximum number of plotter function units to be used
PUR	PURGE PURGALL	10-32+ 10-31+	Remove indirect permanent files from system
PURGE	PURGE PURGALL	10-32+ 10-31+	Remove permanent files from system
Q MQ	ENQUIRE, JSN	7-12+	Report status of jobs
REDUCE	REDUCE	***	Set dynamic job field length management

NOS/BE	NOS	Ref.	Function
RENAME	CHANGE	10-15+	Alter permanent file characteristics
REN	CHANGE	10-15+	Alter indirect perm. file characteristics
REQUEST	REQUEST LABEL	12-21 12-11+	Request labeled or unlabeled tapes
RETAIN	UNLOAD	9-63+	Retain selected files
RETURN	RETURN	9-41	Release local file, decrementing resource count
REWIND	REWIND	9-42+	Rewind local file to its E-O-I
RFL	RFL	7-52	Set fld. len. for job
ROUTE	ROUTE	9-43+	Release file to designated queue
RPL	REPLACE	10-33+	Replace indirect file
SCREEN	TRMDEF	8-7	Change terminal display characteristics
SEGLOAD	SEGLOAD	***	Produce segmented load
SEND	None	N/A	Send message to logged-in user
SITUATE	None	N/A	List all current interactive users
SKIPB	SKIPFB	9-56	Skip logical records going backwards
SKIPEI	SKIPEI	9-55	Skip to E-O-I
SKIPF	SKIPF SKIPEI SKIPR	9-56 9-55 9-57	Skip logical records going forwards
SLOAD	SLOAD	***	Load selected programs
SOPUP	UPROC	7-69+	Set up a user prologue (sign-on procedure)
SUMMARY	SUMMARY ENQUIRE	7-68 7-12	Return system information about your jobs
SYSBULL	None	N/A	Access bulletin files
UNLOAD	UNLOAD	9-63+	Release local file, without decrementing resource count
UOASTAT	LIMITS	7-27+	List account limits
VSN	VSN	12-25	Assign tape VSN to local file



OPERATIONAL STATISTICS

CYBER 730

	<u>2/84</u>	<u>3/84</u>
Time System Available		
During Scheduled Hours		
(Percentage)		
Batch	100.0	99.9
INTERCOM	99.8	99.9
Mean Time Between		
Interruptions (Hours)		
Batch	411.5	336.9
INTERCOM	205.4	336.9

DECSYSTEM-20

	<u>2/84</u>	<u>3/84</u>
Time System Available		
During Scheduled Hours		
(Percentage)	99.1	99.9
Mean Time Between		
Interruptions (Hours)	51.2	66.9

USAGE STATISTICS

CYBER 730

	<u>2/84</u>	<u>3/84</u>
BATCH -		
Jobs Processed	16,793	16,370
Central Site	6,529	6,089
INTERCOM -		
Terminal Sessions	26,805	22,941
Terminal Connect Hours	14,032	12,138
CPU Hours - Batch	152.1	193.1
- INTERCOM	100.1	108.9

DECSYSTEM-20

	<u>2/84</u>	<u>3/84</u>
Terminal Sessions	35,243	28,248
Terminal Connect Hours	16,121	15,477
CPU Hours - All Jobs	276.3	277.8

USER SERVICES EXTERNAL REPORT

MAILING LIST

- ADD my name to the mailing list
- DELETE my name (include mailing label or complete address)
- CHANGE my address (list both old and new addresses and include Zip Code)

CAMPUS

OFF-CAMPUS

NAME: _____	NAME: _____
DEPT.: _____	ADDRESS: _____
BLDG.: _____ ROOM: _____	_____
	ZIP CODE: _____

RETURN TO:   Lehigh University  
              Computing Center  
              RM. 115 Packard Lab, Bldg. 19  
              Bethlehem, PA 18015