UNIVERSITY OF MINNESOTA COMPUTER CENTER
Deadstart Systems Newsletter

6 November 1979 Vol. 5, No. 21

Send all comments, criticisms and contributions to the editor: T. W. Lanzatella, University Computer Center, 2520 Broadway Drive, Lauderdale, MN 55113.

TABLE OF CONTENTS

NOTICE OF CHANGES TO THE SYSTEM

Arnie Nelson added two new site codes to SUPIO, 8H and 8J.

Kevin Fjelsted altered RETAIN processing in PFILES so that the error processing bit in the FET is cleared during the file copy. This change insures that if the file copy bombs, say for a track limit, then the user will get the error message.

Greg Jensen changed the SRU weighting factor for mag tape positioning operations from two to one, thus halving the cost of tape positioning.

Kevin Matthews installed the following changes.

1) The name of our local program MEM was changed to 1UD. Program MEM (1UD) is used to service ECS requests. This change was necessary because CDC is introducing a program named MEM which is used to test central memory. Program CPUMTR was also changed to convert all user MEM calls into 1UD calls.

2) Program PFM was changed so that ERROR IDLE is never set. See Kevin's proposal dealing with error idle later in this issue.

3) Program SLL was altered to know about DM and DY type equipment.

4) Programs OTI and 6DI were modified to properly set flaws when the 885 is initialized.

5) ECS ENABLE/DISABLE commands were added to DSD.

6) The ROLLIN command is now illegal for queue files with priority less than MNPS (100B). This prevents jobs from being rolled in when they should be going to another machine. This has hung the system before. Console operators note that any job which is rolled via DSD enters the queue with priority 1 hence, an ENQP must now be used in order to rollin a rolled-out job.

Don Mears installed the following changes.

1) TELEX was changed to ensure that it will never get stuck in a loop chasing circularly linked pots.

2) The DSD U-display was enhanced to display reentry pots and the address of each terminal table word.

3) Modset BADROL was converted from NOS 1.2. This modset detects corrupted rollin files and tags them in the FNT.

4) Correspondence code terminal support was deleted from 1TD.

5) The restriction that 1TD could only support three multiplexors was removed. 1TD can support up to eight mixes once again.

Tim Hoffmann installed the following changes.

1) Tim installed his live system option into DSDI (see DSN 5,20 P. 162).

2) SDM = processing in CHARGE was repaired.

3) Tim installed some code from PERDUE into COMCCDD which speeds up the routine by 30% although nobody seems to understand.

4) The meaning of the CSUR access word bit is being changed from special academic user (like student) to special user requests. The purpose of this change is to ensure the current convention that AW = ALL implies maximum validation.

5) The NUSERS command has finally been repaired.

6) Program 1UD was altered to return zero for TELEX maximum ECS.

7) Program KIL was corrected for the case when a previous job step used EREXIT/REPRIEVE.

8) Tim installed several PSR-type mods gleaned from R5. The mods correct minor problems in MODVAL, QFM, LFM, ENQUIRE and CPMEM.

Marisa Riviere installed her proposed PT index entry option (procedure file type) (see DSN 5,20 P. 162). The documentation within MFEBR was enhanced to include timings. Additionally, Marisa added a new option (LO = 0) to RFM which provides a list of only old files (unused for 1, 2 or 3 months).

Jeff Drummond installed the following changes.

1) Some PSR code was installed into 1MT which corrects an error where all 55 allowable VSN's could not be used in a VSN list.

2) Some PSR code was installed into 1MT which corrects an error in controlled backspace error processing in a certain case.

3) Some PSR code was installed into ROUTE which corrects an error where forms codes are or'ed together if specified more than once.

4) Program BLOCK was corrected to properly check for block too large when writing to S-format tape.

5) The LL parameter on BLOCK was changed so that an odd line length can be specified. This was done because the system adds a blank to odd-sized blocks when writing S or L format tapes. Previously, by requiring the line length to be even, BLOCK could ensure that the user would never unintentionally get this extra blank added to his blocks. The restriction was removed to allow users to read/write tapes whose block size was even but whose line length was odd, eg., LL = 85, BF = 20. The user can still attempt to write odd-sized blocks but BLOCK will issue a warning message indicating that a blank has been appended to each odd-sized block.

Brad Blasing installed some PSR code from R5 which corrects TCS calls from DIS. Additionally, Brad added the new BATCHIO error message, ILLEGAL HOLLERITH CODE, to the USERS/DSD I-display.

PROPOSED CHANGES TO THE SYSTEM

TSF or MNF - by W. T. Sackett

The version of TSF used on the 720 under NOS is a considerably abbreviated version of MNF. Whenever a user attempts to use a language feature not supported by TSF, the user gets a message USE BATCH VERSION OF MNF. I propose to make this easier for users to do. This proposal suggests that a new option be added to the RUN command in the MNF subsystem which means, "use MNF instead of TSF."

//////////

Time Limits and SRU Limits - by W. T. Sackett

When a user types S,nnn or T,nnn in response to *TIME LIMIT* or *SRU LIMIT* and nnn is greater than the users validated limit, 1TA aborts the job. Rather

than abort, the validated maximum should be used and the job allowed to continue. I favor this over T,* or S,* from NOS R5 because these forms are just another thing to remember and to document. This mod is for those whose memory is good but short (what were my limits?).

//////////

New Statistical Packages - by S. P. Yen

I propose to add the KYST2A, SINDSEL and HICLUS control cards to the CALLPRG index. These packages are related to multi-dimensional scaling programs and were obtained from Bell Labs. The System Group needs to decide whether there is any potential name conflicts.

//////////

Clean up ENTER and NOTE -- by K. Fjelsted

You may remember that about three years ago, a control statement was implemented at UCC which permitted multiple control statements to appear on the same line. This was named the Z control statement. Since that time, CDC has introduced the ENTER statement which is quite similar, and therefore preempts UCC's Z statement. The external syntax for both statements are the same. The documented difference between them being the added feature in the ENTER statement which permits the user to omit the final terminator on any or all of the executable statements which appear on the ENTER line. If the terminator is left off of any of these commands, ENTER will add a period.

There are two undocumented problems with the ENTER statement. The first problem is that if the ENTER statement is used in any kind of procedure loop it will append unwanted statements into the control stream. This is a result of the second problem which is that when ENTER is used it merely writes all of the statements which appear on the ENTER-line to a file named ZZZZSCR. The ENTER program then executes the following control statement which of course will appear in the dayfile. CALL(ZZZZSCR) If I were a user who was not familiar with how the current ENTER control statement works, I would be quite dumfounded when I saw that strange call statement in my dayfile.

I propose to fix up this whole mess by reimplementing the ENTER control statement in the same way that the previous Z statement functioned. This means that ENTER would be implemented in CONTROL. This will get rid of the procedure call to the scratch file ZZZZSCR. A comment character, *, will be placed in front of the ENTER statement after it has been placed in the control stream. This is the same method employed by the CALL statement and prevents it being reexecuted if the user employs any kind of looping mechanism.

I would of course, make it compatible with the existing ENTER statement by allowing the user to have statements without final terminators. I further propose that since ENTER is an entry point into the program NOTE that the NOTE control statement also be moved into CONTROL. This will allow the existing deck which holds NOTE, and ENTER to be yanked. There is some precedent for

having NOTE implemented in CONTROL in that at one time the PRINT statement (a local UCC mod) had its home in CONTROL.

//////////

Error Idle - by K. C. Matthews

A status called error idle was implemented by CDC at release 4 time. Error edle (indicated by an EI error code in the E,M-display) is set for a device when it is considered unsafe or unsure. PFM site error idle on a device, for example, if a disk read error occurs during the file copy for a GET operation. When error idle status is not on a device, only a permanent file dump is allowed on the device. No user permanent file or queue file operations are allowed. CDC intended that when a error idle status occurred the device should be dumped, initialized, and reloaded.

We have had error idle status set twice during production time since we began running release 4. Each time it was due to a single disk error. Since we consider the CDC remedy a little overzealous, we simply cleared error idle status in CM and ECS and repaired the file.

Error idle status is set via CPUMTR functions, so any solution to this inconvenience should be designed to minimize additional space or time in CPUMTR. The following solution is easily coded and has little overhead.

1) An error idle enable/disable bit is added to the SSTL word where the other enable/disable bits reside.

2) The DSD commands ENABLE, ERROR IDLE and DISABLE, ERROR IDLE change this bit.

3) The deadstart (IPRDECK) directive ERRORIDLE toggles this bit.

4) If the error idle bit is enabled, error idle works as in stock NOS. If error idle is disabled, only the "EI" code is displayed for an error idle device. No device funtions are disabled (e.g., permanent file requests).

One might ask why other things don't happen when we set the "disabled" error idle status. We could, for example, insure that no temporary files can go on such a device. My response is that the extra code that would have to be added to CPUMTR would make it not worthwhile.

I propose that we implement the above plan, and that we norma-ly run with error idle disabled.

Note: At the present time, we have a mod called NOIDLE in the system. This prevents PFDUMP and PFLOAD from setting error idle status. It was recently changed to also prevent PFM from setting error idle status. This mod has been considered a kludge mod. We could also simply ignore the above proposal and call NOIDLE a normal system mod.

//////////

APL Proposal - by T. Hodapp

Currently APL2.1.013 is up on the Cyber 172, and this version will go up on the MERITSS 170/172 on January 1, 1980, with the upgrading of that system to NOS. The reason for updating to the current level, is that the present version, is current for NOS level 485. Also, the old version of APL (APL2.D CDC = APL2.20 VMASS) [redacted] (APLUM), does not execute properly on NOS level 485.

The following, is a 4-part proposal to upgrade the APL software support, and to reduce the confusion concerning APL at present.

1) Initialization of full APL library support for the APL user. There libraries would observe standards for CDC APL systems, and would consist of the following libraries:

User Number	Library

APL0 SYSTEM LIBRARY

This number will not change, and will contain, CLEARWS, EMPTY, and NEWSF (for use with APLNEWS).

APL1 SYSTEM LIBRARY

General workspaces that will help the beginning APL user, and provide information to the APL user through the workspaces, APLNEWS, and CATALOG, as well as system workspaces such as FILESYS.

APL50 GRAPHICS LIBRARY

This library includes full graphics and plotting workspaces, for a variety of applications.

APL51 MATH LIBRARY

This library will contain workspaces, with varied mathmatical related functions.

APL52 STATISTICS LIBRARY

This library contains general statistical workspaces, including the STATPAK series currently in use of APL1.

APL53 COMPUTER SCIENCES LIBRARY

This libarary includes various programs related to computer science, including computer simulators, and emulators. Some of these workspaces are even designed to help with FORTRAN programs, as well as conversion between FORTRAN, and APL files.

APL54 GENERAL APL LIBRARY

This library will contain workspaces of a diverse nature pertaining to APL, and the support thereof. There are workspaces for documenting, and manipulating APL workspaces, as well as general workspaces that provide functions useful for the APL user.

APL55 TEXT PROCESSING LIBRARY

This library contains workspaces used in manipulating APL files, and processing text on these files. The library will include the APEDIT set of workspaces in addition to APLTEXT (APL file editor, similar to XEDIT).

APL56 SCIENCES LIBRARY
The workspaces in this library are helpful to people requiring computing in the natural sciences, such as physics, and electrical engineering.

APL57 BUSINESS LIBRARY
This library will contain programs useful for business applications.

APL58 GAMES LIBRARY
This library contains computer games.

APL59 EXPERIMENTAL LIBRARY
This library would contain workspaces that the University has received form different sources, such as IBM, or Sharp APL, that are incompatible for our APL, but could be valuable to an APL programmer, who would like to take the time to fix the workspace. Any workspace that is susequently fixed, will be moved to the proper library.

These libraries are ready to be loaded at the current time, and have all been checked over, and converted if necessary to the CDC APL system.

2) Rewriting of machine retrievable documentation for the new set of APL software. This involves the writeup file as well as the HELP and (WRITEUP,CONTROL) file. This upgrade should be included in updates of such manuals as Cyber Instant as well. The name of the writeup will change from APLUM to APL.

3) The elimination of the APL*Cyber system, and its assorted documentation. This system has not been supported by CDC for several years, and has several known bugs which make it unusable, and confusing to the new APL user. The old old version of APLUM (2.12 from UMASS) will similarly be removed from the Cyber 74. It requests 40000B, is no longer maintained and has numerous bugs. The Cyber 74 will be the only system not to get the new APL, and so the deletion of APL*Cyber will leave that system without an APL. However, since the Cyber 74 is now primarily a batch system, and since APL is a strictly interactive language, this action on APL*Cyber will be of little significance. Also the following statistics show that APL*Cyber has been used very little in the past, and so does not constitute an active portion of the system software.

	1976-77		1977-78		1978-79	
	APLUM	APL*CYBER	APLUM	APL*CYBER	APLUM	APL*CYBER
Cyber 74	LD217	238	8977	13	1154	77
Cyber 172	-	-	-	-	2509	7
6400/720	4801	N/A	3843	40	2821	49

4) Changing the APL control statement from:

APLUM,PARAMETERS.

to

APL,PARAMETERS.

This change was not implemented in the past for two reasons. First, since there were two APL systems on the computer (APL*Cyber, and APLUM),

the one name might be ambiguous. Second, in the past, we have used an APL system called APLUM, or APL from the University of Massachusetts. This is no longer true, because APL2.1 is now a CDC supported set of software (as APLUM was not), and is no longer referred to as APLUM. If this change is implemented, it would reduce the confusion for users of our system, who are familiar with other implementations of APL (notably CDC systems), as well as standardize APL here at the University, with other CDC APL systems. In addition to the change, the old APLUM control statement will issue a message informing the user as to the change.

SYSTEM MAINTENANCE: People and Procedures

Last Week's Systems Group Meeting - by T. W. Lanzatella

The following proposals were discussed.

1) Rich Franta's proposal to install a time-sharing character set in which the underline character is treated as data was accepted (see DSN 5,20 P. 161). A strong suggestion was made, however, that we search for a general solution to the proliferating character set problem.

2) Marisa's proposal to add a PT option to the CALLPRG index entry which is used to declare procedure file format (CCL or KCL) was approved.

3) Tim's proposal to install his CPUMTR rewind code in order to obtain statistics was rejected (see DSN 5,20 P. 162). We felt that a stimulator study should be performed first.

4) Tim's proposal to enhance ENQUIRE to report on jobs running on all mainframes in the MMF environment was approved (see DSN 5,20 P. 162).

5) Tim's proposed LS-DSDI option (live system) was approved.

6) Kevin Matthews discussed a suggestion that the meaning of the CSUR access word bits be changed to conform with the meaning of AW = ALL. We all agreed that the suggestion should be implemented.

Kevin presented the results of a recently completed study of disk read/write timings on the R4 system. The study showed that in an idle system using MST the transfer rates are very close to the published rates. The results are mentioned below.

DEVICE	PUB. RATE	OBSERVED RATE (WRITE/READ)
DJ	460	430/442
DL	921	770/852
DM	614	588/588
DQ	1228	818/1160

Larry mentioned the upcoming technical writing seminar. Systems group meetings for the months of November and December will be 8 Nov., 13 Dec. and 27 Dec.

//////////

CALLPRG and Library Tape News - by M. Riviere

On November 1, I installed a new Library Tape on the Cybers 172 and 74 and on the CDC 720. The modifications included on this tape are:

A replacement of COPYCH with a new version provided by J. Drummond. This modification took place in the three computers.

The replacement of SYSLIB with its newly updated version. This version includes the modification to the SNAPSHOT routines as announced in the previous DSN.

The replacement of COBLIB with a new version where S. Reisman corrected a bug on the C=COBIO routine. The bug fix makes files that are closed with lock to be returned instead of unloaded.

The only two CALLPRG index modification that took place on November 27. Modifications for that date should be requested before noon, November 21. For the new 720 NOS system, however, I will be implementing modifications as I will be receiving them.

//////////

A Fairly Confusing Description of How the Library Tapes May Be on December 16 - by M. Riviere

This article concerns the configuration of the NOS-CDC 720 future Library Tape and the current Cyber library tapes and how they will be affected by the 720/172/74 combined system.

I will describe first the actual CDC 720 KRONOS system tape contents and then current NOS 485 tape. After the two descriptions I will present how the future configuration of the Library Tapes may end up on the three machines.

The main purpose of presenting a description of the future tape here is to allow us to review the possible configuration and to make additional needed modifications to either the tapes and/or the required CALLPRG indices.

As I announced in a previous DSN, I plan to have three different tapes, one built for each one of the three computers. The contents of each tape will, of course, be different. One backup copy will be made for each tape.

The actual CDC 720 Library Tape has the following products: MNF, TSF, ALGOL, PASCAL, SNOBOLC, BASIC, SORTMRG, MINNLIB, SYSLIB, FT3LIB, FORTRAN, SYSIO, PASCLIB, SYSMISC, MSUIO, MNFCLIB, B33LIB, SRTLIB, COPYCH, FILE, SMTEXT and COBRTX.

All these products, with the exception of MINNLIB, are also available on the Cyber 74/172. The versions of most of these products are not the same. Besides, not all the products are available on the Cyber 74/172 from the Library Tape. Some of them are CALLPRG products.

Now let us look at Cyber 74/172 Library Tape. This tape contains common products available to both Cybers, products available only to one of them and products that, although they are somehow common to both machines they are different in both computers due to their machine dependency.

The common Cyber products that are identical in the Cyber 74 and the 172 are: MNF, TSF, FTN, FORTRAN, AAMLIB, BACLIB, FCL460, BIT8LIB, IOTEXT, TXTCRM, COMP4$ and COMP5$.

The common products that are machine dependent are: COBOL, CB6LIB, COPYCL, COBOL5, CB5LIB and SYSIO.

In addition, the 172 section of the tape includes the following products: DDL, DMS170 and QUERY UPDATE.

The attempted configuration of the future CDC 720 Library Tape to be released on November 11 for the test periods is as follows: MNF, TSF, MNFCLIB, MSUIO, FCL460, SYSIO, SYSLIB, MINNLIB, MNLMNF BASIC, B33LIB, PASCAL, PASCLIB, SNOBOLC, BIT8LIB, CRMEP, SORTMRG, SRTLIB, COPYCL, SMTEXT, COBOL, COBERTX, CB4LIB, COBOL5, CSTDMP, CB5LIB, IOTEXT, TXTCRM, the MNF MANTRAP file and the two compass overlays, COMP4$ and COMP5$ used by current MNF and M77 respectively.

Most of these products that have a name identical to the ones now used on the Cyber 74/172 will be the same versions which are now used on the Cyber 74, but some modifications will be implemented on several of them.

On December 16, however, almost the same modifications will also be taking place on the Cyber 74/172 tapes. Modifications will update the tapes to be similar to the attempted CDC 720 tape. The modifications concern mainly the TSF, MNF, the local University of Minnesota library routines, FORTRAN and FTN.

MNF, TSF and FTN will be modified in order to produce loader tables with pointers to the following libraries:

MNF and TSF	FTN
MNFCLIB	FORTRAN
MSUIO	SYSLIB
FCL460	MINNLIB
FORTRAN	MNLFT4
MINNLIB	(AAMLIB and BACLIB
MNLMNF	will be accessed
(SYSLIB by default)	when needed)
	(SYSLIB by default)

The modifications to these compilers are due to the rearrangement of the U of M Arithmetic Libraries made by Mike Frisch. This arrangement produces a partition of the local section of FORTRAN, FCL460, MNFCLIB (Cyber 74/172) and MINNLIB (CDC720) into three new libraries. These libraries are the library MINNLIB, which is common to FTN and MNF, and the two additional libraries MNLFT4 and MNLMNF that contain compiler dependent input/output routines used by FTN and MNF users respectively.

Also, as part of the modification to the libraries, the current versions of FORTRAN, MNFCLIB and FCL460 will be shortened due to the removal of the newly rearranged sections.

The compiler and library rearrangement obviously implies the need for currently existing user's relocatable binaries to be recreated in order to have the correct loader tables.

Current versions of FORTRAN, FCL460, MNFCLIB and MINNLIB should be made available through CALLPRG in order to provide users of relocatable programs with the needed library routines until they can recreate their new binaries.

On the CDC 720, the entry for PAST, MNF that is currently retriving a very old (1966/FT3LIB) version of the compiler could be replaced with an entry to retrive the current compiler and its associated libraries, MNFCLIB, 720 FORTRAN and MINNLIB. At the same time, FT3LIB should be removed from the library tape (the usage of PAST, MNF was low enough in the past months to allow us to do so. Past MNF was accessed no more than 5 times a month). The old compiler and FT3LIB could, however, remain as CALLPRG permanent files (OLDMNF and FT3LIB) should anyone need them for a while longer. A similar entry for PAST, TSF should be added.

On the Cyber 74/172, the versions of FORTRAN, FCL460 and MNFCLIB used until 16 December should be made available as past types. I do not believe we need to offer the current versions of the compilers as past types.

Currently, we do have PAST, FTN and PAST, MNF on the Cyber 74/172. Past FTN is the level 460 version and still has enough usage not to be removed. There is no version of PAST, MNF available for the time being.

Besides the library rearrangement modifications, the version of TSF to be used on the 720 will be altered to use smaller field length than the actual one used on the Cyber 74/172. The reduction of field length was achieved by the removal of code for double precision and complex operations. This modification already exists on the 720 version of TSF.

An additional modification to the library will be the addition of a new routine, REPLAPF, on the CALLPFM section of FORTRAN, FCL460 and MNFCLIB or MINNLIB. REPLAPF is a renamed version of REPLACE. The REPLACE routine should be removed in the future to be consistant with CDC specifications. There is a CDC routine with the same name for Record Manager functions. Users of the CDC routine are now avoiding our local one by using LDSET instructions at load time. Once enough users notification can be made, the local REPLACE routine can be removed from the libraries.

Going back to the 720 arrangement, the business products, SORTMRG and SRTLIB, currently available on the CDC 720 KRONOS Tape, will be accessible as past CALLPRG packages. Also, ALGOL and its library, SYSMISC, will be retrived from CALLPRG instead of from the system.

Another modification that will affect only the Cyber library tape will be the removal of the FTN compiler from the Cyber 172. Cyber 172 users may still be able to access the past version of FTN (level 460).

//////////

CALLPRG Products on the CDC 720 - by M. Riviere

Although the CYBER 74/172 and the CDC 720 will be running a common system soon, they will not have a common CALLPRG index.

The status of the 720 CALLPRG index and packages will remain as it is now. That is, the 720 CALLPRG packages will reside only on the 720 disks and the 720 CALLPRG index will be updated completely independently from the one on the CYBERs. The same configuration will remain for the Writeup files and index.

I started to maintain a new CALLPRG index for the 720 NOS system. Upon executing the statement FETCH, CPOPL7 on the Cybers, the program library for the future 720 NOS CALLPRG index is retrieved on a file called COPOL. Both 720 indices (DRONOS and NOS) are now identical. I will be implementing modifications to the NOS CALLPRG index as they are requested. The NOS CALLPRG index will be used on the 720 during testing times.

Remember that many of the products contained on CALLPRG may need to be re-created or replaced with the ones now used on the Cybers to work properly in the NOS system. Also, consider which other products now available on the Cybers but not on the 720 should be available on the 720 in order to make both systems as common as possible.

There are no plans for the time being of having a common pack with CALLPRG products to be used by three machines. I am not considering the possibility of resurection the use of the XMIT - SEND features of CALLPRG in order to transfer files to the 720. Therefore, the setup of separate indices and pack files may end up being the final one.

The first test time for the 720 NOS system will be on November 11. I will be implementing modifications to the 720 NOS CALLPRG index as soon as possible in order to have them installed for the testing date.

//////////

Cyber (NOS) Deadstart Dump Analysis from Monday, 22 October to Sunday, 4 November - by J. J. Drummond

Tuesday, 23 October

10:47 (DD2011) Cyber 74

1CJ hung dropping tracks on a job that had run on both the Cyber 172 and the Cyber 74. The job had run on both machines because it had been rolled-in on the machine where it was not supposed to execute. When the second copy of the job completed, the input file had already been dropped. It is not clear why the job was being rolled-in on the wrong machine, but the system should not have allowed it either. A level 3 deadstart was successful.

Wednesday, 24 October

15:25 (DD2015) Cyber 172
1TA hung (see TELEX dump analysis). A level 3 deadstart was successful although there appears to have been a few problems with MAGNET after the recovery.

Thursday, 25 October

08:25 Cyber 74
A level 0 deadstart was required because the system had been brought up with one of the system's time packs mounted in place of one of the production time packs.

Wednesday, 31 October

14:15 Cyber 172
The 7-track controller went bad and 7-track tapes were unavailable until a card was replaced.

Thursday, 1 November

02:20 (DD2015) Cyber 172
1CJ hung (again) dropping tracks on a job that had been rolled-in when destined for another machine (see dump on 23 October). The fix for this was already available for the next tape, but probably should have been put on KLUDGES due to the high popularity of ROLLIN. The operators attempted a level 3 recovery but cecame confused when deadstart indicated that the status/control register (SCR) had the ECS ERROR bit set (this happens after dumping ECS from the Cyber 172 because of the flawed areas in ECS). Rather than learning the error in the SCR, they attempted a level 0 deadstart. This failed for the same reason. At this point, they finally cleared the error in the SCR and then went on to do a level 0 deadstart. Also, it is not clear why the dump tape from 24 October (DD2015) was re-used for this dump.

Sunday, 4 November

01:40 Cyber 172
DN67 came up with linkage errors, but OFFing and then ONing the device seemed to fix the problem?!?

//////////

Cyber 170/720 Deadstart Dump Analysis (10/22 - 11/4) - by R. A. Williams

Date	Description	Tape
791023	A momentary power failure caused TELEX to drop out and recover automatically.	N.A.
791030	844 disk unit 2 hung with a fixed disk unit malfunction error.	Fixed

//////////

TELEX and TELEX PDP11 Crash Analysis (10/22-11/4) - by D. W. Mears

10/22 16:02 Channel 4 on the Cyber 74 (the TELEX PDP11 channel) became hung due to a link malfunction. Everything was ok after the operators did a disconnect on the channel. This problem has not reoccurred and the diagnostics do not fail on this link.

10/23 21:50 There was a brief power fluxuation. When the PDP11 saw the power come back up, it reinitialized itself which caused TELEX on both machines to think something was wrong with the PDP11. TELEX put out a blinky message and turned off the PDP11 in the EST. At 21:56 the Cyber 74 PDP11 EST entry was turned back on. At 22:53 the Cyber 172 PDP11 EST entry was turned back on.

10/24 16:27 1TA hung on the Cyber 172 trying to schedule garbage FNT entries. This is the pot reservation ("dropped pot") problem again.