UNIVERSITY OF MINNESOTA COMPUTER CENTER
Deadstart Systems Newsletter

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



## NOTICE OF CHANGES TO THE SYSTEM

Tom Lanzatella altered the UM MAINTENANCE facility to use standard (and current) CDC maintenance routines. Until this change, we had been using KRONOS versions of the maintenance routines which had been moved to MPL and maintained there for the sake of simplicity. Credit Dean Nelson for the work in extracting our changes to the old maintenance routines and re-applying them to the current versions. Tom also changed 1UD, the program which allocates ECS. Among the many 1UD requests is a request to return the maximum amount of ECS a user can obtain. Previously, 1UD returned the users validated limit. Now, 1UD returns the minimum of the users validated limit and the amount of ECS which is currently unused.

Kevin Matthews installed his proposed change to make the R parameter on PF commands optional (see DSN 6,4 p. 34). Kevin also repaired an obscure error in SLL, SYSEDIT's PP-helper. Although we only have one real example, a system hang during deadstart on systems time, the error should occur on any sysedit where many programs are being removed from CM.

Don Mears altered the DSD H-display so that plot files will have a PL displayed in the TID field. Don also repaired a system crashing error in error processing in the R and W tests in LKT, the link test facility.

Tim Hoffmann installed the following changes.

1) A new access work bit, CPLT, was added which controls plot file usage (see DSN 6,4 p. 33).

2) The CATLIST report was changed so that when a file is in error, it is flagged with an asterisk. Additionally, the local code used to alphabetize the CATLIST report was moderately speeded up.

Marisa Riviere repaired CALLPRG so that statistics messages are not produced for packages retrieved from private Callprg indices. Also, CALLPRG was changed to accomodate larger indices from indexed writeups (such as CONTROL). Marisa made two changes to RFM.

1) Users (staff) can now make a one-time transferral of file ownership using RFUCW.

2) Error processing was overhauled to make the program more amenable to internal calls by (say) a fortran program.

Jeff Drummond repaired TAPES so that OWNER processing works when a tape has permits.

Brad Blasing corrected message limit processing in 1AJ so that when a message limit is encountered, the program doesn't hang-up issuing a OPERATOR KILL message after every command entered. Instead, the control statement file is cleared, EREXIT and REPRIEVE are cleared and the job is aborted.

Arnie Nelson added four new SUPIO sites.

PROPOSED CHANGES TO THE SYSTEM

ENQUIRE - by T. J. Hoffmann

I would like to remove the restriction in E(JN) so that users may specify a 7 character job name and not be restricted to seeing only jobs with their hash. With the addition of searching the EFNT for jobs, C172 Telex users can now monitor submit and route jobs/files on the C74, but cannot check batch (card) jobs on any machine. I propose the following:

E(JN) All jobs with the user's hash.
E(JN=123) hash plus 1-3 characters.
E(JN=1234567) 4-7 characters says this is a job name and the hash is ignored.

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JOBNAME CHANGING - by T. J. Hoffmann

When a job is requeued from the IQFT to the Input Queue, the job sequence changes. This means that accounting looses track of each half of the job. To remedy this, I would like to issue an account dayfile message which indicates the name change.

MQNC,JOBNAME,SSS.

Where JOBNAME is the original name, and SSS is new sequence characters. This primarily affects delay queue jobs.

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NAME THAT BASE - By J. J. Drummond

Files (or sections) on multi-file tapes are often identified by their QN (or section) numbers. These QN numbers are specified on the LABEL and LISTLB control statements and are displayed in the DAYFILE:

```
MULTI-FILE QN=nnn LOCATED.          (1)
MULTI-FILE QN=nnn OPENED.           (2)
REQUESTED SECTION nnnn.             (3)
FOUND SECTION nnnn.                 (4)
```

The QN number on the LABEL and LISTLB control statements is assumed to be decimal (unless suffixed with a 'B' post-radix). The first two dayfile messages display the QN number in decimal, the last two in octal. I propose changing 1MT (who issues the last two messages) to display the QN numbers in decimal rather than in octal. This should provide consistency with respect to how the system displays multi-file section numbers.

As a bug-fix, I also plan to change the first two DAYFILE messages to display all four digits of the QN (rather than the last three) and to have these messages conform to the others.

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SO YA THOUGHT YA MIGHT LIKE TO READ YOUR TAPE? - by J. J. Drummond

You say that you tried to read your tape and that you got an "ON THE FLY" error message on every block? And your backup tape generates 600 pages of "POSITION LOST" messages? And it's costing you more to print your DAYFILEs than it is to run your jobs? Is that what's troubling ya binky? Well, read on...

In addition to supplying us with new tape drives, CDC also supplied us with a number of new tape problems. The most annoying are those that spew-forth thousands of DAYFILE messages. Since messages issued by the operating system are not counted against a jobs message limit, there is no protection against a hoard of messages. I propose to solve this problem.

One solution would be to have 1MT decrement your message limit for each message it issues. Another (and more general) solution is to have MTR decrement your message limit for each message that ANY PP issues for your job. I propose to implement code to accomplish the latter solution. One potential disadvantage of this approach is that messages that previously did not count against the user's message limit will now decrement it. This may cause some jobs (that are now near the limit) to stop working. This, in turn, might require raising everyone's limit.

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MORE ON TEXT - by D. Germann

I propose to install control statement callable entries in the CALLPRG index for two text processing programs from Perdue. The first program, TXTFORM, is a text formatter. The second program converts the output of TXTFORM into a file that can be routed to a line printer; it is a companion to TXTPLOT (see DSN 6,4 p. 33) and is called TXTPRIN.

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LET'S USE THE 16 WORD PFC - by K. C. Matthews

In NOS release 5 Control Data changed the size of the permanent file catalog entry from 8 words to 16 words. A modset was also provided which allowed release 4 systems to use a 16 word catalog entry. I propose that UCC change from an 8 to a 16 word catalog entry on Labor Day Weekend - on Sunday, August 31.

As part of the change, we have to dump and load all permanent files in our system - including all removable private packs. Also, locally written programs which look at the catalog entry must be changed. The programs I can think of are RFM, CATLSYS, DUMPPF, ARCHIVE, and COPYCAT.

Why change to the expanded catalog entry? My primary reason is to make us compatible with the Release 5 sites (like MECC). In the 16 word catalog entry, the subsystem field is finally removed from the middle of the user control word. Also, if we ever upgrade our CDC systems to a new level of NOS this change will be required. The dumping and reloading of all files also presents us with a new opportunity.

Currently, all but 1 of our private removable packs are DI-1 packs. When we make the catalog entry change, I would also like to change all of those packs to DY-1 packs. A DY-1 is our half-length TRT version of the DI-1. It uses 1/2 the central memory for the disk TRT, and also gives a little more storage on each disk. (This is because CDC only uses 18 of the 19 disk surfaces on a DI disk equipment). We will also change the default pack type at UCC from DI-1 to DY-1, so that most removable pack users should see no change.

If we decide now to change on August 31, that gives us plenty of time to warn users of DI-1 packs of the upcoming change. A warning is also needed to any user who has programs that look at the permanent file catalog entry.

SYSTEM MAINTENANCE: People and Procedures

Callprg and Library Tape News - by M. Riviere

On March 23, the Library Tapes and Callprg indices on all computers were modified at the request of Mike Frisch in order to accomplish the library reorganization which has been described ad nauseam in the DSN.

Jeff Mundstock replaced the current version of M77 with the future version on all mainframes.

The next set of Library Tape and Callprg modifications will take place on 15 April. Modifications for that date should be submitted on or before noon on 10 April.

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Cyber 74/172 Deadstart Dump Analysis From Friday, 7 March through Thursday, 20 March - by K. C. Matthews

Sunday, 16 March

23:00 Cyber 74
PPU program 1SB stopped in a PP. The problem was due to the plotter.

Tuesday, 18 March

14:25(DD2011) Cyber 172
A CPUMTR error exit occurred. The running exchange package had two words which seemed to belong to CPUMTR, and the rest seemed to be part of MAGNET's exchange package. PP0 (MTR) seemed to be full of a TRT - no MTR code was found.

Thursday, 20 March

15:07 (DD2015) Cyber 172
TELEX's helper 1TA hung at control point 1. Don Mears is looking at this crash.

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TELEX and TELEX PDP11 Crash Analysis (3/10 to 3/23) - by D. W. Mears

| | |
|---|---|
| 3/20 15:07 | 1TA hung on the Cyber 74 when TELEX requested 1TA to schedule a rollout FNT entry which had no equipment or first track. I am still trying to find out why TELEX generated the bad request. |
| 3/17, 3/18, 3/19, 3/20 | TELEX on the Cyber 172 reported recovered front end errors. It is impossible to determine from the message issued if the link is malfunctioning or if the PDP11 program is failing to respond to a request from the Cyber within a reasonable amount of time. I will be improving the error messages to eliminate this ambiguity. |