UNIVERSITY OF MINNESOTA COMPUTER CENTER
Deadstart Systems Newsletter

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NOTICE OF CHANGES TO THE SYSTEM

Tom Lanzatella corrected UQM so that the command DISABLE,LOWRATE does not turn off lowrate accounting.

Don Mears installed the following changes.

1) The SWITCH command was changed to disallow switching of PLOT files.

2) Program ODV was corrected to properly change job origins in the system sector when a file is diverted to a central site.

3) A problem with interlock on job name in the 8090 IMPORT package was corrected.

4) The EXPORT DIVERT command was changed to not divert files assigned to the EXPORT control point.

Tim Hoffmann contributed the following changes.

1) Processing of the SF= option in STIMULA was corrected for the case when the file specified is not found.

2) Program STIMULA was changed to allow scripts with single quotes when no tasks are defined.

3) The status of LOWRATE EXECUTION and LARGE JOB EXECUTION will be reflected in the E,P-display and in the USERS/DSD FLAGS display.

4) The mod which ensures that dayfiles have system sectors was converted from Nos 1.2 to Nos 1.3.

Marisa Riviere repaired WRITEUP so that retrieval of tape resident writeups works correctly. Marisa also changed the MFL= entry point in CALLPRG to an RFL= entry point. Marisa also corrected the date field in the RFCAT report.

Bill Sackett delivered the following changes.

1) The MULTI facility developed by MECC was installed. The feature is comprised of two large modsets (DSDW and MUTERM) two programs (SYSTASK and MUTERM) and two common decks (COMCMUU and COMCMUM).

2) Bill converted the 1AJ modset, LDREL, which provides the LDR load to subcontrol point feature. This feature is used by multi.

3) A local or rollout type file will always be placed on a device which has at least X free tracks. When several devices have fewer than X free tracks due to large numbers of permanent files,response time can be hurt because only one or two disk channels are used for all local and rollout files. This situation recently developed on the Cyber 720. The threshold X has been lowered from 1/8 to 1/32 of a device.

4) Program 1AJ was fixed so that program loads of ECS-resident CPU programs though the DDP actually work.

5) The user selectable loader code in 1AJ was altered somewhat to make space for #4 above.

Jeff Drummond installed the following changes.

1) A scope-blanking problem in E,P-display processing was corrected.

2) The DSD DISMOUNT command was repaired for the case when the first tape unit in the EST is busy.

3) The DSD B-display was changed so that ** is displayed on the second line of the B-display entry when a storage move is in progress.

4) Program SETCORE was corrected for the case when no parameters are specified and ECS is assigned.

5) Program TRN was corrected to update the mass storage limit when releasing files to queues.

Brad Blasing installed his proposed change to made the system schedule jobs around a hung control point (see DSN 6,2 P. 21). Brad changed the USERS/DSD A-display so that it prints the entire display buffer.

SYSTEM MAINTENANCE: People and Procedures

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

The following proposals were discussed.

1) John Vogel's proposal to change PURGE so that files specified are echoed on OUTPUT for terminal users was rejected (see DSN 6,2 P. 20). We thought

that users should either set their terminals in full-duplex or examine their dayfiles if they do not trust the terminal or phone lines.

2) Brad Blasing's proposal to make the system schedule around a hung control point was accepted (see DSN 6,2 P. 21).

3) Jeff Drummond's proposal to add COPYU options to select 8 lines-per-inch and auto-page-eject was approved (see DSN 6,2 P. 21).

4) Discussion of the lengthy library reshuffling proposal led to the following conclusions.
   a) The V= form of the FETCH command will be used.
   b) Callprg will not select a default version of any package. All Callprg package maintainers will be responsible for setting up default versions. This is done with index entries which do not have V= parameters and have MS= parameters which identify the version.
   c) The confusing setup for using prefixes to identify past and future versions of libraries was dropped. Individuals in charge of each library will take care of providing the correct version.
   d) A significant change is that Callprg will now abort when a package is not found. Package maintainers should be particularly aware of this change.

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CALLPRG AND LIBRARY TAPE NEWS - by M. Riviere

During the past weeks the following modifications took place on the Cybers 74/172/720 Library Tapes:

Jim Mundstock changed MNF and TSF by new versions where some small problems have been corrected. Jim also added M77, its library, M77LIB and the compiler's debug file, ZZZZZ77, to the Library Tape. Up to then, M77 was offered as a CALLPRG package.

Bill Sackett provided a new version of BASIC and its library, B33LIB. In this new version, Bill corrected some errors existing in the previous one. The previous version however, became a Past Callprg package.

Steve Reisman replaced COBOL5 on the Cyber 720 with a new version reassembled specifically for this machine. Up to the replacement, COBOL5 on the Cyber 720 was identical to the version used in the Cyber 74. The new version uses the compare move features of the 720 and it is more efficient in that computer than the previous one (smaller and approximately 10% faster).

I replaced SYSLIB with a new version that contains the Loader routines section updated up to the 501 CDC PSR level. The update was provided by Brad Blasing.

With respect to the Callprg indices, last week's modifications consisted of:

The introduction of an entry for the Future version of PASCAL, requested by Andy Mickel. The modification was implemented only on the Cybers 74/172.

The introduction of an entry for a Future version M77, requested by Jim Mundstock.

The removal of two no longer used entries for BASIC (FETCH and BAS61) and the introduction of a Past entry to retrieve the previously used version of that compiler. These modifications were made at the request of Bill Sackett.

There are no Library Tape or Callprg index modifications scheduled for February 19.

The next set of Callprg and Library Tape modifications will be taking place on March 4. Modifications for that date should be submitted before noon, February 21.

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ABOUT SOME PAST AND FUTURE ENTRIES IN THE CALLPRG INDICES - by M. Riviere

I will be implementing several modifications to the CALLPRG program in order to fulfill the requirements of the new library arrangement. All these modifications where proposed, discussed and approved by the System's group and the Callprg/Libraries committee.

Full descriptions of the changes and the reasons for them are included in several DSN articles published during the past two months.

This article deals mainly with the part of the modifications which introduces a V parameter to be used in the CALLPRG index and or the user's statements. The V parameter directs Callprg to select a specific version (or any other qualification type) of a Fetch, Past or Future package. For example, a statement of the form: FETCH, IMSL/V=MNF; will cause Callprg to retrive only the version of IMSL that has an index entry of the form: IMSL, TY=FETCH, V=MNF. Callprg will abort with a PACKAGE NOT FOUND error message if a Fetch entry for IMSL with a matching qualifier in the V parameter does not exist.

The V parameter will also apply for Past and Future versions of Callprg packages.

Contrary to what it does now when a Past or a Future package is not found, Callprg will be aborting with the message PACKAGE NOT FOUND. That is, Callprg will handle missing Past and Future entries as it does now on non-existant Fetch entries.

The need to abort for non-existant Past and Future packages is because there may be more than one current system default version of a package - one associated with each qualifier.

The abort condition can be overriden by:

1) The use of a no abort parameter on the user's card. For example: PAST, IMSL/V=,MNF,NA; will not abort the job in case that the entry for a Past MNF version of IMSL is not found.

2) The inclusion of dummy CALLPRG entries for some Past or Future packages

that, although they are not available now, they were available until shortly ago may be again available in the future.

The first choice will require some user education. The NA parameter should be suggested for usage, when applicable, through UCC newsletter articles that reference the availability of Future versions of Callprg packages, Sysnotes, ect.

The second choice is to be selected and implemented by any one maintaining index entries who is aware of the existance (or possible existance) of user jobs that permanently include Past or Future statements for packages that are not currently available. That is, perhaps, the case of products whose Past or Future version are often but not always available. For example, an index entry of the form:

FTN, TY=FUTURE, MS=$ FUTURE VERSION WILL BE AVAILABLE SOON$.

will let the user's job having a statement of the form FUTURE, FTN. not abort and the informative message will be printed.

The Callprg modifications will go into the System on the March 13 tape. Please review your index entries and add messages-only-type entries for the products that you consider may need them.

It will be a nuisance to add entries for every product, of course, but by adding the entries for most commonly used products we may be able to prevent many user's jobs from aborting when they did not before.

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Cyber Deadstart Dump Analysis From Saturday, 19 January - Thursday, 7 Feburary - by J. J. Drummond

Monday, 21 January

10:50 Cyber 74/172

ECS failed. The CDC engineers fixed the problem and a level 0 deadstart/preset was then required.

Tuesday, 22 January

04:20 (DD2016) Cyber 172

The left screen went blank when the system was checkpointed at the end of operations. This is a MAGNET/DSD problem with the E,P display that is fixed on the next tape (AY system).

Wednesday, 23 January

10:55 (DD2022) Cyber 74

The system was hung up. Don Mears analyzed the dump and uncovered that while PFM was loading an overlay from ECS the DDP went out to lunch. Also, a circuit breaker was tripped at about this time.

14:14 (DD2023) Cyber 74

1CJ hung. A level 3 deadstart failed and a level 0 deadstart had to be performed. Don Mears analyzed the dump and determined that a rollout FNT/FST entry had been written in words 4 & 5 in CMR. Don suspects a 1TA problem.

Thursday, 24 January

10:17 (DD2024) Cyber 172

C1O hung when its internal track buffer emptied prematurely. It was later determined that this was caused by a conflict between a release 5 PSR added on the latest tape and a local mod that connected the same problem (but in a different way). C1O was fixed by Jeff Drummond on Tuesday morning.

Monday, 28 January

14:21 (DD2025) Cyber 172

C1O hung. Same problem as on 24 January.

14:50 (DD2002) Cyber 172

1MA hung. Don Mears and Kevin Matthews analyzed the dump and uncovered a strange inconsistency. 1MA hung on a track with the EOI bit set but was unreserved!

Wednesday, 30 January

17:39 (DD2003) Cyber 172

1AJ hung while trying to advance a DMP card. The problem appears to be duplicatable but unlikely to occur often. Kevin Matthews will investigate.

01:55 (DD2004) Cyber 172

Same problem as above.

Friday, 1 February

08:10 Cyber 172

System hung-up on a disk channel. The CDC Engineers were called and fixed a problem with Channel 6. No dump taken.

Tuesday, 5 February

12:19 (DD2003) Cyber 172

CPUMTR exchanged to word 0 in CMR. Analysis of the dump by Don Mears is inconclusive. It looks as though one of the CPU's lost the monitor-mode bit. A Level 3 deadstart was done.

14:01 (DD2004) Cyber 172

UQM was reporting erroneous ECS errors and failing to transfer files in the shared queues to the Cyber 74. Analysis of the system by Jeff Drummond revealed that word 14 of CMR (the EFNT pointer) was apparently not recovered after the Level 3 at 12:19. An attempt to correct the problem by Jeff Drummond only made it worse and a Level 0 was required.