

UNIVERSITY OF MINNESOTA COMPUTER CENTER
Deadstart Systems Newsletter

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NOTICE OF CHANGES TO THE SYSTEM

Kevin Matthews removed some debug code from RESEX which caused a PACK FOUND message whenever a removeable pack request was satisfied.

Don Mears contributed the following changes.

- 1) Error messages related to the PDP-11 front-end issued by 1TD were changed to be more specific.
- 2) Two new BATCHIO Decwriter commands were added. The I/O equipment operators can now enquire as to the status of forms code jobs.
- 3) Further space savings were gained in 1TD by deleting auto-terminal type selection at login-time. This feature is useful only to correspondence code terminals, which we no longer support.
- 4) The BATCHIO Decwriter equipment will no longer be turned off on an output buffer full condition.

Tim Hoffmann installed the following changes.

- 1) The REP option on the ROUTE command (repeat count) will now work for Plot files.
- 2) Parameters PO and P1 were added to the QUEUE command. These are synonyms for LOWRATE and NOFRILLS respectively.

- 3) The MQNC account file message was installed. This message records a job's original job name (see DSN 6,6 p. 45).

Marisa Riviere repaired an error in CALLPRG which caused an occasional blank line to be issued to the account file.

Bill Sackett installed the following changes.

- 1) A small modification error stemming from the R3 to R4 conversion was corrected. This minor error is notable because it caused the CM component of the SRU calculation in CPUMTR to be taken as a small constant rather than the true CM usage. Users with large memory, CP bound jobs will be most affected by this change. The correction was actually installed last week.
- 2) The field size in the VALIDUZ file for the SRU limit was increased to 15 bits from 12 bits. Additionally, SRU limits specified in the VALIDUZ file are now taken in units of 1 rather than units of 10.
- 3) A bug in LTA processing of SRU limits wherein ten times a users validated limit would be granted when a user entered S,nnn in response to *SRU LIMIT* if nnn exceeded the users validated limit was corrected.
- 4) A space saving change was made to DSD by moving DEBUG and ENGR command processing out of resident. This change was necessary in order to install the W-display for MULTI.
- 5) Changes were made to CPUMTR and LUD (ECS allocation PP-routine) to ensure that only CPU 0 could be used by a job which has user ECS assigned. On a dual CPU machine without DDP, ECS is accessed only through CPU 0. A ECS user who requests CPU 1 can cause an inequitable division of CPU usage.

Jeff Drummond installed the following changes.

- 1) Multi-file section number processing in LMT was changed so that QN in expressed in decimal in all dayfile messages (see DSN 6,6 p. 46).
- 2) Program EXPLIB was changed so that when a pack name is entered into the express library, a pack type can be included (DI, DJ).
- 3) A bug in COPYU where carriage control characters could get lost on the output file if the output file was not prepositioned was corrected.

Jeff installed the following corrective code from R5.

- KRA615\$ - Add assembly time checks into TELEX.
- LPT2\$ - Repair LPT (line printer test) errors.
- DEMUX1\$ - Efficiency enhancements to DEMUX.
- BAT1\$ - Repair minor errors in BAT.

- KRA625\$ - Change end-of-set status (on multi-file tape positioning) to be non-fatal and change LISTLB to use this.
- KRA627\$ - Documentation update in COMCARM and COMCPOP.
- KRA638\$ - Change LSP to not rollout a TXOT job with output pending - a process of marginal value.
- CCPT\$ - Change COMCCPT to no longer assume that a prefix table (7700) is greater than 10B words long.
- CMVE1\$ - Change COMCMVE to set B1 equal to 1 if the symbol B1=1 is not defined.
- PCLD1\$ - Change COMPCLD to distinguish actual entry points from special entry points (like RFL=) in the CLD.
- CIO4A\$ - Ensure that direct access file size limits are not enforced for SSJ= jobs.
- CPM6\$ - Ensure that the override flag is cleared whenever a new error exit address is set.
- 1TA9\$ - Prohibit 1TA from issuing spurious FILES LOST messages.

Brad Blasing installed the following changes which are predominantly R5 corrective code modsets.

- S03361\$ - Correct DSD so that the scopes do not blank during deadstart if a +,-,) or (is entered.
- CPCOM8\$ - Correct FILEC macro to assemble correctly in relocatable capsules.
- DSD5\$ - Correct DSD to make the "n.aa+w" memory change command work if aa is left off and also ensure that aa is within the field length of control point n.
- MTR1\$ - Prevent storage move error if two PP's issue RSTM (request storage) at the same control point.
- 1RI6\$ - Clear WAITING FOR STORAGE message when 1RI grants a storage increase on a rollin.

Paul Thompson changed DUMPPF to issue a message indicating the number of protected files skipped.

PROPOSED CHANGES TO THE SYSTEM

Remove GETVSN - by T. W. Lanzatella

I propose to eliminate the GETVSN macro and its associated code in UFM. The reason for this suggestion is that the macro is used in only one place in the entire system that I know of. I doubt whether any Callprg packages or user programs use the function. The function is used by DUMPPF in order to produce a report which indicates what permanent files are on what tape when performing end-of-month permanent file archiving. Tape VSN can be easily obtained by reading the UDT in MAGNET's field length by any system origin or SSJ= job using RSB. If this is not acceptable, the facility can be reincarnated as a FILINFO option.

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Consolidated Accounting - by G. Jensen

- 1) In anticipation of the production of an integrated accounting system for the Cybers and Meritss, I would like to propose the inclusion of the machine identification on the account dayfile deadstart/recovery message. Two examples are:

- ABSY,^KØID,ØØYY/MM/DD.

- ABSY,ØID,ØL,ØYY/MM/DD.

where ID = machine ID(64,72,74)

L = recovery level and Ø = blank.

This would allow the accounting programs, as well as anyone else who reads the account dayfile to know unquestionably from which machine it originated.

- 2) The possibility exists that we may sometime decide to run the machines on a 24 hour a day schedule during certain periods. Some method of properly accounting a job that is "split" between accounting periods must therefore be available. This "split" job would be created when a job is running at the time the last account dayfile dump is performed for a particular accounting period. I therefore propose that the original user number of a job be appended to the ending SRU message. An example is:

^{AS}
AESR,ØØØØØØØØ1.234UNTS.ØABC1234.

This would allow a fragmented job to be accounted no matter where it may be split.

SYSTEM MAINTENANCE: People and Procedures

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

The following proposals were accepted or rejected.

- 1) Tim Hoffmann's proposal to change the ENQUIRE JN option to allow a full seven character job name specification was accepted (see DSN 6,6 p. 45).
- 2) Tim Hoffmann's proposal to install a new account file message which specifies a job's original job name was accepted (see DSN 6,6 p. 45). This message will be useful for jobs which begin execution, are requeued and then dequeued with a new job name.
- 3) Jeff Drummond's proposal to change dayfile messages referring to multi-file tape operations so that the QN is always decimal was accepted (see DSN 6,6 p. 46).
- 4) Jeff Drummond's proposal to change the way message limits are enforced in order to deal with the problem of voluminous dayfiles produced when a user attempts to read a bad tape was accepted in principle but rejected as stated (see DSN 6,6 p. 46). We all felt that we ought to have a tape-specific error message limit.
- 5) Dan Germann's proposal to add two new text oriented programs TXTFORM and TXTPRIN received a qualified approval. We were concerned about the availability of documentation (see DSN 6,6 p. 47).
- 6) Kevin Matthew's proposal to convert to the 16 word permanent file catalog entry on 31 August was accepted.

Arnie Nelson presented a description of the new RJE terminal, its components and their cost. He reported that terminal software is nearly complete, lacking only finishing touches on the "human engineering." The terminal will accomodate upper/lower case characters and will soon be able to handle floppy disks.

Larry Liddiard reported on next year's equipment acquisitions. The following items were mentioned.

- 1) 2 FMD disks and controllers (June/July)
- 2) 3 RJE stations
- 3) 1 card punch
- 4) 1 11" VERSITEC PLOTTER
- 5) 1 679-6 tape controller.

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Callprg and Library Tape News - by M. Riviere

On April 1 and 2, Library Tapes on the Cybers 74/172/720 were modified with the addition of S2K and the replacement of PASCAL and M77 compiler and their associated libraries.

The S2K package was provided by Steve Reisman and is a reassembled version of the former S2K and S2KIA Callprg products.

The PASCAL compiler and its library, PASCLIB, were replaced with their future versions. Additionally, the Callprg indices on the three machines were modified in order to offer the then current versions as past products. These modifications were requested by Andy Mickel.

Program M77 and its library, M77LIB, were provided by Jim Mundstock. Jim had several improvements made on the compiler and the library.

The next set of Callprg and Library Tape modifications take place on April 29. Modifications for that date should be provided up to April 17 by noon.

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New Location for MISCPL - by M. Riviere

I have placed a copy of MISCPL, the program library containing miscellaneous staff sources, on the UCC pack. Up to now, MISCPL was residing in the SYSTEM pack. UCC is up more often than SYSTEM and the new location of the library makes it easier to access for everybody.

The MISCPL library resides on my account number, YZE6081. The library can be accessed only by the staff members that are validated to read it. If you have or if you would like to have, the sources of your programs saved on MISCPL and you are not validated to read it, please contact me for validation.

The contents of MISCPL are mainly sources of several Callprg packages maintained by the System's Group, modifications to CDC products that are not contained in WPL such as Compass and the Loader, some installation decks, and sections of the Fortran libraries developed by the System Group, such as CALLPFM and PROCPAC.

I update MISCPL approximately once a month and I keep old copies for approximately half a year.

If you have any product that seems to be suitable for MISCPL please contact me to discuss about including it in the library. MISCPL is a convenient and safe place for keeping those sources that "who knows where they may be when we may need them."

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Cyber 74/172 Deadstart Dump Analysis from Friday, 21 March through Thursday, 3 April - by K. C. Matthews

Friday, 21 March

08:00

Cyber 74

The system hung soon after deadstart. The Cyber 74 was accidentally left after maintenance with some margins set. This was quickly corrected.

Saturday, 22 March

The system did not come up until 10:30 a.m. due to some problems in the installation of the new motor generators. Twice during production time (and at least twice afterwards) the systems went down due to power problems.

Saturday, 20 March

At 7:15, the machines went down due to motor generator problems. The system was up again at 09:40, but down again at 14:30. These problems were left over from the change of the previous weekend. The machines also failed Sunday during system time.

Thursday, 3 April

15:59 (DD2005)

Cyber 74

The system hung with a disk error on one of the new 885 disks. An error in our 885 code was discovered after 6 April, and the problem was corrected. This problem, however, caused three more crashes before the problem was resolved.

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Cyber 170-720 Deadstart Dump Analysis (3/11-4/6) - by R. A. Williams

<u>Date</u>	<u>Description</u>	<u>Tape</u>
800314	1RI hung for unknown reasons. There has not been time to perform further analysis.	DD17
800322	The system hung once and came up late due to problems with the new motor generator equipment.	N.A.
800330	The new motor generator equipment failed again causing the system to go down.	N.A.
800402	The operator master cleared one of the 6676 multiplexers while attempting to fix a problem with the Cyber 74 line printer. This mistake caused the system to go down.	N.A.
80407	The new motor generator equipment failed again causing the system to go down.	N.A.

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TELEX and TELEX PDP11 Crash Analysis (3/24 to 4/7) - by D. W. Mears

4/1 11:10 The TELEX link on the Cyber 172 failed to return a full after being functioned for a read. TELEX automatically recovered.

4/6 16:00 The 2551 was down all night due to a power supply problem. Most of the ports were working by Monday morning 4/7, but all the ports in the 2551 expansion cabinet remain down.