

UNIVERSITY OF MINNESOTA COMPUTER CENTER  
Deadstart Systems Newsletter

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NOTICE OF CHANGES TO THE SYSTEM

NOS Changes

Tom Lanzatella installed his proposed change to the format of the ABUN message removing the LOWRATE field and issuing a new account file message ABRC with format: ABRC,xx. (see DSN 5, 1 p. 3). Additionally, a ABRC message is now issued for time sharing users who login during low rate hours.

Kevin Matthews installed a change to ØDV rendering the version on WPLNOS identical to the version in the system.

Don Mears repaired a longstanding error in BATCHIO wherein queue files were occasionally and mysteriously disappearing. Don also altered program LSB : to add the jobname to the Q-line of the banner page for IMPORT.

Tim Hoffmann reinstalled his change to CPUMLD, the CPUMTR preloader, which causes CPUMTR to use the CMU if two CPU's are available. After a previous attempt at installing this change, we couldn't deadstart the CYBER 74.

Bill Sackett repaired RESEQ to assume TERM,TTY rather than TTYD.

Jeff Drummond installed the following changes.

- 1) Jeff installed his proposed changes for CCL support (see DSN 5, 1 p. 3).
- 2) Jeff repaired a longstanding error in multi-file tape assignment. Previously (since 20 August) S and L format tapes could not be assigned except for the first file (QN=1). This error was caused by a local mod (MULTI) and by a change installed by CDC at PSR460 which altered the interpretation of the MLRS field in the FET.
- 3) Program BLANK was corrected to distinguish MT/NT conflict situations. Previously, BLANK would allow statements like BLANK(VSN=xy,ID=abc,MT,CV=EB) and

simply label the tape as 7-track. Cases like this will now result in the message MT/NT CONFLICT. The situation has also been PSRed.

- 4) Program MODVAL was corrected for the cases when a UN=xxx option is specified on a SETVAL or PASSWOR command. This error surfaced after password hashing was installed.
- 5) Jeff installed a new version of COMSPAS, the PASCAL run-time system definitions.

Brad Blasing installed the following changes.

- 1) Brad changed the DSD P-display so that the PPU P-registers are now displayed. Additionally, hung PPs will now be intensified.
- 2) Program ACCFAM was altered to skip field length validation for users with CICM (infinite field length) permission. The few staff members with this bit may have noted that after converting to NOS, a batch job could not be run without a CM parameter on the job card. This is no longer the case.
- 3) Brad repaired a disastrous error in PFM processing of the CATLIST request. PFM was not checking for a negative IN pointer in the requester's FET. The consequence of this is that a user could deposit a copy of his catalog entries practically anywhere in memory. The situation has been PSRed.
- 4) Brad repaired a similar problem in CPM processing of the VERSION macro. Program CPM would not allow the version name to be returned in the last 100B words of FL but would allow it to be returned to the 100B words preceding RA. This situation has also been PSRed.
- 5) Brad installed a R4 version of COMPASS with changes proposed in DSN 4, 24 p. 194. This version has a new option PD=6 or 8 which specified that the listing is to be printed at 6 or 8 lines per inch.

Steve Collins installed a new version of XEDIT with unspecified changes. Steve also repaired an error in processing of procedure files in NOTICE/NOTIFY which appeared with the ill-fated attempt to install changes proposed in DSN 4, 14 p. 111. We have been running an old version of NOTICE/NOTIFY for a month.

#### KRONOS Changes

Tim Hoffmann corrected his feature in MODVAL so that a UN option specified on a LIMITS command actually works, assuming the user has CMUC.

Tom Lanzatella installed the NOS version of RESEQ into KRONOS. This is necessary in order to accommodate the new version of BASIC.

Bill Sackett installed the identical change to RESEQ described above. Bill also changed the amount of field length scheduled when a user enters the PASCAL subsystem to 45K from 52K.

Jeff Drummond installed a new version of COMSPAS.

Brad Blasing installed identical changes to PFM and CPM described above.

Steve Collins installed changes to XEDIT and NOTICE/NOTIFY as described above. Steve also installed extensive changes to CPORT, the utility used to generate the PORT file.

SYSTEM MAINTENANCE: People and Procedures

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

- 1) The following proposals were rejected or accepted.
  - a) Brad Blasing's proposal to install COMPASS from R4 was approved (see DSN 4, 24 p. 194).
  - b) John Larsen's proposal to install NOTE from NOS R4 was approved (see DSN 5, 1 p. 2).
  - c) Jeff Drummond's proposal to install code to support CCL was approved (see DSN 5, 1 p. 3).
  - d) Brad Blasing's proposal to change CYBER loader to preset core to a negative indefinite value was approved. Since we already know that this change will affect some users, a media blitz warning users of the change was advised (see DSN 5, 1 p. 3).
  - e) Tom Lanzatella's proposal to change the way low rate jobs are indicated in the account file was approved (see DSN 5, 1 p. 3). The format of the new message was changed to: ABRC, ~~xxx~~, where xx will initially be 00 only.
- 2) Larry Liddiard discussed the following items.
  - a) The Lauderdale terminal room is now a no smoking area.
  - b) Bids for the new 885 disk (7155 controller) are out.

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VIM 29.5 LPC and OSC Highlights - by Mike Frisch

As chairperson of the VIM user group's LPC (Languages and Processors Committee), I could only attend the LPC and OSC (Operating Systems Committee) meetings. N. L. Reddy of MECC attended the DCC (Data Communications Committee) meetings so check with him for details in that area. The following is just highlights. More extensive notes will be available from me, shortly.

The main items of interest to us in LPC were in CDC's report. Common Products Release 6 this month includes new features for BASIC 3.3, ALGOL 60 version 5.0, and common decks that are common for both NOS and NOS/BE. In late March, F45 (the FTN 4 to FTN 5 conversion package) will be released as a separate package under FTN 4. Release 7 is scheduled for July and includes ALGOL 5.1, BASIC 3.4, Cyber Interactive Debug 1.1, SYMPL 1.4, UPDATE 1.4 (enhancements for CDC's 8-bits-in-12 ASCII extended character set), Cyber Loader enhancements (for the post mortum dump (PMD) package i.e., MANTRAP - and for FTN 5), FTN 5 itself with its library, and the PMD package for FTN 4 and FTN 5. Future plans (mid-1980)

include interactive PMD (which we already have in our MANTRAP) and possibly some extensions to FTN 5 (DO-WHILE, INCLUDE, IMPLICIT NONE, and bit manipulation subroutines) being requested as a military standard by the U. S. Department of Defense.

In OSC, again the CDC report was all that was of importance. (The NOS working group spent a lot of time on desired NOS features, but those are not even at the voting stage.) NOS PSR 485 will be out in January. The delay from December is to solve a Telex/IAF performance problem introduced at PSR 472 in 1T0.

NOS Release 5 will be out in June with corrective code in September and December. Main items of interest to us are multi-mainframe performance enhancements, Common Products Releases 6 and 7, permanent file enhancements (see PSR 477 System Release Bulletin - SRB), rotating mass storage deadstart and common deadstart procedure, ECS diagnostic improvements, Common Maintenance Library (CML) enhancements, 885 Fixed Module Disk (FMD) support and 8-bits-in 12 ASCII extended character set support for line printers. Future plans for NOS include multi-mainframe enhancements (common I/O queues, host-to-host link, file/job staging via NAM - Network Access Method, interface to a new product called LCN - Loosely Coupled Network - which uses NAM, without requiring the 2550 or ECS, but involving a Network Systems-like coax cable and controller), File Name Table organization, job administration enhancements, security enhancements, RMS allocation improvements, ANSI label support, performance monitor standardization (a new product that might be separately priced), and EST (Equipment Status Table) expansion to allow more disks and tapes. 885 disk full-tracking can only be done on Cyber 170's (not 70's) and requires a fix to available in mid-1979, probably as a Field Change Order (FC)).

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Cyber 74 Deadstart Dump Analysis from Monday, 8 January to Sunday, 21 January -  
by K. C. Matthews

Monday, 8 January

17:15 (DD-35)

Cyber 74

PP program LCK hung because one of the TRT's it was attempting to write to the disk was bad. This was caused by junk being written over low core by PFM. Brad Blasing has fixed the bug in PFM which caused the problem.

Monday, 15 January

20:20

Both Machines

The Cyber 74 was solidly bad. All jobs were aborting with the "CPU ERROR EXIT" message. The problem eventually turned out to be a bad memory stack on the Cyber 74.

While this was happening, a label error occurred on pack DN73. DN73 is a scratch and shared queue device, but holds no permanent files. We tried to initialize the device at deadstart time, but even that failed. The 172 was unable to access the disk. It turned out that the disk was still reserved by the Cyber 74. Clearing the reservation was easy, and then the 172 deadstarted without problems. We suspect that a bad label was written to the disk from the bad memory on the 74.

Thursday, 18 January

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18:15 (DD-22)

Cyber 74

A label error occurred on device DN30. This device holds direct access files for all user indices and some queue files. We were unable to read the label and TRT from the disk. This is surprising, since at UCC we keep copies of the label at the start and the end of the disk. Disk errors occurred whenever we tried to read the label from either location. But the rest of the disk looked O.K. Rewriting any of the bad sectors (with junk) removed the disk error; the junk could be reread without problems. We reloaded DN30 to a different disk pack and saved the original disk for the CDC engineers to examine.

Friday, 19 January

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The 172 was late coming up because there was initially a label error on one of its drives. DN63 holds permanent files and the dayfile, account file, and error log. When we were able to examine the disk, new copies of the above three dayfiles had been started on the first three trades of the disk. There was probably some sort of error on DN63 which we cannot determine now because the dayfile was started on the label. We are fixing the dayfile recovery routines so that they will hang in this case rather than start a new dayfile on a bad disk.

15:35

Cyber 74

DN30 was bad again. There were also errors occurring on user jobs on that pack. We deadstarted and reloaded the pack. It is now mounted in a different location since we suspect its drive of having intermittent problems. Pack UCC was mounted on the suspicious drive starting on 21 January. The Mass Storage Test was run for 15 hours on the pack that went bad, remounted on the bad drive, and no errors occurred. This doesn't look good.

Due to a lack of adequate documentation, the 172 was brought down for a while to free up pack UCC. It turns out that this was not necessary. We will attempt to upgrade the disk down documentation in the next month or two.

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6400 Deadstart Dump Analysis (1/8 - 1/21) - by R. A. Williams

<u>Date</u>	<u>Description</u>	<u>Tape</u>
790120	The system hung. A central memory error was discovered that caused byte 0 to be dropped throughout core.	Fixed