

UNIVERSITY OF MINNESOTA COMPUTER CENTER
Deadstart Systems Newsletter

24 July 1979

Vol. 5, No. 14

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NOTICE OF CHANGES TO THE SYSTEM

NOS 1.2 Changes

Kevin Matthews altered program PDUMP to reflect the user number used to account permanent file maintenance activities. The new user number is PF. PDUMP is a program used to format and schedule PFDUMP commands which perform incremental dumps. Kevin also changed ODV so that large print files bound for site EA (Exp. Eng.) are automatically switched to site EX. These files must be manually switched back to EA in order to print.

Tim Salo added site 3C to SUPIO.

Don Mears repaired interlock and system sector update during SWITCH processing in 1DU. Don also changed PDP-11 processing in 1TD so that when the PDP-11 fails, the last function issued is displayed in the dayfile.

Steve Collins contributed a new version of XEDIT with the following changes.

- 1) Tabs are allowed up to column 160 rather than the current right margin value.
- 2) Issue truncation messages for line entered in INPUT mode.
- 3) Give proper EXPLAIN entries for error message ARGUMENT ERROR.
- 4) Print the message BAD FILE NAME if an erroneous file name is specified when entering XEDIT.
- 5) Allow the EDIT command while in creation mode.

Jeff Drummond provided a version of BLOCK/UNBLOCK for inclusion in the NOS 1.2 (see DSN 5, 11 p. 99). BLOCK/UNBLOCK is a combination of two programs written by Tim Salo, BLOCKER and REBLOCK. The new utility has a unified parameter structure.

NOS 1.3 Changes

Tom Lanzatella converted the modsets used to restrict user jobs to a single time limit error and to produce an exchange package dump after encountering a time limit. Tom also modified EXAMINE to determine 9-track tape density independent of any user specification. This change was necessary because of the soon-to-arrive 679 tape units.

Tim Salo supplied new versions of SUPIO and EXPORT with unspecified changes and corrected QAP so that EXPORT would work properly.

Kevin Matthews applied changes to the mass-storage drivers rendering 885 disk support. Most of these changes were gleaned from a prerelease of NOS 1.4 (PSR498). Kevin also converted modset CONPAD, a feature in MST written by John Larsen which converts logical to physical disk addresses. The installation of 885 support actually installs two new disk equipment DM and DN which are half and full tracked 885 respectively. The locally added equipments, DM and DN, were changed to DY and DZ. These are DI equipments with DJ addressing half and full tracked.

Kevin applied changes to PDUMP as described above.

Don Mears installed the following changes.

- 1) PDP-11 processing in LTD was changed as above.
- 2) Forms code and user number are now included in the trailing banner of output files.
- 3) Queue priority processing in LCJ was corrected.
- 4) GAME processing in TELEX now retrieves files from UN=GAME rather than UN=LIBRARY.
- 5) Program LTA was corrected to avoid occasional random writes into CM.
- 6) A command prefixed with "X," should now work in the BATCH subsystem.
- 7) Modset PRERR was converted from NOS 1.2. This mod installs code to process printer errors.
- 8) Decimal time limit specification on the job card should now be translated properly.
- 9) Files ROUTED with EC=A9 should no longer occasionally print as upper case only files.
- 10) Changes to LDU as described above.

Tim Hoffmann converted modset TTYDXP a change to CPMEM which causes the exchange package dump to fit in 72 columns. Tim also repaired modset CPMEU1 so the "DUMP FROM..." message issued by CPMEM is not garbled.

Jeff Drummond corrected FIND processing in DSD. Jeff also corrected two problems in IDU:

- 1) PURGE messages were reordered.
- 2) Purging timed event queue files should now work.

Additionally, Jeff contributed a new program BLOCK as above.

Steve Collins contributed a new version of XEDIT with changes identical to those described above.

Brad Blasing installed the following changes.

- 1) Modset LSTLWA was converted to NOS 1.3. This mod adds the ENDS/HHA field for ABS type records to the CATALOG report.
- 2) The E,P display was corrected to properly show ID and express number and so that MAGNET specials (like MOUNT) are intensified.
- 3) Brad contributed a new version of COMPASS with various 8-LPI corrections.

PROPOSED CHANGES TO THE SYSTEM

XEDIT Proposal - by S. E. Collins

I propose that a Y or Z command loop in XEDIT terminate upon encountering END-OF-FILE. Currently, the only method available to terminate a loop is to cause a string search to fail (refer to pages 32 and 47 of the XEDIT manual). There are very few cases where multiple passes over a file are desired, and the current method of terminating the loop is awkward and confusing.

In addition, the following inconsistency is present in the current Y command loop logic. XEDIT guidelines specify that:

- 1) Any single XEDIT command will terminate execution upon encountering END-OF-FILE, and command processing will continue with the next command (e.g., the next command in a Y command loop).
- 2) Execution of a Y command sequence will not terminate unless an error occurs (e.g., STRING NOT FOUND). Hitting END-OF-FILE will terminate the present command but not the Y command loop itself.

Thus, a loop such as Y\$NEXT\$- will continue processing past END-OF-FILE, wrapping around to the top of the file only if there are an odd number of lines in the file. This is because the NEXT command will encounter END-OF-FILE, and execution of the NEXT command will terminate, but the Y command loop will continue to execute.

However, if there are an even number of lines in the file, the dash command will encounter END-OF-FILE, rather than the NEXT command, and execution of the dash command will be terminated. Since it is the dash command which specifies that the Y loop is to be repeated, the Y command loop will also be terminated. The above proposed change will resolve this seeming inconsistency.

SYSTEM MAINTENANCE: People and Procedures

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

- 1) Steve Collins' proposal to add a GRAB command to the CALLPRG index was narrowly approved (see DSN 5, 13 p. 110).
- 2) Larry commented that the UCC listing in the student/staff directory may be reorganized along more functional lines like who to call for what kind of problem.
- 3) Delivery dates for 677 tape drives is precariously late.
- 4) The engineering group wants a hardwired line to the PDP-11. We wondered whether usage justified a dedicated line.

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Callprg and Library Tape News - M. Riviere

On July 13 the CALLPRG index had the following modifications:

Andy Bremanis changed the entry for ACSTAT to allow a bigger MF value for the product.

Yvonne Murray replaced UPWRITE with a new version where the most serious problems of UPWRITE, such as destroying the future index in case of an error exit and producing strange results when in the "HELP" mode, are fixed.

On July 28, the following additional modifications took place on CALLPRG:

Andy Mickel introduced a new version of SNOBOLC as a fetch type package.

John Strait introduced an entry for WRITE, a PASCAL utility and made PROSE to be control card callable instead of Fetch type.

M. Frisch set up an index entry for F45, a FTN4 to FTN5 CDC conversion program.

All the modifications described above were applied to the current and the future index.

On July 19 the 485 Library Tape and the following modifications:

The FORTRAN library was replaced with a new version when the PROCPAC routines were updated to level 485. The modification to the routines was made by Dean Nelson. Dean's modifications consisted mainly of changing the fashion in which the FET tables are obtained from the FIT and in updating several function codes to their needed values in the new system.

The forgotten MNF MANTRAP file ZZZZPP was added.

I added a dummy FIN10 overlay that contains an informative message about the non-existence of the time sharing version of FTN on level 485 and a reference to UPGRADE. FIN10 is executed by FTN when the TS parameter is used on the compiler call statement.

The version of FCL 460 was also updated on the 485 Library Tape. FCL 460 is the version of FORTRAN to be used by MNF on the future System. The update consists of replacing ICPA and the PROCPAC routines, all of which adapted to the new level. An identical version of FCL 460 is retrieved by CALLPRG as PAST, FORTRAN on the 485 level.

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Cyber Deadstart Dump Analysis from Sunday, 8 July through Sunday, 22 July -
by K. C. Matthews

Tuesday, 10 July

07:55(DD-44)

Cyber 172

A disk error during a rollout hung the system. A level 3 deadstart was performed.

Monday, 16 July

16:49

Both Machines

ECS failed. It is not possible to run our multi-mainframe system without ECS, since ECS is absolutely required for shared queues and shared disks. At 20:14, when it appeared that the problem was not going to be quickly fixed, the 74 was deadstarted without ECS (one machine can access the shared disks). SUPIO also does not run without ECS, but still some useful work and some catching up was done. At 21:50 the problem was fixed and both machines were deadstarted again in multi-mainframe mode.

Sunday, 22 July (Release 4 running)

16:35 (DD-2)

Cyber 74

IAJ hung processing a FETCH statement. The problem was discovered to be a result of using LOADER, LINK. and then executing something which requires CALLPRG. The problem should be fixed by the next NOS R4 Sunday. TWL and JJD disabled LOADER, LINK to get around the problem this Sunday.

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TELEX and TELEX PDP11 Crash Analysis (7/9 - 7/22) - by D. W. Mears

7/13 21:30 TELEX on the Cyber 74 had to be stopped and brought up again due to many hung ports. The hung ports were apparently caused by a TELEX MQE error at 20:09. No dump is available.

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Plotter PDP11 Crash Analysis (7/9 - 7/22) - by D. W. Mears

We have had several problems with the plotter recently. The problem most noticeable to the users is the lack of darkness of the plots. Field Engineering has worked on the problem and greatly improved the quality of the plots. In addition, the plotter driver was changed to drive the plotter at about 1/3 speed, thus increasing the time the paper remains in the toner and making the plots darker. Even with these improvements, plots with large areas of black, remain streaked and uneven and not as dark as they were just a few months ago.

The plotter has had a long-standing problem with "not ready" processing. That is, once it goes not ready, it will not go ready again unless it is manually reset or master cleared with a RESET instruction. Recently the problem has gotten worse. Now, when the plotter goes "not ready" and is manually reset, the "scan complete" status never gets set. The plotter had to be reloaded three times due to this problem. The plotter program has been modified to avoid this problem.

Varian has suggested that some of our problems in the plotter are due to the fact that we are using an old plotter interface to the PDP11 and that the new improved redesigned plotter interface might solve some of our problems. However, when we attempted to switch over to the new interface, we discovered that the new interface aggravates the problem where zero bytes get inserted into plots, producing a shifting effect. We are continuing to use the old interface and Field Engineering is investigating the problem with the new interface.

There was one reload after the Decwriter started printing garbage. The dump shows that the output fet out pointer did not point to the output buffer.

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RJE/SUPIO Crash Analysis (June 1 - July 18) - by Elie May

- 6/07 Supio hung in A status.
- 6/12 PDP 11 power supply failure.
- 6/18 RJE terminal failure problem.
- 7/10 Supio hung in A status.